



**Texas Commission on
Environmental Quality
Austin, Texas**

Permit for Industrial Solid Waste
Management Site issued under provisions of
Texas Health and Safety Code ANN. Chapter
361 and Chapter 26 of the Texas Water
Code

Hazardous Waste Permit No. 50052
EPA ID. No. TXD069452340
ISWR No. 50052

This Class 3 permit modification
supersedes and replaces Hazardous Waste
Permit No. 50052 issued March 25, 2013
and its revisions.

Name of Permittee: US Ecology Texas, Inc.
3277 County Road 69
Robstown, Texas 78380

Site Owner: US Ecology Texas, Inc.
3277 County Road 69
Robstown, Texas 78380

Registered Agent for Service: National Registered Agents, Inc.
1999 Bryan St., Ste. 900
Dallas, Texas 75201

Classification of Site: Hazardous and Nonhazardous Class 1, Class 2, and
Class 3 industrial solid waste on-site/off-site storage,
processing, and disposal, commercial facility.

The permittee is authorized to manage wastes in accordance with the limitations, requirements, and other conditions set forth herein. This permit is granted subject to the rules of the Commission and other Orders of the Commission, and laws of the State of Texas. This permit does not exempt the permittee from compliance with the Texas Clean Air Act. This permit will be valid until canceled, amended, modified or revoked by the Commission, except that the authorization to store, process and dispose of wastes shall expire midnight, ten (10) years after the date of renewal permit approval on March 25, 2013. This permit was originally issued on December 5, 1988. This permit/compliance plan was renewed on December 2, 1999, and March 25, 2013.

All provisions in this permit stem from State and/or Federal authority. Those provisions marked with an asterisk (*) stem from Federal authority and will implement the applicable requirements of HSWA for which the Texas Commission on Environmental Quality has not been authorized.

Issued Date: January 26, 2018

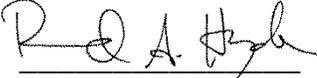

For the Commission

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List of Attachments:

- A - Legal Description of Facility
- B - Facility Map
- C - List of Incorporated Application Materials
- D - List of Permitted Facility Units
- E - Air Monitoring, Texas Ecologists, Inc. Robstown, Texas
- F - Groundwater Detection Monitoring System
- G - Well Design and Construction Specifications

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Permittee: US Ecology Texas, Inc.

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List of Compliance Plan Attachments:

CP Attachment A Facility Site Maps

Sheet 1 of 3 Facility Site Map -Landfill Waste Management Area

Sheet 2 of 3 Upper Transmissive Zone Corrective Action Wells

Sheet 3 of 3 Second Transmissive Zone Monitoring Wells

CP Attachment B - Public Participation in HSWA Corrective Action

CP Attachment C - Well Design, Construction, Installation, Certification, Plugging and Abandonment Procedures and Specifications

Permit/Compliance Plan Acronyms

ACL	-	Alternate Concentration Limit
ALR	-	Action Leakage Rate
AMP	-	Attenuation Monitoring Point
AOC	-	Area(s) of Concern
APA	-	Affected Property Assessment
APAR	-	Affected Property Assessment Report
APOE	-	Alternate Point of Exposure
Appendix VIII	-	40 CFR 261, Appendix VIII (Identification and Listing of Hazardous Waste - Hazardous Constituents)
ASTM	-	American Society for Testing and Materials
BGS	-	Below Ground Surface
BLRA	-	Baseline Risk Assessment
CAO	-	Corrective Action Observation
CAS	-	Corrective Action System
CCC	-	Coastal Coordination Council
CEMS	-	Continuous Emissions Monitoring System
CFR	-	Code of Federal Regulations
CMI	-	Corrective Measures Implementation
CMP	-	Texas Coastal Management Program
CMS	-	Corrective Measures Study
COC	-	Constituent(s) of Concern
EPA	-	United States Environmental Protection Agency
EPA SW-846	-	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, Third Edition, November 1986
GWPS	-	Groundwater Protection Standard
HSWA	-	Hazardous and Solid Waste Amendments of 1984
ICM	-	Interim Corrective Measures
LDR	-	Land Disposal Restrictions
MDL	-	Method Detection Limit
SQL	-	Method Quantitation Limit
MSL	-	Mean Sea Level
NAPL	-	Non-Aqueous Phase Liquid
NOR	-	Notice of Registration
PCB	-	Polychlorinated Biphenyl
PCL	-	Protective Concentration Level
PMZ	-	Plume Management Zone
POC	-	Point of Compliance
POE	-	Point of Exposure
ppm	-	Parts Per Million
ppmv	-	Parts Per Million by Volume
PQL	-	Practical Quantitation Limit
Psi	-	Pounds Per Square Inch
QA/QC	-	Quality Assurance/Quality Control
RACR	-	Response Action Completion Report
RAER	-	Response Action Effectiveness Report
RAP	-	Response Action Plan (for Action Leakage Rate in landfills)
RAP	-	Remedial Action Plan
RCRA	-	Resource Conservation and Recovery Act

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Permittee: US Ecology Texas, Inc.

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RFA	-	RCRA Facility Assessment
RFI	-	RCRA Facility Investigation
RRR	-	TCEQ Risk Reduction Rules
RSA	-	Remedy Standard A
RSB	-	Remedy Standard B
SR/WM	-	Source Reduction and Waste Minimization
SSI	-	Statistically Significant Increase
SWDA	-	Solid Waste Disposal Act
SWMU	-	Solid Waste Management Unit(s)
TAC	-	Texas Administrative Code
TCEQ	-	Texas Commission on Environmental Quality
TCEQ QAPP	-	“Quality Assurance Project Plan for Environmental Monitoring and Measurement Activities Relating to the Resource Conservation and Recovery Act and Underground Injection Control”
THC	-	Total Hydrocarbons
TRRP	-	Texas Risk Reduction Program

Texas Commission on Environmental Quality



Class 2 Permit Modification

Permittee Name	US Ecology Texas, Inc.	Hazardous Waste Permit No.	50052
City	Robstown	County	Nueces
Customer No.	CN603247974	Solid Waste Registration No.	50052
Regulated Entity No.	RN101445666	EPA Identification No.	TXD069452340
Application Date	July 26, 2022	Application Received Date	July 26, 2022
Request	Class 2 Modification	Tracking No.	27738486

The above permit is modified as follows:

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Section I.B. Incorporated Application Materials

Section I.B. is revised as follows:

B. Incorporated Application Materials

This permit is based on, and the permittee shall follow the Part A and Part B Industrial and Hazardous Waste Application submittals dated June 3, 2009, July 23, 2009, January 15, 2010, March 31, 2010, October 21, 2010, April 12, 2011, and July 15, 2011, the Application Elements listed in “Attachment C”, and the following amendments/modifications to the permit, which are hereby approved subject to the terms of this permit and any other orders of the Texas Commission on Environmental Quality (TCEQ):

Permit Modification/ Amendment	Application Date/ Revision Date¹	Description of Change
Class 2 modification	October 31, 2013	Remove Special Permit Provision XII.A that restricts hours of operation at the facility from the permit.
Class 1 modification	August 22, 2014	To update the emergency coordinator list in the Contingency Plan.

Permit Modification/ Amendment	Application Date/ Revision Date ¹	Description of Change
Class 2 modification	August 22, 2014	<ol style="list-style-type: none"> 1. Addition of two uncovered storage areas (Permit Unit Nos. 9-5 and 9-6) for the permitted Uncovered Container Storage Area (Permit Unit No. 9) without increasing the capacity of the unit. 2. Realignment of two storm water flumes of the Cell 48 multilayer final cover system without changing dimensions, specifications, or materials of construction of storm water flumes or the final cover system.
Class 1 modification	February 3, 2016, Revised March 3, 2016	To update the emergency coordinator list in the Contingency Plan.
Class 3 modification	September 20, 2013, Revised November 12, 2013, May 2, 2014, January 21, 2015, September 28, 2015, November 5, 2015, and April 18, 2016	<ol style="list-style-type: none"> 1. To authorize the addition of four (4) new wastewater tanks, one (1) new miscellaneous unit (Oil Reclamation Facility Thermal Desorption Unit) and associated twenty-two (22) tanks. 2. To update Inspection Schedule, Contingency Plan, Waste Analysis Plan, Engineering Report, Closure Plan, and Financial Assurance due to addition of new waste management units.
Class 1 modification	September 9, 2016	To update the Table III.E.1 - Arrangements with Local Authorities in the Contingency Plan
Class 1 modification	December 29, 2016	To update Table III.E.3 - Emergency Equipment in the Contingency Plan.
Class 1 ¹ modification	February 20, 2017, Revised March 23, 2017	To change the location of the main facility entrance and to update the emergency coordinator list in the Contingency Plan.

Permit Modification/ Amendment	Application Date/ Revision Date ¹	Description of Change
Class 3 modification	September 1, 2015, Revised October 19, 2015, May 12, 2016, December 13, 2016, April 27, 2017, May 17, 2017, and October 19, 2017	<ol style="list-style-type: none"> 1. To authorize areal expansion of facility boundary by adding a 233 Acres tract of land (Mayo Tract). 2. To add 2 new landfill cells 51 and 52. 3. To update Facility Siting Criteria. 4. To revise Facility Management Reports and Plans (Inspection Schedule, Security, Contingency Plan, etc.), Engineering Report, Geology, Groundwater Detection Monitoring Plan, Closure and Post-Closure Plan, and Financial Assurance due to facility expansion.
Class 2 modification	October 2, 2017, Revised October 31, 2017	<ol style="list-style-type: none"> 1. To increase the container storage capacity in the permitted Uncovered Waste Storage Area (Permit Unit No. 9) from 4,000 cubic yards to 5,285 cubic yards. 2. To revise permit Table V.B. - Container Storage Area and Table VII.E.1. - Permitted Unit Closure Costs Estimate.
Class 2 modification	January 26, 2018, Revised March 8, 2018	<ol style="list-style-type: none"> 1. To add two container storage areas (Permit Units No. 9-7 and 9-8) in the permitted Uncovered Waste Storage Area (Permit Unit No. 9) without increasing the container capacity of the unit. 2. To revise permit Table V.B. - Container Storage Area and Attachment D.1.- Authorized Permitted Units.
Class 1 modification	April 30, 2018	<ol style="list-style-type: none"> 1. To upgrade the piping that is connected to four RCRA permitted wastewater storage tanks at the facility: tanks M-6, S-1; S-2, and M-3 designated as TCEQ Permit Unit Numbers 5, 6, 7 and 10. 2. Typographical corrections to Table V.B and Attachment D.

Permit Modification/ Amendment	Application Date/ Revision Date ¹	Description of Change
Class 2 modification	November 26, 2018, Revised February 04, 2019	<ol style="list-style-type: none"> 1. Add an additional container storage area (Unit 9-9) to the permitted Uncovered Waste Storage Areas (Permit Unit No. 9) without increasing the container capacity of the unit. 2. Revisions to permit Table V.B. - Container Storage Area, Table VII.E.1. - Permitted Unit Closure Cost Summary, and Attachment D - List of Permitted Facility Units. 3. Revisions to design drawings to the Stabilization Building treatment pans, Mixing Tank MT-1 (East) and Mixing Tank MT-2 (West) (Permit Unit Nos. 11 and 12). 4. Revisions to Permit Table III.D. - Inspection Schedule to remove the laboratory wastewater accumulation tank from the inspection schedule. 5. Remove Observation Wells MW-UTZ-04A, MW-UTZ-05A, MW-UTZ-06A and MW-UTZ-07A. 6. Addition of new Point of Compliance Well MW-UTZ-22A. 7. The revision of Table VI.B.3.b. including: <ol style="list-style-type: none"> a. Add note that proposed wells will be 2" or greater diameter; b. Add note regarding background; and c. Add note that existing wells may be extended to account for new embankments which will affect parameters in Table VI.B.3.b such as top of casing elevation. 8. The revision of Attachment F including: <ol style="list-style-type: none"> a. Add note to clarify background determination; and b. Adjust map symbology and notes to indicate that MW-UTZ-01A and B, MW-UTZ-09A and B, MW-UTZ-13A and B, and MW-UTZ-16A and B are two co-located wells.

Permit Modification/ Amendment	Application Date/ Revision Date ¹	Description of Change
Class 1 modification	April 2, 2019	<ol style="list-style-type: none"> 1. Replace roof and sidewalls of Permit Unit No. 3 (Controlled Parking/Storage Building 1-East side) to repair some damages. Replacements will be of same dimensions, specifications, and materials as the original building design. 2. Update Contingency Plan Table III.E.2. with personnel changes and contact information.
Class 1 modification	September 10, 2019	<ol style="list-style-type: none"> 1. Update Contingency Plan Table III.E.2 with personnel changes and contact information. 2. Update Emergency Equipment Table III.E.3 with addition of fire suppression/prevention system upgrade to the listed emergency equipment.
Class 1 modification	September 18, 2019	To include utilization of leachate collection and leak detection pipes with alternate Standard Dimension Ratio for Landfill Cells 51 and 52. The modification meets the requirements of 30 TAC 305.69 (K)(A)(3) for equipment replacement or upgrading with functionally equivalent components.
Class 1 modification	December 05, 2019	<ol style="list-style-type: none"> 1. Update the status of Landfill Cells 51-1 and 51-2 from proposed to active, Revisions to permit Table V.G.1. - Landfills, Table VII.E.1. - Permitted Unit Closure Cost Summary, Table VII.E.2. - Permitted Unit Post-Closure Cost Summary, and Attachment D- List of Permitted Facility Units in the permit. 2. Update Contingency Plan Table III.E.2. with personnel changes and contact information.
Class 1 modification	March 20, 2020, Revised March 28, 2020	To remove closed unit Tank SL-1 (Permit Unit No. 15, NOR Unit No. 26) and update corresponding Tables as included in detail below.
Class 1 ¹ modification	April 20, 2020	To relocate deep well pumps (pre injection units) to the new location adjacent to the current location with elevated containment and piping to improve the operation of the pumps during rainfall events.

Permit Modification/ Amendment	Application Date/ Revision Date ¹	Description of Change
Class 1 modification	October 22, 2020, Revised November 3, 2020	Update Contingency Plan Table III.E.2 with personnel changes and contact information.
Class 2 modification	September 14, 2020	<ol style="list-style-type: none"> 1. Revise groundwater detection monitoring program to add new Point of Compliance (POC) well MW-UTZ-23A in lieu of POC well MW-UTZ-03A. Remove POC well MW-UTZ-03A from the detection monitoring program. 2. Adjust locations of previously proposed POC wells. 3. Add construction details for POC wells MW-UTZ-08A, MW-UTZ-09A, MW-UTZ-09B which were installed in June 2019. 4. Modifies Sampling and Analysis Plan. 5. Update Table VI.B.3.b. - Unit Groundwater Detection Monitoring System, and Attachment F - Groundwater Detection Monitoring System Map in the permit.
Class 1 modification	May 25, 2021	Update Contingency Plan Table III.E.2 with personnel changes and contact information.
Class 3 modification	December 15, 2021 Revised January 19, 2021, May 4, 2021, September 24, 2021, November 18, 2021	<p>Revise permit to address new Alternate Cover System (ACS) for Landfill cells 50, 51, and 52.</p> <ol style="list-style-type: none"> 1. Revise Inspection Schedule to include inspection requirements for ACS. 2. Revise Engineering Report, Table V.G.1 - Landfills, to address ACS and to increase rated capacity for landfill Cells 51 and 52. 3. Revise closure and post-closure plan to address ACS. 4. Revise Table VII.E.1.- Closure Cost Estimates and Table VII.E.2 -Post-Closure Cost Estimates to address cost estimates.

Permit Modification/ Amendment	Application Date/ Revision Date ¹	Description of Change
Class 1 modification	December 1, 2021	<ol style="list-style-type: none"> 1. Informational changes to Closure/Post-closure Plan to update permitted tank unit number. 2. Update tank unit status from proposed to active for permitted tanks T-37, T-40, T-41, WT-4. 3. Update Contingency Plan Table III.E.2 with personnel changes and contact information. 4. Change general manager contact name, information and signatory authority. 5. Provide proof of deed recordation for Cells 51 and 52.
Class 1 modification	January 24, 2022	Update Contingency Plan Notification List, Table III.E.2 with personnel changes and contact information.
Class 1 Modification	March 31, 2022	<ol style="list-style-type: none"> 1. Update Table III.E.1 - Arrangements with Local Authorities to address changes to agencies identified in the Contingency Plan. 2. Update Table III.E.2 - Contingency Plan Notification List with personnel changes and contact information. 3. Update facility map Drawing III.E.1 - Evacuation Routes and Emergency Equipment to add Uncovered Waste Storage Area (Permit Unit No. 9-9) and make it easier to read. 4. Repair and upgrade Pressure Vacuum Relief Valve and Rupture Disk for Permitted Tanks T-16 (Permit Unit No. 31) and T-17 (Permit Unit No. 32).
Class 1 modification	August 18, 2022, Revised August 22, 2022	<ol style="list-style-type: none"> 1. Update permit tank unit status from proposed to active for permitted tanks WT-1, WT-2, WT-3, T-42, T-43. 2. Revise Table VII.E.1.- Closure Cost Estimates to update cost estimates.

Permit Modification/ Amendment	Application Date/ Revision Date¹	Description of Change
Class 2 Modification	July 26, 2022	<ol style="list-style-type: none">1. Update Waste Analysis Plan (WAP) to revise waste feed characteristics for Low Volatile Metals (LVM), Semi Volatile Metals (SVM), and Mercury due to 2019 Compliance Demonstration Test results.2. Update Table V.K.3 - Miscellaneous Unit Maximum Constituent Feed Rates to revise Operating Parameter Limits (OPLs) for LVM and SVM from 105 lb/hr to 169 lb/hr, and to increase Mercury OPL from 0.6 lb/hr to 5.18 lb/hr.

These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.

The following table is revised.

Table V.K.3 - Miscellaneous Unit Maximum Constituent Feed Rates

Replace existing Table V.K.3 with the revised Table V.K.3 (Attached).

This Class 2 Permit Modification is part of Permit No. 50052 and should be attached thereto.

Issued Date: September 29, 2022



For the Commission

I. Facility Description

A. Size and Location of Site

A permit is issued to US Ecology Texas, Inc. (hereafter called the permittee), to operate a hazardous waste processing, storage, and disposal facility located at 3277 County Road 69, Robstown, in Nueces County, Texas, drainage area of Segment 2204 in the Nueces-Rio Grande Coastal Basin (North Latitude 27°43'43", West Longitude 97°39'28"). The legal description of the facility submitted in Permit No. 50052 Application dated June 3, 2009 and revised September 1, 2015, is hereby made a part of this permit as "Attachment A". The hazardous waste management facility as delineated by the permittee's application map is hereby made a part of this permit as "Attachment B".

B. Incorporated Application Materials

This permit is based on, and the permittee shall follow the Part A and Part B Industrial & Hazardous Waste Application submittals dated June 3, 2009, July 23, 2009, January 15, 2010, March 31, 2010, October 21, 2010, April 12, 2011, and July 15, 2011, the Application Elements listed in "Attachment C", and the following amendments/modifications to the permit, which are hereby approved subject to the terms of this permit and any other orders of the Texas Commission on Environmental Quality (TCEQ):

Permit Modification/ Amendment	Submittal/Revision Date	Description of Change
Class 2 Modification	October 31, 2013	Remove Special Permit <u>Provision XII.A</u> that restricts hours of operation at the facility from the permit.
Class 1 Modification	August 22, 2014	To update the emergency coordinator list in the Contingency Plan.
Class 2 Modification	August 22, 2014	Addition of two uncovered storage areas (Permit Unit Nos. 9-5 and 9-6) for the permitted Uncovered Container Storage Area (Permit Unit No. 9) without increasing the capacity of the unit. Realignment of two storm water flumes of the Cell 48 multilayer final cover system without changing dimensions, specifications, or materials of construction of storm water flumes or the final cover system.
Class 1 Modification	February 3, 2016, and revised March 3, 2016	To update the emergency coordinator list in the Contingency Plan.

Class 3 Modification	September 20, 2013, and revised November 12, 2013, May 2, 2014, January 21, 2015, September 28, 2015, November 5, 2015, and April 18, 2016	To authorize the addition of four (4) new wastewater tanks, one (1) new miscellaneous unit (Oil Reclamation Facility Thermal Desorption Unit) and associated twenty-two (22) tanks. To update Inspection Schedule, Contingency Plan, Waste Analysis Plan, Engineering Report, Closure Plan, and Financial Assurance due to addition of new waste management units.
Class 1 Modification	September 9, 2016	To update the Table III.E.1 – Arrangements with Local Authorities in the Contingency Plan
Class 1 Modification	December 29, 2016	To update Table III.E.3 – Emergency Equipment in the Contingency Plan.
Class 1 ¹ Modification	February 20, 2017, and revised March 23, 2017	To change the location of the main facility entrance and to update the emergency coordinator list in the Contingency Plan.
Class 3 Modification	September 1, 2015, and revised October 19, 2015, May 12, 2016, December 13, 2016, April 27, 2017, May 9, 2017, May 17, 2017, and October 19, 2017	To authorize areal expansion of facility boundary by adding a 233 Acres tract of land (Mayo Tract). To add 2 new landfill cells 51 and 52. To update Facility Siting Criteria, Facility To revise Facility Management Reports and Plans (Inspection Schedule, Security, Contingency Plan, etc.), Engineering Report, Geology, Groundwater Detection Monitoring Plan, Closure and Post-Closure Plan, and Financial Assurance due to facility expansion.

These materials are incorporated into this permit by reference as if fully set out herein. Any and all revisions to these elements shall become conditions of this permit upon the date of approval by the Commission.

II. General Facility Standards

A. Standard Permit Conditions

The permittee has a duty to comply with the Standard Permit Conditions under 30 Texas Administrative Code (TAC) Section 305.125. Moreover, the permittee has a duty to comply with the following permit conditions:

1. Modification of Permitted Facilities

The facility units and operational methods authorized are limited to those described herein and by the application submittals identified in Section I.B. All facility units and operational methods are subject to the terms and conditions of this permit and TCEQ rules. Prior to constructing or operating any facility units in a manner which differs from either the related plans and specifications contained in the permit application or the limitations, terms or conditions of this permit, the permittee must comply with the TCEQ permit amendment/modification rules as provided in 30 TAC Sections 305.62 and 305.69.

2. Duty to Comply

The permittee must comply with all the conditions of this permit, except that the permittee need not comply with the conditions of this permit to the extent and for the duration such noncompliance is authorized in an emergency order issued by the Commission. Any permit noncompliance, other than noncompliance authorized by an emergency order, constitutes a violation of the Resource Conservation and Recovery Act (RCRA) and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. [30 TAC Section 305.142]

3. Severability

The provisions of this permit are severable. If any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected.

4. Definitions

For purposes of this permit, terms used herein shall have the same meaning as those in 30 TAC Chapters 305, 335, and 350 unless this permit specifically provides otherwise; where terms are not defined in the regulations or the permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

Application data - data used to complete the final application and any supplemental information.

5. Permit Expiration

In order to continue a permitted activity after the expiration date of the permit the permittee shall submit a new permit application at least 180 days before the expiration date of the effective permit, unless permission for a later date has been granted by the Executive Director. Authorization to continue such activity will terminate upon the effective denial of said application.

6. Certification Requirements

For a new facility, the permittee may not commence storage, processing, or disposal of solid waste; and for a facility being modified, the permittee may not process, store or dispose of solid waste in the modified portion of the facility, except as provided in 30 TAC Section 305.69 (relating to Solid Waste Permit Modification at the Request of the Permittee) until the following has been accomplished [30 TAC Section 305.144]:

The permittee has submitted to the Executive Director and the local Regional Office of the TCEQ, by certified mail or hand delivery, a letter signed by the permittee, and signed and sealed by a Texas Professional Engineer stating that the facility has been constructed or modified in compliance with the permit. If the certification is being provided to document proper closure of a permitted unit, or to certify installation

or repair of a tank system, then the certification must be signed and sealed by an independent Texas licensed Professional Engineer. Required certification shall be in the following form:

“This is to certify that the following activity (specify activity, e.g., construction, installation, closure, etc., of an item) relating to the following item (specify the item, e.g., the particular facility, facility unit, unit component, subcomponent part, or ancillary component), authorized or required by TCEQ Permit No. 50052 has been completed, and that construction of said facility component has been performed in accordance with and in compliance with good engineering practices and the design and construction specifications of Permit No. 50052”

- a. A certification report has been submitted, with the certification described in Provision II.A.6.a., which is logically organized and describes in detail the tests, inspections, and measurements performed, their results, and all other bases for the conclusion that the facility unit, unit component, and/or closure have been constructed, installed and/or performed in conformance with the design and construction specifications of this permit and in compliance with this permit. The report shall describe each activity as it relates to each facility unit or component being certified including reference to all applicable permit provisions. The report shall contain the following items, at a minimum:
 - (1) Scaled, as-built plan-view and cross-sectional drawings which accurately depict the facility unit and all unit components and subcomponents and which demonstrate compliance with the design and construction specifications approved and detailed in the terms of this permit;
 - (2) All necessary references to dimensions, elevations, slopes, construction materials, thickness and equipment; and
 - (3) For all drawings and specifications, the date, signature, and seal of a Professional Engineer who is licensed in the State of Texas.
 - b. The Executive Director has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or if within fifteen (15) days of submission of the letter required by paragraph (a) of this section, the permittee has not received notice from the Executive Director of the intent to inspect, prior inspection is waived and the permittee may commence processing, storage, or disposal of solid waste.
- * 7. Land Disposal Restrictions

The permittee shall comply with the land disposal restrictions as found in 40 Code of Federal Regulations (CFR) 268 and any subsequent applicable requirements promulgated through the Federal Register. Requirements include modifying/amending the permittee's waste analysis plan to include analyses to determine compliance with applicable treatment standards or prohibition levels, pursuant to 40 CFR 268.7(c) and 264.13(a).

8. Dust Suppression

Pursuant to 40 CFR 266.23(b)/30 TAC Section 335.214(b), the permittee shall not use waste, used oil, or any other material which is contaminated with dioxin, polychlorinated biphenyls (PCBs), or any other hazardous waste (other than a waste identified solely on the basis of ignitability) for dust suppression or road treatment.

9. Permit Reopener

This permit shall be subject to review by the Executive Director five (5) years from the date of permit issuance or reissuance and shall be modified as necessary to assure that the facility continues to comply with currently applicable requirements of the Solid Waste Disposal Act (SWDA) and the rules and regulations of the Commission. The permittee shall submit any information as may be reasonably required by the Executive Director to ascertain whether the facility continues to comply with currently applicable requirements of the SWDA and the rules and regulations of the Commission.

10. Texas Coastal Management Program

The TCEQ has reviewed the permit application for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the Coastal Coordination Council (CCC) and has determined that the permit is consistent with the applicable CMP goals and policies. [30 TAC Section 281.43(a)(1)]

11. Monitoring of Commercial Hazardous Waste Management Facility Operations

Within the first year after Commission initial action on this permit and any subsequent amendment, modification, transfer, extension, or renewal of this permit, the permittee shall provide notice to affected persons of the intent to have an independent annual environmental audit of the facility performed. The notice shall be issued in accordance with the requirements of 30 TAC Section 305.147(1). If an affected party requests the audit, then the permittee must follow the requirements of 30 TAC Sections 305.147(2)-(6), and (8), for selecting an independent inspector, paying for the notice and audit, submission of a written report, and determining the scope of the inspection.

12. Failure to Submit Relevant Facts in Permit Application

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the Executive Director, the permittee shall promptly submit the correct information or facts to the Executive Director. [30 TAC Section 305.125(19)]

13. Hazardous Waste Combustion Facility Provision

Reserved.

14. Waste Management Fee Assessment, Fee Payment, and Records and Reporting

- a. If applicable, the permittee is subject to the assessment of fees for hazardous wastes which are stored, processed, disposed, or otherwise managed and for Class 1 industrial wastes which are disposed at a commercial facility. [30 TAC Section 335.325]
- b. As applicable and except as provided in Provision II.A.14.c., the permittee shall pay waste management fees monthly. Monthly fee payments shall be due by the 25th day following the end of the month for which payment is due. [30 TAC Section 335.328(b)]
- c. If required, the permittee owes waste management fees in an amount less than \$500 for a calendar month or less than \$1,500 for a calendar quarter, the permittee may file a quarterly report and pay a quarterly fee. [30 TAC Section 335.328(c)]
- d. If required, the permittee shall document the basis for the assessment of any applicable waste management fees, including any adjustment to or exemption from assessment. [30 TAC Section 335.329(b)(4)]

If required, the permittee shall submit a monthly report of on-site waste management activities subject to the assessment of waste management fees on forms furnished or approved by the Executive Director. This report shall be due by the 25th day following the end of the month (or quarter) for which a report is made. Monthly (or quarterly) reports shall be submitted, regardless of whether any storage, processing, or disposal was made during a particular month (or quarter), by preparing and submitting a summary indicating that no waste was managed during that month (or quarter). [30 TAC Section 335.329(b)(5)]

- e. As applicable, the permittee shall maintain the required records and reports in accordance with 30 TAC Sections 335.329(c) and (d).

15. Transfer of Ownership and/or Operational Control

The transfer of ownership and/or operational control of this permit is subject to the transfer requirements of 30 TAC Section 305.64 and permit modification requirements of 30 TAC Section 305.69. The new owner and/or operator seeking a transfer of ownership and/or operational control of this permit shall submit a Class 1¹ permit modification (with prior written approval by the Executive Director) at least 90 days prior to the scheduled transfer in accordance with 30 TAC Section 305.69(b)(2). Prior to the Executive Director issuing the permit modification transferring the permit, the new owner or operator shall provide a fully executed financial assurance mechanism satisfactory to the TCEQ Executive Director, for all existing units which have received waste and any corrective action required under this permit, in compliance with 30 TAC Chapter 37, Subchapter P. [30 TAC Section 305.64(g)]

B. Recordkeeping and Reporting Requirements

1. Monitoring and Records

- a. All data submitted to the TCEQ shall be in a manner consistent with the latest version of the "Quality Assurance Project Plan for Environmental Monitoring and Measurement Activities Relating to the Resource Conservation and Recovery Act and Underground Injection Control" (TCEQ QAPP).
- b. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity. The method used to obtain a representative sample of the material to be analyzed shall be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved in writing prior to use by the Executive Director of the TCEQ. Laboratory methods shall be the latest version specified in current edition of Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846 (EPA SW-846); Standard Methods for the Examination of Water and Wastewater; RCRA Groundwater Monitoring: Draft

Technical Guidance, 1992, OSWER Directive 9950.1, or an equivalent method, as specified in the Waste Analysis Plan, Section IV of the Part B Application, and approved in writing prior to use by the Executive Director. [30 TAC Section 305.125(11)(A)]

- c. The permittee shall retain in an organized fashion and furnish to the Executive Director, upon request, records of all monitoring information, copies of all reports and records required by this permit, and the certification required by 40 CFR 264.73(b)(9), for a period of at least three (3) years from the date of the sample, measurement, report, record, certification, or application. [30 TAC Section 305.125(11)(B)]

- d. Records of monitoring shall include the following [30 TAC Section 305.125(11)(C)]:
 - (1) The date, time, and place of sample or measurement;
 - (2) The identity of individual who collected the sample or measurement;
 - (3) The dates analyses were performed;
 - (4) The identity of individual and laboratory who performed the analyses;
 - (5) The analytical techniques or methods used; and
 - (6) The results of such analyses or measurements.
 - e. All engineering and geoscientific information submitted to the TCEQ shall be prepared by, or under the supervision of, a licensed professional engineer or licensed professional geoscientist, and shall be signed, sealed, and dated by qualified professionals as required by the Texas Engineering Practice Act and the Texas Geoscience Practice Act and the licensing and registration boards under these acts.
2. Operating Record
- In addition to the recordkeeping and reporting requirements specified elsewhere in this permit, the permittee shall maintain a written operating record at the facility, in accordance with 40 CFR 264.73. These records will be made available to representatives of the TCEQ upon request.
3. Retention of Application Data
- Throughout the terms of the permit, the permittee shall keep records of data used to complete the final application and any supplemental information. All copies of renewals, amendments, revisions and modifications must also be kept at the facility such that the most current documents are available for inspection at all times. All materials, including any related information, submitted to complete the application shall be retained, not just those materials which have been incorporated into the permit. [30 TAC Section 305.47]
4. Reporting of Noncompliance
- The permittee shall report to the Executive Director of the TCEQ information regarding any noncompliance which may endanger human health or the environment. [30 TAC Section 305.125(9)]
- a. Report of such information shall be provided orally within twenty-four (24) hours from the time the permittee becomes aware of the noncompliance.
 - b. A written submission of such information shall also be provided within five (5) days of the time the permittee becomes aware of the noncompliance. The written submission shall contain the following:
 - (1) A description of the noncompliance and its cause;
 - (2) The potential danger to human health or safety, or the environment;
 - (3) The period of noncompliance, including exact dates and times;
 - (4) If the noncompliance has not been corrected, the anticipated time it is expected to continue; and
 - (5) Steps taken or planned to reduce, eliminate, and prevent the recurrence of the noncompliance, and to mitigate its adverse effects.

5. Twenty-Four Hour Reporting

The following shall be included as information which must be reported orally within twenty-four (24) hours pursuant to 30 TAC Section 305.125(9) [30 TAC Section 305.145]:

- a. Information concerning release of any solid waste that may cause an endangerment to public drinking water supplies; and
- b. Any information of a release or discharge of solid waste, or of a fire or explosion which could threaten the environment or human health or safety, outside the facility. The description of the occurrence and its cause shall include:
 - (1) Name, address, and telephone number of the owner or operator;
 - (2) Name, address, and telephone number of the facility;
 - (3) Date, time, and type of incident;
 - (4) Name and quantity of material(s) involved;
 - (5) The extent of injuries, if any;
 - (6) An assessment of actual or potential hazards to the environment and human health or safety outside the facility, where this is applicable; and
 - (7) Estimated quantity and disposition of recovered material that resulted from the incident.

6. Notice Waiver

The Executive Director may waive the five (5) day written notice requirement specified in Provision II.B.4.b. in favor of a written report submitted to the Commission within fifteen (15) days of the time the permittee becomes aware of the noncompliance or condition. [30 TAC Section 305.145(b)]

7. Biennial Report

The permittee shall prepare and submit to the Executive Director all information and records required by 40 CFR 264.75. By March 1st of each even-numbered year for the preceding odd-numbered year's activities the permittee shall submit either a Biennial Report or letter certifying submission of the above. One copy of the report/letter shall be submitted to the TCEQ Industrial & Hazardous Waste Permits Section and an additional copy shall be submitted to the appropriate TCEQ Regional Office.

8. Pollution Prevention

Facilities subject to 30 TAC Chapter 335, Subchapter Q - Pollution Prevention: Source Reduction and Waste Minimization must prepare a five (5) year Source Reduction and Waste Minimization Plan and submit a Source Reduction and Waste Minimization (SR/WM) Annual Report to the TCEQ Environmental Assistance Division. This report must be submitted annually on the dates specified in the rule.

9. Waste Minimization

The permittee shall annually certify, by January 25th for the previous calendar year, the following information [40 CFR 264.73(b)(9)]:

- a. That the permittee has a program in place to reduce the volume and toxicity of all hazardous wastes which are generated by the permittee's facility operation to the degree determined to be economically practicable; and

- b. That the proposed method of treatment, storage, or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment. This waste minimization certification is to be included in the facility operating records until closure.

10. Annual Detection Monitoring Report

The permittee shall submit an Annual Detection Monitoring Report as required by Section VI.G. of this permit by March 1st of each year.

11. Manifest Discrepancy Report

If a significant discrepancy in a manifest is discovered, the permittee must attempt to reconcile the discrepancy. If not resolved within fifteen (15) days, the permittee must submit a report, describing the incident, to the Executive Director, as per the requirements of 30 TAC Section 335.12. A copy of the manifest must be included in the report.

12. Unmanifested Waste Report

A report must be submitted to the Executive Director within fifteen (15) days of receipt of unmanifested waste, as per the requirements of 30 TAC Section 335.15(3).

13. Monthly Summary

The permittee shall prepare a monthly report, of all manifests received during the month, summarizing the quantity, character, transporter identity, and the method of storage, processing and disposal of each hazardous waste or Class 1 waste shipment received, itemized by manifest document number. This monthly summary report shall be submitted to the TCEQ Registration and Reporting Section on or before the 25th day of each month for waste received during the previous month. [30 TAC Section 335.15(2)]

C. Incorporated Regulatory Requirements

1. State Regulations

To the extent applicable to the activities authorized by this permit, the following TCEQ regulations are hereby made provisions and conditions of the permit.

- a. 30 TAC Chapter 37, Subchapter P: Financial Assurance for Hazardous and Nonhazardous Industrial Solid Waste Facilities;
- b. 30 TAC Chapter 305, Subchapter A: General Provisions;
- c. 30 TAC Chapter 305, Subchapter C: Application for Permit;
- d. 30 TAC Sections 305.61 - 305.69 (regarding amendments, renewals, transfers, corrections, revocation and suspension of permits);
- e. 30 TAC Sections 305.121 - 305.125 (regarding permit characteristics and conditions);
- f. 30 TAC Sections 305.127 - 305.129 (regarding permit conditions, signatories and variance procedures);
- g. 30 TAC Chapter 305, Subchapter G (except 30 TAC 305.149): Additional Conditions for Hazardous and Industrial Solid Waste Storage, Processing and Disposal Permits;
- h. 30 TAC Chapter 335, Subchapter A: Industrial Solid Waste and Municipal Hazardous Waste in General;
- i. 30 TAC Chapter 335, Subchapter B: Hazardous Waste Management General Provisions;

- j. 30 TAC Section 335.152, Standards;
- k. 30 TAC Sections 335.153 - 335.155 (regarding reporting of emergency situations and additional reports required);
- l. 30 TAC Sections 335.156 - 335.167 (regarding applicability of groundwater monitoring programs and corrective action requirements);
- m. 30 TAC Sections 335.168 - 335.169 (regarding the design and operating requirements and closure and post-closure care of surface impoundments);
- n. 30 TAC Sections 335.173 - 335.174 (regarding the design and operating requirements and closure and post-closure care of landfills);
- o. 30 TAC Sections 335.175 - 335.176 (regarding special requirements for containers and bulk and containerized waste);
- p. 30 TAC Sections 335.177 - 335.179 (regarding general performance standard, cost estimate for closure, and financial assurance);
- q. 30 TAC Sections 335.325, 335.328 and 335.329 (regarding waste management fee assessment, fee payment, and records and reports);
- r. 30 TAC Chapter 335, Subchapter Q: Pollution Prevention: Source Reduction and Waste Minimization; and
- s. 30 TAC Chapter 350, Texas Risk Reduction Program.

Issuance of this permit with incorporated rules in no way exempts the permittee from compliance with any other applicable state statute and/or Commission Rule.

2. Federal Regulations

To the extent applicable to the activities authorized by this permit, the following provisions of 40 CFR Parts 264 and Part 268, adopted by reference by 30 TAC Section 335.152 and 335 Subchapter O are hereby made provisions and conditions of this permit, to the extent consistent with the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361 (Vernon), and the rules of the TCEQ:

- a. Subpart B -- General Facility Standards;
- b. Subpart C -- Preparedness and Prevention;
- c. Subpart D -- Contingency Plan and Emergency Procedures;
- d. Subpart E -- Manifest System, Recordkeeping, and Reporting;
- e. Subpart G -- Closure and Post-Closure;
- f. Subpart H -- Financial Requirements;
- g. Subpart I -- Use and Management of Containers;
- h. Subpart J -- Tank Systems;
- i. Subpart N -- Landfills;
- j. Subpart X -- Miscellaneous Units;
- k. Subpart AA -- Air Emission Standards for Process Vents;
- l. Subpart BB -- Air Emission Standards for Equipment Leaks;
- m. Subpart CC -- Air Emission Standards for Tanks, Surface Impoundments, and Containers; and
- n. 40 CFR Part 268 -- Land Disposal Restrictions (LDR).

III. Facility Management

A. Operation of Facility

The permittee shall construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment, as required by 40 CFR 264.31. All equipment and structures used to manage hazardous waste at the facility shall be maintained in proper operating condition.

B. Personnel Training

The permittee shall ensure that all facility personnel involved with hazardous waste management successfully complete a training program as required by 40 CFR 264.16. The permittee shall maintain training documents and records, as required by 40 CFR 264.16(d) and (e).

C. Security

1. The permittee shall provide and maintain an artificial or natural barrier which completely surrounds the active waste management portion(s) of the facility and shall have a means to control entry, at all times, through gates or other entrances to these same facility areas.
2. The permittee shall post warning signs at all points of access to the active waste management portion(s) of the facility and along the natural and/or artificial barriers in sufficient numbers to be seen from any approach to that (those) portion(s) of the facility. The signs shall be printed so that they may be clearly read from a distance of at least twenty-five (25) feet, and shall state "Danger - Unauthorized Personnel Keep Out" in English and in Spanish.

D. General Inspection Requirements

The permittee shall follow the inspection schedule contained in the permit application submittals identified in Section I.B. of this permit and as set out in Table III.D. - Inspection Schedule. The permittee shall remedy any deterioration or malfunction discovered by an inspection, as required by 40 CFR 264.15(c). Records of inspection shall be kept, as required by 40 CFR 264.15(d). Any remedial actions taken in response to facility inspections and the date of the remediation shall be included in the inspection records.

E. Contingency Plan

1. The permittee shall follow the Contingency Plan, developed in accordance with 40 CFR Part 264 Subpart D, and contained in the permit application submittals identified in Section I.B. of this permit. Copies of this plan shall be available to all employees involved in waste management at the facility.
2. The permittee shall immediately initiate clean-up procedures for removal of any spilled hazardous or industrial nonhazardous wastes and waste residues and shall take all steps necessary to prevent surface water or groundwater contamination as a result of any spills.
3. Collected hazardous or industrial nonhazardous wastes, spills, leaks, clean-up residues, and contaminated rainfall runoff, including contaminated stormwater from the drainage control system(s) associated with the permitted units, shall be removed promptly after the spillage and/or rainfall event in as timely a manner as is necessary to prevent overflow of the system by the following method(s):
 - a. Removal to an on-site authorized facility unit;
 - b. Removal to an authorized industrial solid waste management facility or authorized off-site facility; or

c. Discharge in accordance with a wastewater discharge permit.

The permittee shall ensure that any equipment or vehicles which have come in contact with waste in the loading/unloading, storage, processing, and/or disposal areas have been decontaminated prior to their movement into designated uncontaminated areas of the site property. At a minimum, all contaminated equipment shall be externally decontaminated and contaminated vehicles shall have their undercarriages and tires or tracks decontaminated to remove all waste residues and to prevent contamination of uncontaminated areas. All wash water generated shall be collected and disposed of in accordance with Provision III.E.3.

4. Preparedness and Prevention

- a. At a minimum, the permittee shall equip the facility as set forth in Table III.E.3. - Emergency Equipment contained in the permit application identified in Section I.B. of this permit, as required by 40 CFR 264.32.
- b. All sumps, pumps, fire- and spill-control equipment, decontamination equipment, and all other equipment and structures authorized or required through the Contingency Plan shall be tested and maintained, as necessary, to assure its proper operation in time of emergency, as required by 40 CFR 264.33.
- c. The permittee shall maintain access to the communications or alarm system, as required by 40 CFR 264.34.
- d. A trained emergency coordinator shall be available at all times in case of an emergency and will have the responsibility for coordinating all emergency response measures as required by 40 CFR 264.55 and 264.56. Emergency number(s) shall be posted in all waste management portions of the facility and all employees in those areas shall be trained in the location of those postings.

F. Special Permit Conditions

1. Characteristic sludges and by-products that are processed to produce a fuel remain a solid waste pursuant to 40 CFR 261.2(b)(2) and 30 TAC 335.1(146)(D)(ii) and are not excluded fuels unless the oil constituents of the wastes were originally fuels themselves. Unless the oil constituents of the characteristic hazardous wastes are fuels themselves prior to recovery and reclamation, the permittee shall manage recovered/reclaimed oil as solid and/or hazardous waste if the waste exhibits a hazardous waste characteristic.
2. Within 60 days from the approval of Class 3 permit modification that was originally submitted on September 20, 2013, the permittee shall conduct Tank integrity assessment on all existing tanks that are currently used for oil recovery and reclamation operation. The permittee shall keep the assessment reports as part of the facility operating record and these records shall be made available to representatives of the TCEQ upon request. The permittee shall comply with Provision II.A.6. for certification requirements.
3. Reserved

IV. Wastes and Waste Analysis

A. Waste Analysis Plan

The permittee shall follow the Waste Analysis Plan, developed in accordance with 40 CFR 264.13 and the permit application identified in Section I.B. of this permit.

B. Authorized Wastes

1. The permittee is authorized to manage hazardous and non-hazardous industrial solid wastes listed in Table IV.B. - Wastes Managed in Permitted Units, subject to the limitations provided herein.

Wastes authorized for storage, processing, and disposal include those generated from facility sources and from off-site sources.

2. Hazardous and Non-hazardous Waste Received From Off-Site Sources

When the permittee may receive hazardous or non-hazardous waste from an off-site source (except where the permittee is also the generator), the permittee shall inform the generator in writing that the permittee has the appropriate permits and will accept the waste the generator is shipping. The permittee shall keep a copy of this written notice as part of the operating record. [40 CFR 264.12(b)]

3. The wastes authorized in Table IV.B. shall not contain any of the following:
 - a. PCB waste, as defined by the Environmental Protection Agency (EPA) in regulations issued pursuant to the Toxic Substances Control Act under 40 CFR Part 761, unless the permittee is compliant with the federal requirements for PCB storage and disposal as specified in 40 CFR Part 761;
 - b. Radioactive materials/wastes unless the permittee is authorized to store and process these wastes in compliance with specific licensing and permitting requirements under Chapter 401 of the Texas Health and Safety Code. In accordance with 30 TAC Section 336.203, no person shall dispose of radioactive material unless that person has a license or an exemption from the Texas Commission on Environmental Quality (TCEQ) under Texas Health and Safety Code, Section 401.106(a);
 - c. Explosive material, as defined by the Department of Transportation under 49 Code of Federal Regulations (CFR) Part 173 for storage, treatment, and/or disposal;
 - d. Dioxin-containing wastes, identified by EPA as F020, F021, F022, F023, F026, and F027 wastes in 40 CFR 261.31 for storage, treatment, and/or disposal;
 - e. Ignitable compressed gases;
 - f. Pressurized gases for disposal, including those contained in compressed gas cylinders unless closure devices have been removed or cylinders have been punctured and drained prior to disposal;
 - g. Bulk liquids for direct disposal;
 - h. Etiologic Agents for storage, treatment, and disposal;
 - i. Containerized liquids (except lab packs) for direct disposal;
 - j. Bulk hazardous liquids to which biodegradable absorbents have been added for disposal;
 - k. Reactive material as defined in 40 CFR Part 261.23 for storage, treatment, and/or disposal, unless the waste meets the requirements of 40 CFR Part 268 for direct landfill disposal;
 - l. Liquid organic peroxides for storage, treatment, and/or disposal;
 - m. Containerized liquids to which biodegradable absorbents have been added for disposal;

- n. Non-containerized waste containing a volatile organic concentration (VOC) of twenty (20) percent by weight or greater for storage, treatment, and/or disposal unless the containerized bulk waste containing VOC of twenty (20) percent by weight or greater is acceptable for treatment in Oil Reclamation Facility and complies with the Waste Analysis Plan requirements;
 - o. Municipal garbage as defined in 30 TAC Section 330.2(52) for storage, treatment, and/or disposal;
 - p. Putrescible wastes as defined in 30 TAC Section 330.2(109) for storage, treatment, and/or disposal;
 - q. Medical wastes as defined in 30 TAC Section 330.2(74) for storage, treatment, and/or disposal; or
 - r. Septage as defined in 30 TAC Section 330.2(130) for storage, treatment, and/or disposal.
4. Prior to accepting any additional wastes not authorized in Table IV.B., the permittee shall follow the permit amendment or modification requirements listed in 30 TAC Sections 305.62 and 305.69.
5. The permittee may store wastes restricted under 40 CFR Part 268 solely for the purpose of accumulating quantities necessary to facilitate proper recovery, treatment, or disposal provided that it meets the requirements of 40 CFR 268.50(a)(2) including, but not limited to the following:
- a. Clearly marking each container to identify its contents and the date each period of accumulation begins; and
 - b. Clearly marking each tank with a description of its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, or such information for each tank is recorded and maintained in the operating record at that facility.
6. The permittee may accept the following non-hazardous wastes generated by non-industrial entities, such as military bases, remediation companies, educational institutions, and governmental agencies:
- c. Asbestos containing materials;
 - d. Off-specification or spent chemical products;
 - e. Remediation and demolition wastes;
 - f. Empty containers;
 - g. Grease from equipment maintenance;
 - h. Non-PCB ballasts;
 - i. Mercury-free fluorescent tubes;
 - j. Paint related waste;
 - k. Waste waters.
 - l. The permittee shall comply with the applicable requirements of 30 TAC Chapter 335, Subchapter J and 30 TAC Chapter 330, Subchapter P, related to fees and reporting

C. Sampling and Analytical Methods

1. Table IV.C. - Sampling and Analytical Methods, shall be used in conjunction with the Waste Analysis Plan referenced in Section IV.A. of this permit, in performing all waste analyses.
2. The permittee shall ensure that all waste analyses utilized for waste identification or verification have been performed in accordance with methods specified in the current editions of EPA SW-846, American Society for Testing and Materials (ASTM) or other methods accepted by the TCEQ. The permittee shall have a Quality Assurance/Quality Control (QA/QC) program that is consistent with EPA SW-846 and the TCEQ QAPP.

V. Authorized Units and Operations

A. Authorized Units

1. The permittee is authorized to operate the permitted units listed in "Attachment D.1. - Authorized Permitted Units" for storage and processing and disposal subject to the limitations herein. All waste management activities not otherwise exempted from permitting under 30 TAC Section 335.2 shall be confined to the authorized facility units subject to permitting listed in "Attachment D.1. - Authorized Permitted Units". References hereinafter in this permit to "TCEQ Permit Unit No.____" shall be to the authorized permitted facility units listed in "Attachment D.1. - Authorized Permitted Units". All authorized units must be clearly identified as numbered in "Attachment D.1.". These units must have signs indicating "TCEQ Permit Unit No.____".
2. The permittee shall comply with 40 CFR 264.17, relating to general requirements for ignitable, reactive, or incompatible wastes.
3. The permittee shall prevent inundation of any permitted units and prevent any discharges of any waste or runoff of waste contaminated stormwater from permitted units. Additionally, each loading or unloading area, associated with a permitted hazardous or nonhazardous waste management unit, shall be provided with a drainage control system which will collect spills and precipitation in such a manner as to satisfy the following:
 - a. Preclude the release from the system of any collected spills, leaks or precipitation;
 - b. Minimize the amount of rainfall that is collected by the system; and
 - c. Prevent run-on into the system from other portions of the facility.
4. The permittee shall construct, operate, and maintain the facility to prevent washout of any hazardous waste by a 100-year flood, as required by 40 CFR 264.18(b)(1).
5. The permittee shall provide the following information to the Executive Director:
Reserved

B. Container Storage Areas

1. Container storage areas are shown in Table V.B. - Container Storage Areas. The permittee is authorized to operate the facility container storage areas for storage and processing subject to the limitations contained herein.
2. Containers holding hazardous waste shall be managed in accordance with 40 CFR 264.171, Condition of containers; 40 CFR 264.172, Compatibility of waste with containers; and 40 CFR 264.173, Management of containers.

3. The permittee shall construct and maintain the containment systems for the container storage areas in accordance with the drawings and details included in the Part B Application identified in Section I.B. At a minimum, the containment system must meet the requirements of 40 CFR 264.175.
4. The permittee shall comply with the following requirements for Permit Unit No.9 (Uncovered Waste Storage Areas):
 - a. The storage of wastes containing free liquids is prohibited; and
 - b. The Uncovered Waste Storage Areas shall meet the requirements of 40 CFR 264.175(c).
5. Permit Unit No. 2 - Drum Processing Building (Covered Container Storage Area), maximum capacity not to exceed 972 55-gallon drums, for storage of all containerized wastes except for wastes in roll-off containers and trucks. The processing in this building is limited to bagging and drumming of catalyst products. During processing of catalyst products, the maximum capacity of waste stored in the building shall not exceed 864 55-gallon drums or the volume equivalent and at any time the total capacity of the unit shall not exceed 972 55-gallon drums.

C. Tanks and Tank Systems

1. The permitted tank units and their approved waste types are shown in Table V.C. - Tanks and Tank Systems. The permittee is authorized to operate the permitted tank units for storage and processing subject to the limitations contained herein.
2. The Stabilization Building No. 2 shall contain the following units subject to the limitation contained herein:
 - a. Mixing Tank MT-1 (East, Permit Unit No. 11), welded steel, with a maximum working capacity of 132 cubic yards for treatment of wastes. The tank is used only for the treatment of wastes that are not subject to 40 CFR Part 264 Subpart CC requirements. The storage of wastes in this unit is prohibited.
 - b. Mixing Tank MT-2 (West, Permit Unit No. 12), welded steel, with a maximum working capacity of 132 cubic yards for treatment of wastes. The tank is used only for the treatment of wastes that are not subject to 40 CFR Part 264 Subpart CC requirements. The storage of wastes in this unit is prohibited.
3. The Stabilization Building No. 3 shall contain the following units subject to the limitation contained herein
 - a. Mixing Tank MT-3 (Permit Unit No. 13), welded carbon steel, with a maximum working capacity of 122 cubic yards for treatment of wastes. The tank is used only for the treatment of wastes that are not subject to 40 CFR Part 264 Subpart CC requirements. The storage of wastes in this unit is prohibited.
 - b. Mixing Tank MT-4 (Permit Unit No. 14), welded carbon steel, with a maximum working capacity of 122 cubic yards for treatment of wastes. The tank is used only for the treatment of wastes that are not subject to 40 CFR Part 264 Subpart CC requirements. The storage of wastes in this unit is prohibited.
 - c. Reserved
4. The permittee shall not place hazardous waste or treatment reagents in the tank system if they could cause the tank, its ancillary equipment, or a containment system to rupture, leak, corrode, or otherwise fail. [40 CFR 264.194(a)]
5. The permittee shall prevent spills and overflows from the tank or containment system as per the requirements of 40 CFR 264.194(b).

6. Secondary containment systems must be provided with a leak-detection system that is 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 twenty-four (24) hours.
 7. The permittee shall report to the Executive Director within twenty-four (24) hours of detection when a leak or spill occurs from the tank system or secondary containment system to the environment. [40 CFR 264.196(d)(1)] (A leak or spill of one pound or less of hazardous waste that is immediately contained and cleaned-up need not be reported.) [40 CFR 264.196(d)(2)] (Releases that are contained within a secondary containment system need not be reported.)
 8. Within thirty (30) days of detecting a release to the environment from the tank system or secondary containment system, the permittee shall report the following information to the Executive Director: [40 CFR 264.196(d)(3)]
 - a. Likely route of migration of the release;
 - b. Characteristics of the surrounding soil (including soil composition, geology, hydrology, and climate);
 - c. Results of any monitoring or sampling conducted in connection with the release. If the permittee finds it will be impossible to meet this time period, the permittee shall provide the Executive Director with a schedule of when the results will be available. This schedule must be provided before the required thirty (30) day submittal period expires;
 - d. Proximity of downgradient drinking water, surface water, and populated areas; and
 - e. Description of response actions taken or planned.
 9. The permittee shall submit to the Executive Director all certifications of major repairs to correct leaks within seven (7) days of returning the tank system to use. [40 CFR 264.196(f)]
- D. Surface Impoundments- Reserved
- E. Waste Piles-Reserved
- F. Land Treatment Units-Reserved
- G. Landfills
1. The permittee may dispose of industrial and hazardous waste in the secure landfill, discrete and continuous cell types, below and above grade, consisting of: active cells 43-46, and 50. The permittee may also dispose industrial and hazardous waste in the secure landfill, discrete and continuous cell types, above grade, consisting of cells 51(with 8 subcells 51-1 through 51-8) and 52 (with 14 subcells 52-1 through 52-14). The Pre-RCRA solid waste management unit (SWMU) cells 1-15, 18-20, 23-25, and the closed Mix Area; closed RCRA cells 21, 26-39, 40-42, and 48 are closed and no longer accepting wastes. The landfill cells are specifically described by Landfill Table V.G.1. - Landfills, Table V.G.3. - Landfill Liner System, and Table V.G.4. - Landfill Leachate Collection system. The facility plan view diagram incorporated herein as Attachment B describes the location of the Landfill cells. The permittee is authorized to operate the active permitted landfill(s) for waste disposal subject to the limitations contained herein.
 2. Test Fill
 - a. Prior to construction of any new landfill or landfill cell with changes in the design, specifications, materials, and/or construction specifications for the liner system, the permittee shall construct and evaluate a test fill(s) to verify that material

specifications, and construction specifications, methodology and equipment proposed to construct a full-scale compacted clay liner achieve a field hydraulic conductivity of 1×10^{-7} cm/sec or less in the testfill(s). The test fill construction plans, specifications and documentation procedures shall conform with the guidance described in Section 2.3.4.1.2. (Test Fill Construction) of "Construction Quality Assurance For Hazardous Waste Land Disposal Facilities" (EPA Publication No. 530-SW-021, dated October, 1985) and/or "Quality Assurance and Quality Control for Waste Containment Facilities" (EPA/600/R-93/182). Hydraulic conductivity of the test fill pad shall be determined using the sealed double-ring infiltrometer (ASTM D 5093), or an equivalent method approved by the Executive Director.

The permittee shall complete construction and evaluation of the test fill in accordance with the terms of this permit and shall submit certification of proper construction and evaluation in accordance with Provision II.A.6. This certification shall be signed by both the permittee and a qualified, licensed Professional Engineer competent in geotechnical engineering with experience in construction of compacted clay liners and evaluation of field permeabilities of compacted clay liners.

- b. The test fill certification report shall include the following information:
- (1) Results of all preconstruction, construction, and post construction quality assurance inspections and testing performed;
 - (2) A summary of material specifications and construction specifications, methodology and equipment necessary to construct a full-scale compacted clay liner or cover achieving a field hydraulic conductivity of 1×10^{-7} cm/sec or less;
 - (3) Complete documentation, including a summary of raw data, detailing how the field hydraulic conductivity of the compacted test fill clay liner was measured and calculated; and
 - (4) The qualifications of the engineer certifying proper test fill construction and testing.

3. General Landfill Design and Construction Requirements

- a. The landfill liner system shall consist of at least two liners which meet the requirements of 40 CFR 264.301(c)(1)(i)(A) and (B). In addition, a leachate collection/leak detection system which meets the requirements of 40 CFR 264.301(c)(2) and (3) shall be installed above and between the liners. The landfill liner system and leachate collection/leak detection system shall meet the specifications listed in Table V.G.3. - Landfill Liner System and Table V.G.4. - Landfill Leachate Collection System.

Each landfill cell shall have a liner system designed, constructed, and operated to prevent discharge of any waste or waste constituents to area groundwater. Prior to beginning excavation of any landfill cells, the permittee shall install or use an existing piezometer, well, or test pit within 50 feet or less of each cell corner for the purpose of determining the groundwater elevation. Immediately prior to completing excavation of any cell, the permittee shall then review all available groundwater data and shall adjust the maximum depth of cell excavation such that the maximum depth in any portion of the cell, including sump areas, will be a minimum of two feet above the historically highest groundwater elevation at that point. The entire cell floor elevation shall be raised as necessary to maintain a two-foot distance to the historically high groundwater elevation based on the data gathered.

For Cell 50 including the aerial component of Cell 50 over Cells 43/44/45/46, as applicable, the permittee shall install extraction wells or other appropriate effective control measures to maintain at least a two foot separation between the bottom of Cell 50 liner system and the groundwater. The separation distance to groundwater shall be determined using an average of the groundwater elevations determined from groundwater monitoring wells located on the West side of the Nueces County Ditch No. 1 for the last two semi-annual groundwater sampling events. The installation of extraction wells or other appropriate effective control measures may be in a staged manner beginning in the area of existing cells, and as new cells are constructed, the additional extraction wells or other appropriate effective control measures shall be installed to maintain at least a two-foot separation between the bottom of the liner system and the groundwater. The construction, specification, operation and maintenance of the extraction wells or other appropriate effective control measures shall be in accordance with the applicable provisions of the compliance plan.

For unconstructed Cells 51 and 52, the permittee shall maintain at least 5 feet separation from the base of containment system to the soil units in accordance with the requirements of 30 TAC 335.204(e)(5). The base of the containment system shall also be separated by at least 10 feet of material with an equivalent hydraulic conductivity towards the aquifer not greater than 10^{-7} cm/sec as measured at each sampling point distributed across the cell/subcell during construction in accordance with the requirements of 30 TAC 335.204(e)(4). The permittee shall document this information as part of the construction certification requirements of Provision V.G.3.f.

b. Soil Liner

All constructed clay-rich soil structures (liners, dikes, and cover) shall be constructed according to the specifications and methodologies established for the soil liner test fill and shall meet or exceed the following minimum specifications:

- (1) Materials for all constructed clay-rich structures shall be excavated, broken down, hydrated to the proper moisture content (if necessary) and then recompacted in loose lifts not less than 6.0 inches nor greater than 9.0 inches in thickness. If the soils are significantly below optimum moisture content (>3% below optimum moisture content) the maximum clod size of the soils will be reduced to less than 2 inches so that hydration can occur uniformly. Each lift shall be scarified to a depth no greater than 2.0 inches nor less than 0.5 inches prior to placement of the following lift;
- (2) Compaction shall be to at least 95% Standard Proctor Density at or slightly above optimum moisture content. The permittee shall compact each clay-rich structure with a sheepsfoot-type roller of the same drum diameter and length, empty and/or ballasted weight, length and face area of the feet, and yoking arrangement as used to construct the test fill required in this section. The permittee with the prior approval of the Executive Director may use a different roller of similar size and type that provides equivalent or greater compactive effort as the sheepsfoot-type roller. For areas inaccessible to a sheepsfoot roller, a tamping foot-type compactor, smooth-drum roller or vibrating-plate compactor having foot pressures of at least 250 psi shall be substituted;
- (3) The term "clay-rich soil", as described in this permit, shall be defined as soil exhibiting the following minimum characteristics:
 - (a) Plasticity index greater than or equal to 15;
 - (b) Liquid limit greater than or equal to 30; and

- (c) Percent passing No. 200 sieve greater than or equal to 30.
- (4) Laboratory Standard Proctor Density and optimum moisture content tests performed in accordance with ASTM D-698 for a minimum of one (1) representative sample from each 5000 cubic yards of soil;
- (5) Field density and moisture control tests on constructed soil liners performed in accordance with ASTM D-1556, ASTM D-2167, ASTM D-2922, or an equivalent method at a frequency of at least one per every 10,000 square feet of each lift placed;
- (6) Atterberg Limits performed in accordance with ASTM D-4318 at a frequency of at least one per every 100,000 square feet per 6.0 inches to 9.0 inches of compacted lift and for a minimum of two (2) tests per layer per cell;
- (7) Percent passing No. 200 sieve performed in accordance with ASTM D-1140 at a frequency of at least one per every 100,000 square feet per 6.0 inches to 9.0 inches of compacted lift and for a minimum of two (2) tests per layer per cell;
- (8) Soil liner thickness and slope determinations at a rate of at least one (1) determination by appropriate surveying techniques per every 10,000 square feet of soil liner installed; and
- (9) Hydraulic conductivity measurements expressed in terms of cm/sec for representative undisturbed core samples of the constructed soil liner system components at a frequency of one per acre per lift.

c. Geomembrane Liner

- (1) The following conditions shall be satisfied prior to the installation of any geomembrane liner:
 - (a) The upper four (4) inches of the supporting soil for the liner shall not contain any stones, roots, or foreign objects having a dimension greater than one (1) inch;
 - (b) The surface to be lined shall be prepared so as to provide a surface that is free of irregularities, loose earth, desiccation cracks, and abrupt changes in grade; and
 - (c) The compacted clay liner shall be maintained at or slightly above optimum moisture content and free of desiccation cracks prior to placement of any overlying geomembrane liner. Verification testing and modifications to moisture content shall be performed for the compacted clay liner during soil compaction activities and hence at least every seven (7) days until placement of the overlying component of the liner system. Final soil moisture content determinations must be performed for the clay liner within twenty-four (24) hours of placement of the overlying component of the liner system. At a minimum, soil moisture content shall be measured at six (6) inch depths at a minimum rate of one (1) test per 10,000 square feet of soil liner. The date, location, and results of all soil moisture measurements and the date and location of the synthetic liner placement shall be included in the required certification report. The results of a visual inspection made by the certifying engineer, noting the presence or absence of desiccation cracks and any remedial measures taken to remove these features, must also be included in the certification report for the landfill (cell).
- (2) During installation, all persons walking on the liner shall wear shoes which will not damage the liner.

- (3) The geomembrane shall not be installed during rainfall or in an area of pooled water.
- (4) The geomembrane shall be installed so that there will not be tension or wrinkles at the anticipated average temperature for its final use.
- (5) All personnel seaming the geomembrane shall have previous project experience in field seaming geomembrane liner using similar seaming methods.
- (6) An anchor trench having minimum dimensions of two (2) feet in width and two (2) feet in depth shall be constructed along the perimeter of the landfill trench.
- (7) The geomembrane panel shall be secured at the ground surface in the anchor trench specified in Provision V.G.3.c.(6) and shall be installed such that field seams, to the extent possible, are aligned parallel to the landfill sidewall slope.
- (8) Adjacent panels of the geomembrane shall be overlapped at least three (3) inches.
- (9) All seam areas of the geomembrane shall be clean and free of moisture, dust, dirt, and any other foreign material of any kind.
- (10) Each seaming unit for extrusion welding shall have temperature gauges that indicate the temperature of the extrudate in the machine and at the nozzle.
- (11) Field seaming shall not be done if the ambient temperature is below 34°F.
- (12) Field seaming shall not be done if the ambient temperature is below 50°F, but greater than 34°F, unless the geomembrane is preheated above that temperature by either the sun or a hot air device.
- (13) Prior to field seaming the geomembrane each day, all personnel responsible for seaming shall prepare a test seam of at least two (2) feet in length. These test seams shall be tested for adequate strength (seam peel stress equal to 100 percent of the tensile strength of the geomembrane used) prior to field seaming the geomembrane. All test seaming shall be performed under the same conditions as production seaming. Any problems with equipment or test seam strength shall be corrected prior to field seaming the geomembrane.
- (14) All seam and nonseam areas of the geomembrane shall be visually inspected for signs of defective seams, blisters, punctures, undispersed raw materials, and any sign of contamination by foreign matter. Any problems discovered shall be marked, repaired, and retested or re-evaluated. The geomembrane surface shall be clean at the time of these inspections.
- (15) All field seams shall be nondestructively tested over their entire length. Seam testing shall be performed as field seaming progresses. Any defects shall be marked, repaired, and retested.
- (16) Field seams shall be tested using, at a minimum, an ultrasonic tester, a pressure tester, or a vacuum tester suited for this purpose. All testing equipment shall be calibrated or properly adjusted prior to use each day.
- (17) All field seams shall be destructively tested at a minimum frequency of one sample for every 500 feet of weld for adequate strength as defined above. Areas of removed samples shall be patched and the patched seams non-destructively tested in accordance with Provision V.G.3.c.(15) above.
- (18) If any seam tested in accordance with Provisions V.G.3.c.(15), (16), and (17) is shown to be defective, the permittee shall evaluate the entire length of seam represented by the defective test results to determine the extent of the defect(s).

The permittee shall replace or repair defective seams prior to progressing with field seaming operations.

d. Leachate Collection/Leak Detection System

- (1) Sieve analysis tests on non-synthetic material (granular drainage media) at a minimum rate of one (1) test per 400 cubic yards.
- (2) Hydraulic conductivity measurements expressed in units of cm/sec at a frequency of at least four (4) representative samples collected from each compacted drainage layer.
- (3) Drainage layer thickness determinations at a rate of at least three (3) determination by appropriate surveying techniques per every cell or 10,000 square feet of drainage layer installed.
- (4) Drainage pipe slope determinations at a rate at least one determination by appropriate surveying techniques per every 50 feet of drainage pipe and an overall visual inspection of all pipes for sagging and improper bedding.

e. Run-On and Run-Off Control Systems

The permittee shall design and construct a run-on control system and a run-off management system as specified in the approved Part B Permit Application Section V.G., which is incorporated into this permit through Section I.B. [30 TAC Sections 335.173(g) and (h)]

f. The permittee shall submit certification of proper landfill construction prior to the placement of waste in a landfill or landfill cell. The certification shall be submitted in accordance with Provision II.A.6. Within thirty (30) days of submittal of such certification, the permittee shall submit a certification report which contains the results of all tests conducted. The permittee shall conduct any tests, inspections, or measurements that are deemed necessary in the judgment of the registered professional engineer supervising the cell construction, for the engineer to certify that the landfill cell has been constructed in conformance with the design and construction specifications of this permit. The certification report shall, at a minimum, contain the following drawings and test results:

- (1) Scaled plan-view and cross-sectional drawings that accurately depict the areal boundaries and dimensions of the cell; separation distance(s) of the cell from the property boundary; minimum, maximum, and representative elevations of the excavation of the cell; minimum, maximum, and representative elevations of the cell as component parts of the liner system; location, site, volume, materials of construction, and slope, as applicable, of all soil and synthetic liners and leachate collection and leak detection system components; and
- (2) For the soil liner, geomembrane liner, and leachate collection/leak detection system; all observations, tests, and analyses required to ensure that installation has been completed in accordance with the terms of this permit and the incorporated design plans.

g. For Cell 50 including the aerial component of Cell 50 over Cells 43/44/45/46, the construction, operation, and maintenance shall be in accordance with the permit application which is incorporated by reference in Section I.B. The landfill Cell 50 including overlapping stability dikes and perimeter berms shall be constructed and maintained in accordance with the permit application which is incorporated by reference in Section I.B.

4. General Landfilling Operations

The permittee shall conduct landfilling operations according to the following requirements:

- a. The initial two (2) feet of waste or soil placed in a landfill cell shall be placed with a tracked vehicle (D-6 Caterpillar size or smaller) and shall be composed of bulk or processed non-containerized waste. Rubber-tired vehicles and roller-type compaction equipment shall not drive on any portion of the leachate collection system in a landfill cell until the initial two (2) foot layer of waste or soil has been placed;
- b. Upon compliance with Provision V.G.4.a., all subsequent waste, except containerized waste, shall be applied in lifts not greater than eighteen (18) inches and compacted to minimize settlement of landfilled waste;
- c. All exposed hazardous waste shall be covered by six inches of cover soil or an alternative cover such as a foam or spray-on product prior to end of each working day. An interim cover consisting of at least one foot of clay soil may be installed as wastes reach final grade elevation. [30 TAC Section 335.173(k)];
- d. All collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems shall be maintained and must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system. [30 TAC Section 335.173(i)];
- e. All precipitation that collects in an active landfill cell, including water that drains into the landfill cell from interior access roads, shall be managed as contaminated water and disposed of accordingly at an authorized on-site waste management unit or at an authorized off-site facility;
- f. While a landfill cell is in operation, it must be inspected at least weekly and after storm events in accordance with 40 CFR 264.303(b);
- g. The permittee shall remove leachate from collection sumps as often as necessary to ensure that the leachate depth in the leachate collection/leak detection system is always less than the thickness of the drainage material and never exceeds 12 inches;
- h. The permittee shall inspect each leak detection system and record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period of the landfill;
- i. Liquids removed from the leachate collection/leak detection systems shall be classified in accordance with 30 TAC Chapter 335, Subchapter R (Waste Classification) and shall be managed accordingly at an authorized on-site waste management unit or at an authorized off-site facility;
- j. Control of Wind Dispersal of Particulate Matter

The permittee shall cover or otherwise manage the landfill to control wind dispersal of particulate matter in accordance with the procedures described in Attachment V.2. for Cell 50 and Attachment 6 of landfill engineering report for Cells 51 and 52 of the permittee's approved permit application. Permittee shall not use leachate or contaminated stormwater for dust suppression from landfill cells without the prior approval of the Executive Director. The permittee shall submit appropriate permit modification and obtain approval prior to using leachate/contaminated stormwater from the landfill cells [30 TAC Section 335.173(j)];

- k. The permittee shall construct an interim cover specified in Provision VII.E.1.b. during landfill operation progressing continuously as the waste material reaches final elevation;
- l. During operation of Cell 48 or during closure/post-closure, a series of overlapping stability dikes shall be constructed or maintained following the sequences given in the Part B application. A perimeter, buffer layer, composed of non-hazardous waste and/or compacted clay, shall be placed adjacent to and along the interior perimeter of the stability dikes no higher than four (4) feet below the temporary dike crest as shown in the permit application.
- m. Requirements for Ignitable, Reactive or Incompatible Wastes
The permittee shall manage ignitable, reactive incompatible wastes in accordance with the following conditions:
- (1) Ignitable or reactive wastes shall not be placed in a landfill, unless the waste and landfill meet all applicable requirements of 40 CFR 268, and the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under 40 CFR 261.21 or 261.23; [40 CFR 264.312]
 - (2) Ignitable wastes in containers may be disposed in the landfill cells in accordance with 40 CFR 264.312(b); and
 - (3) Incompatible wastes, or incompatible wastes and materials must not be placed in the same landfill cell unless the permittee complies with 40 CFR 264.17(b) and follows the procedures specified in the permittee's approved permit application;
- n. Special Requirements for Hazardous Wastes F020, F021, F022, F023, F026, and F027 Reserved
- o. Stabilization of Liquid and LDR Wastes
- (1) The permittee shall not place liquids or waste containing free liquids, whether or not sorbents have been added (except small containers of hazardous waste in overpacked drums [lab packs] as described in 40 CFR 264.136, the container is very small such as an ampule, or non-storage containers [i.e. capacitors or batteries] designed to hold free liquids) in landfill cells. "Free liquids" are liquids which readily separate from the solid portion of a waste when the waste mixture is at a temperature above 32°F and ambient pressure.
 - (2) All bulk and containerized loads shall be inspected for free liquids by conducting visual inspections to assure that free liquids are not placed in the landfill. All testing for free liquids shall be according to Test Method 9095 (Paint Filter Liquids Test) as described in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (EPA Publication No. SW-846).
 - (3) If the inspection required in Provision V.G.4.o.(2) indicates that a waste contains free liquids, the waste shall be treated prior to landfilling using a treatment technology that does not solely involve the use of a material that functions primarily as a sorbent. In order to verify that chemical stabilization has taken place, a representative sample of the treated portion of the waste shall be collected from each batch of stabilized waste. Each sample shall be tested by an appropriate procedure as described in Provisions V.G.4.o. (4) and (5) in order to verify that chemical stabilization has taken place.

If the waste is nonhazardous, the waste shall be solidified prior to landfilling using a technology that does not solely involve the use of a material that functions primarily as a sorbent. Solidification will be verified using Test

Method 9095 (Paint Filter Liquids Test) as described in EPA Publication No. SW-846.

- (4) For chemical stabilization processes based solely on a pozzolonic reaction between the aqueous portion of a waste and an appropriate admix ratio of calcium hydroxide (e.g. lime) and silicates (e.g. fly ash), an unconfined compressive strength test shall be used to verify successful stabilization. Each sample taken in accordance with Provision V.G.4.o.(3) shall be prepared into a remolded specimen as described in Section 4.3 of ASTM Test Method D-2166-66. After curing for not more than 7 days, the unconfined compressive strength of the specimen shall be determined using ASTM Test Method D-2166-66.
- (5) If the liquid portion of a particular waste contains greater than 10 percent organic constituents, is hazardous, or if the stabilization process employed is not based solely on a pozzolonic reaction, then a strength verification test shall not be used to verify that sufficient chemical stabilization has occurred. Instead, the Toxicity Characteristic Leaching Procedure (TCLP) (40 CFR Part 261 Appendix II) shall be used to determine directly whether a sufficient fraction of the hazardous constituent has been made unavailable to the environment.
- (6) If a waste or a portion thereof has been stabilized in accordance with Provision V.G.4.o.(4), then the waste shall not be landfilled unless the sample collected pursuant to Provision V.G.4.o.(3) has an unconfined compressive strength of 50 psi within 7 days of treating the waste. If hazardous waste has not been stabilized in accordance with Provision V.G.4.o.(5), or if the waste stabilized in accordance with Provision V.G.4. o.(4) does not attain an unconfined compressive strength of 50 psi, then the waste shall not be landfilled if greater than 10 percent (by mass) of the organic constituents in the liquid portion of the unstabilized waste is extracted in the TCLP leaching medium.
- (7) Once it has been demonstrated with Provision V.G.4.o.(6), that a particular stabilization process used on a representative sample of a particular waste will result in a treated product that passes the unconfined compressive strength test or TCLP leaching procedure (as applicable), then samples of each batch are only required to pass the Paint Filter Liquids Test prior to placement in the landfill. If there are any changes in the treatment process (e.g., Admix ratios and stabilization material composition) and/or composition of the waste to be treated, stabilization testing shall be repeated.

Prior to first receipt of LDR wastes treated off-site or wastes which do not require treatment on-site, the permittee shall perform corroborative sampling and analysis on those wastes for all applicable LDR constituents in accordance with 40 CFR Part 268. In lieu of corroborative sampling and analysis, the generator may provide a certification, including analytical results, to the permittee verifying the waste meets all applicable LDR standards. Such analysis by the permittee or certification by the generator shall be repeated at least annually. Additionally, a minimum of 10% of the waste streams received in a calendar year shall be randomly sampled and analyzed for LDR constituents applicable to that waste stream in accordance with 40 CFR Part 268. This random analysis shall be done in addition to any other waste analysis requirements of this permit. Records shall be maintained demonstrating compliance with the above requirements and shall be kept on site and available for review by TCEQ representatives.

- (8) The permittee shall use appropriate treatment methods for waste streams requiring treatment to meet the 40 CFR Part 268 treatment standards. Successful treatment is said to be achieved if post-treatment analyses demonstrate that appropriate treatment standards will be achieved in accordance with the land disposal restrictions of 40 CFR Part 268. The permittee shall then sample and analyze the treated waste at least once a year or when the generator notification indicates potential changes in the waste characteristics. The frequency of testing may be increased to one in every ten shipments for highly variable waste streams.
- (9) Prior to first receipt of LDR wastes, the permittee shall perform corroborative sampling and analysis on the wastes for all applicable LDR constituents in accordance with 40 CFR Part 268. In lieu of corroborative sampling and analysis, the generator may provide a certification, including analytical results, to the permittee verifying the waste meets all applicable LDR standards. Such analysis by the permittee or certification by the generator shall be repeated at least annually. Records shall be maintained demonstrating compliance with the above requirements and shall be kept on site and available for review by TCEQ representatives.

p. Special Requirements for Containers

All containers, unless they are very small, such as an ampule, must be either at least 90 percent full when placed in the landfill, or crushed, shredded or similarly reduced in volume to the maximum practical extent before burial in the landfill [40 CFR 264.315];

q. Special Requirements for the Disposal of Lab Packs

The permittee shall not place containers holding liquid waste, or waste containing free liquids in a landfill, unless the following conditions apply [30 TAC Section 335.175(d)]:

- (1) The container is very small, such as an ampule,
- (2) The container is designed to hold free liquids for use other than storage, such as a battery or capacitor, or
- (3) The container is a lab pack as defined and managed in accordance with 40 CFR 264.316;

r. Waste to Liner Compatibility

The permittee shall ensure that wastes to be landfilled will not impair the function of the synthetic liner. At a minimum, waste to liner compatibility testing shall be conducted for those wastes whose compatibility with the selected membrane liner has not been conducted and the effects are unknown. For wastes and liners upon which tests have been conducted and the results and/or effects are known (manufacturer's literature, other experimental literature, etc.), additional testing is not required. The permittee shall maintain test results and/or documentation that confirms waste to liner compatibility at the facility.

5. Action Leakage Rate and Response Action Plan [40 CFR 264.302 and 264.304].

The permittee shall establish an Action Leakage Rate (ALR) pursuant to 40 CFR 264.302. The permittee shall determine if the ALR, given in gallons per acre per day, for each sump has been exceeded by converting the weekly or monthly flow rate

the monitoring data obtained to an average daily flow rate (gallons per acre per day) for each sump. The permittee shall calculate the average daily flow rate for each landfill sump on a weekly basis during the active life and closure period. The ALR for the sumps in each landfill cell is given on Table V.G.1. - Landfills.

Prior to receipt of waste, the permittee shall have in place an approved Response Action Plan (RAP) which meets the requirements of 40 CFR 264.304. The RAP shall set forth the actions to be taken if the ALR is exceeded.

6. Cell Location Survey

The permittee shall maintain the following items in the operating record:

- a. A map with the exact location and dimensions (including depth) of each cell with respect to permanently surveyed benchmarks; and
- b. A record of the areal and vertical location of each waste placed into a landfill cell.

H. Incinerators-Reserved

I. Boilers/Industrial Furnaces-Reserved

J. Drip Pads-Reserved

K. Miscellaneous Units

1. The miscellaneous units and the approved waste types are shown in Table V.K.1 - Miscellaneous Units. The permittee is authorized to operate the miscellaneous unit for processing subject to the limitations contained herein. The conditions and limitations of this subsection and its associated tables apply to the miscellaneous unit unless otherwise noted.

2. Limitations on Wastes Processed

- a. The average waste feed rate to the miscellaneous unit shall be determined and recorded in the operating records. The operational time of the waste feed conveyor shall be monitored and recorded on a continuous basis. The total net weight of each waste processed in the miscellaneous unit shall be recorded in the operating records on a daily basis. The net weights of wastes fed shall be determined using the truck scale measurements. The average waste feed rate shall be determined using the prior four weeks of net weights of waste processed and the total operational time of the feed conveyor. The average feed rate of waste shall be updated weekly and recorded in the operating records. The average feed rate of wastes shall be used along with the screening level concentrations to ensure compliance with the feed rate restrictions contained herein. Wastes exceeding the screening level concentrations for regulated constituents shall be blended in appropriate ratios to ensure compliance with the average hourly feed rate limits in Table V.K.3. When processing waste streams which have substantially different processing rates from the monthly average waste feed rates due to differing waste characteristics, the permittee shall determine the average waste feed rate for the differing wastes and establish appropriate screening levels to ensure compliance with feed rate limits. Adequate operating records shall be maintained onsite to track the movement of all wastes processed in the unit on a daily basis.
- b. The total feed rate of metals and volatile organic chlorine shall not exceed the limitations set out in Table V.K.3 - Maximum Constituent Feed Rates.

- c. Hazardous wastes processed in the miscellaneous unit shall be tracked to ensure that process residuals are properly classified when transitioning from the processing of non-excluded listed and characteristic hazardous wastes to excluded hazardous wastes. In addition, the residuals from processing shall be disposed of in accordance with all applicable requirements of Provision V.G.4. and 40 CFR Part 268.[30 TAC Sections 335.504 and 335.431]
 - d. Concentrations of chlorinated volatile organic compounds (VOCs) shall be determined in accordance with the methods specified in the Waste Analysis Plan. If chlorinated VOC concentrations are determined by sampling and analysis, the concentrations of other chlorinated volatile organic compounds, that are not target compounds of the analytical method used, shall be determined if such compounds are reasonably expected to be present in the waste based upon process knowledge. In the event that representative concentrations of chlorine from VOCs are not available based upon process knowledge or by limitations in the analytical methods, the total chlorine concentration of the waste shall be determined using methods specified in Provision IV.C.2.
3. Miscellaneous Unit Area Operating Conditions
- a. Compliance with the permit conditions specified in Provision V.K.2. of this permit will be generally regarded as compliance with the emission standards specified in Table V.K.4. However, any evidence that compliance with Provision V.K.2. is insufficient to ensure compliance with the referenced emission standards may be "good cause" for justifying initiation of an amendment pursuant to 30 TAC Section 305.62(d) or permit revocation or suspension pursuant to 30 TAC Section 305.66. [30 TAC Section 335.223(b)]
 - b. The permittee may not feed hazardous wastes to the permitted units listed in Table V.K.1 - Miscellaneous Units unless the following operating conditions are satisfied:
 - (1) The unit meets the conditions specified in Table.V.K.2 - Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems. [40 CFR 63.1206(c)(3), 63.1209(b)-(q)]
 - (2) The permittee maintains and operates an automatic waste feed cutoff system which shall activate under the conditions listed in Table V.K.2 - Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed CutOff Systems. [40 CFR 63.1206(c)(3)]
 - c. The permittee shall comply with the emission limits specified in Table V.K.4 - Maximum Allowable Emission Rates when processing hazardous wastes. [40 CFR 63.1219(b)]
 - d. The miscellaneous unit must be operated in accordance with Provision V.K.3.b. at all times when hazardous waste remains in the unit. [40 CFR 264.345(a), 63.1206(c)(1)(iii)]
 - e. Throughout normal operation, the permittee must conduct sampling and waste analysis in accordance with the Waste Analysis Plan adopted by reference in Permit Section I.B. to ensure that the hazardous wastes processed in the miscellaneous unit are within the physical and chemical composition limits specified in this permit. [40 CFR 264.341(b), 63.1209(c)]
 - f. A miscellaneous unit shall cease processing hazardous wastes when changes in the properties or feed rates of the hazardous waste or changes in design or operating conditions deviate from the limits specified herein. [40 CFR 264.345(f)]

- g. Before switching from the scrubber mode to the non-scrubber mode, the scrubber shall remain operational at a minimum time of two hours or a period equal to the average residence time of the solids in the thermal desorption unit, whichever is greater. The average residence time of the solids shall be determined by dividing the solids volume of the thermal desorption unit by the average feed rate of wastes.

Before switching from a batch mode of hazardous waste treatment operations to the oil bearing hazardous waste reclamation mode, a minimum of two bins of processed solids from the oil bearing hazardous waste reclamation mode shall be collected during the transition period. The processed solids, oils, and other residues shall retain the applicable hazardous waste listings associated with the batch-processed hazardous wastes and the oil bearing hazardous wastes processed during the transition period. The oil residues collected by the gas treatment system during the transition period shall not be mixed or blended with reclaimed oils which are to be sold as a fuel oil or other product.

- h. The permittee shall operate the High Efficiency Particulate Air (HEPA) filter system in accordance with the design specifications of the manufacturer of the filter. Dates and times of HEPA filter changes shall be recorded in the operating logs. The HEPA filter system shall be inspected at least every operating shift for proper operation. The pressure drop across the HEPA filters shall be monitored as indicators of the integrity and proper operation of the filters. If a filter is identified as being defective, the filter must be replaced and the defective condition shall be noted in the operating record. Waste feeds to the thermal desorption unit shall cease when the HEPA filter system is not in service.
 - i. The average solids discharge temperature from the dryer shall exceed 650°F when processing waste in the thermal desorption unit for compliance with land disposal restrictions. Continuing compliance with land disposal restrictions shall be verified by representative sampling of the thermal desorption unit solids to be landfilled.
 - j. The permittee shall calculate hourly rolling averages in accordance with the requirements in 40 CFR 266.102(e)(6). The permittee shall ignore periods of time when one-minute values are not available for calculating the hourly rolling average. When one-minute values become available again, the most recent one-minute average value is added to the previous 59 values to calculate the hourly rolling average. [30 TAC Section 305.127(2)]
4. Trial Burn Requirements
- a. The permittee shall submit an original and three copies of a Trial Burn Plan within 90 days of permit issuance for review to the TCEQ Executive Director. The permittee shall conduct the trial burn in accordance with the approved Trial Burn Plan. The Trial Burn Plan shall have the objectives of demonstrating compliance with the emission limits in Table V.K.4 and establishing operating limits in Tables V.K.2 and V.K.3 for two modes of operation. The first mode of operation shall be designed without the operation of the scrubber system downstream of the thermal oxidizer. The trial burn testing for the first mode of operation shall be conducted no later than 21 months after issuance of this permit. The second mode of operation shall be designed for operation of the scrubber system downstream of the thermal oxidizer. The trial burn for the second mode of operation shall be conducted within three months of the initial operation of the scrubber system. At a minimum, the Trial Burn Plan shall include the sampling and analysis plan describing the parameters to be tested, monitored, and/or analyzed and a Quality Assurance Project Plan.

- b. If based upon the analytical results of the Trial Burn, the permittee determines that the miscellaneous unit failed one or more of the performance standards established in Table V.K.4, the permittee shall notify the Executive Director of the TCEQ within twenty-four (24) hours of the determination. The Executive Director of the TCEQ may respond to the notification with a directive to the permittee to cease feeding hazardous waste or to perform such other directives as may be necessary to ensure compliance with the emission limits in Table V.K.4. The permittee may apply to the Executive Director of the TCEQ for a permit modification pursuant to 30 TAC Section 305.69 and for a new trial burn.
 - c. The trial burn report shall be submitted within ninety (90) days after the trial burn or later date if approved by the Executive Director of the TCEQ. If the permittee fails to submit the trial burn report before the deadline, the permittee shall cease processing hazardous waste in the miscellaneous unit.
 - d. At least sixty (60) days prior to commencement of the trial burn, the permittee shall provide a written notification to the Executive Director containing the scheduled commencement and completion dates for the trial burn.
5. Short-term Miscellaneous Unit Operating Conditions
- a. Pursuant to 40 CFR 270.62(a), the shakedown period beginning with initial introduction of hazardous waste to the miscellaneous unit and ending with the initiation of the trial burn shall not exceed 720 hours cumulative operating time while processing hazardous waste. During this period, any information obtained by the permittee concerning operating conditions that indicates that the operating conditions of Provision V.K.5.b. may not be adequate to ensure compliance with the performance standards in Table V.K.4, shall be submitted to the TCEQ before the initiation of the trial burn.

The submittal shall be accompanied by a request to amend or modify the permit conditions in accordance with Provision II.A.1. such that compliance with the performance standards is assured. The Executive Director may extend the duration of the shakedown period for up to 720 additional hours pursuant to an approved modification request under 30 TAC Section 305.69.
 - b. During the shakedown period, the trial burn period, and the period after completion of the initial trial burn, and pending the amendment or modification of the permit to reflect the results of the trial burn, the permittee shall operate the miscellaneous unit within the following waste feed limitations and operating conditions while feeding hazardous waste to the miscellaneous unit under the scrubber mode of operation:
 - (1) The feed rates of metals shall be limited to those specified in Table V.K.3 - Maximum Constituent Feed Rates; [40 CFR 264.344(c)(1)-(3)]
 - (2) The miscellaneous unit shall meet the conditions specified in Table V.K.5 - Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems - Short-term Operation; and [40 CFR 264.344(c)(1)-(3)]
 - (3) The permittee shall comply with the emission limits specified in Table V.K.4 - Maximum Allowable Emission Rates when processing hazardous wastes. [40 CFR 63.1219(b)]
 - c. The permittee shall maintain and operate an automatic waste feed cutoff system which shall activate under the conditions listed in Table V.K.5 - Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems - Short-term Operation. [40 CFR 264.344(c)(1)-(3)]

6. Miscellaneous Unit Sampling Requirements

- a. The permittee may conduct additional shakedown and testing in accordance with a test plan or Trial Burn Plan approved by the Executive Director. The permittee may conduct 720 hours of additional shakedown prior to conducting the test. The results from the additional testing shall be used for the purpose of determining compliance with the performance standards contained in Table V.K.4. After the approved testing is completed, the unit shall be operated in accordance with the operating conditions in effect prior to the commencement of the testing. The permittee may request a permit modification or amendment pursuant to 30 TAC Sections 305.69 or 305.62 to incorporate the new operating conditions demonstrated by the test results.
- b. Every five (5) years after issuance of this permit or upon request of the Executive Director, sampling and analysis of the waste and exhaust emissions shall be conducted to verify compliance with the feed rate limits in Table V.K.3 - Maximum Constituent Feed Rates and the emission limits in Table V.K.4 - Maximum Allowable Emission Rates under normal operating conditions. Under normal operating conditions, each of the operating parameters specified in Table V.K.2 - Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems must be held within the range of the average value over the previous twelve (12) months and the maximum or minimum allowable limit, as appropriate. The average value is defined as either the mean of all values recorded over the previous twelve (12) months or the sum of the rolling average values recorded over the previous twelve (12) months divided by the number of rolling averages recorded during that time. The average value must not include calibration data, malfunction data, and data obtained when not burning hazardous waste. Conflicting parameters shall be identified in association with the targeted operating parameter ranges for the testing in the sampling plan. [40 CFR 264.347(a)(3)]
 - (1) The permittee shall submit an original and three copies of a stack test plan to the TCEQ Executive Director at least 180 days prior to the scheduled testing date for agency review, approval and/or modification. The test plan shall include at a minimum the following, prepared in accordance with EPA guidance:
 - (a) A sampling and analysis plan describing the parameters to be tested, monitored and/or analyzed, and
 - (b) A Quality Assurance Project Plan.
 - (2) At a minimum, the miscellaneous unit shall be tested for emissions of the constituents listed in Table V.K.4 - Maximum Allowable Emission Rates, and other constituents as requested by the Executive Director.
 - (3) The operating parameters listed in Table V.K.2 - Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems shall be monitored and recorded during the stack test.
 - (4) The Waste Section of the appropriate TCEQ regional office shall be contacted a minimum of sixty (60) days prior to sampling to schedule a pretest meeting.
 - (5) An original and three copies of the final sampling report shall be forwarded to the Executive Director within ninety (90) days after receipt of the sampling results. Three of the copies of the report may be in an acceptable electronic format such as portable document file.

7. Miscellaneous Unit Monitoring, Testing and Inspection Requirements

- a. The permittee shall monitor and record the parameters listed in Table V.K.2 - Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems and Table V.K.5 - Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems - Short-Term Operation. All monitoring systems shall record data in the units corresponding to the permit limits unless otherwise specified herein. Data compression techniques for recording data will not be accepted as an appropriate record keeping system in accordance with 40 CFR 264.73. [40 CFR 264.347(d)]
- b. Stack oxygen, carbon monoxide, and total hydrocarbon concentrations shall be measured during testing required by Provisions V.K.5. and V.K.6. in accordance with the approved test plans.
- c. To verify operability, the waste feed cutoff system and associated alarms for the miscellaneous unit must be tested at least once per scheduled maintenance outage (at least 12 times per year) when hazardous waste is being processed. In addition, a complete inspection and function test shall be performed on all system alarms and emergency control devices at least annually. [40 CFR 264.347(c), 30 TAC Section 305.127]
 - (1) System testing will be accomplished by stopping the feed mechanism to the thermal desorption unit and by checking all inputs, and their associated alarms, to the waste feed cutoff system. A check of every input to the waste feed cutoff system does not have to activate the waste feed cutoff. If the permittee maintains a "fail safe" system (i.e., the feeding mechanism remains in an off mode in the event of failure), only the control panel circuits and associated alarms need testing each scheduled maintenance outage (at least 12 times per year). This may be accomplished using an electronic loop test for the components of the system, including sensors, which test the operability of the circuit without shutting off the feeding mechanism to the thermal desorption unit.
 - (2) If the waste feed cutoff system "trips" (i.e., waste feed is cut off due to a process operations excursion from specified limits) during the seven (7) day period prior to testing, the actual trip may be used to satisfy the requirement to test the waste feed cutoff system. However, the other components of the cutoff system still must be tested to ensure they are functioning properly.
- d. The monitoring and inspection data collected in Provisions V.K.7.a. and c. shall be recorded and placed in the operating log as required by 40 CFR 264.347(d). In addition to the specific requirements of that paragraph, the permittee shall also record:
 - (1) All occasions when waste is being fed to the miscellaneous unit and the operating limits specified in Provision V.K.2. are exceeded;
 - (2) All occasions when the waste feed is cut off by the automatic waste feed cutoff system, including the date, time, and cause of the incident that triggered the cutoff; and
 - (3) All occasions when waste is being fed and fugitive emissions from the miscellaneous unit are detected.
- e. During an automatic waste feed cutoff, the permittee shall continue to monitor the operating parameters for which permit limits are established. [40 CFR 264.347]

- f. For each set of ten exceedances of an emission standard or operating limit, while hazardous waste remains in the thermal desorption unit during a thirty (30) day block period, the permittee must submit a written report within five (5) calendar days of the tenth exceedance documenting the exceedances and results of the investigation and corrective measures. Except that maximum pressure parameter exceedances are not subject to this reporting requirement. The Executive Director of the TCEQ shall take appropriate action based on the results of the report. [30 TAC 305.127]
- g. The permittee shall continuously record all monitoring data as required in Table V.K.2 - Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems.
- h. A pressure transmitter system allowing for continuous monitoring of the pressure drop across the HEPA filtration system shall be installed no later than twelve (12) months after permit issuance. The continuous monitoring system shall be designed and installed to measure the pressure drop across the HEPA filter to ensure that the HEPA filtration system is operating within the manufacturer specifications. A copy of the manufacturer specifications shall be placed into the operating records.
- i. Within three (3) months of permit issuance, the permittee shall establish an automatic waste feed cutoff limit for the maximum one-minute average internal pressure of the thermal desorption unit as required by Table V.K.2 - Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems.
- j. Sampling ports and platforms shall be incorporated into the design of the proposed scrubber exhaust stack in accordance with the guidelines set forth in the TCEQ Sampling Procedures Manual, Chapter 2 Stack Sampling Facilities.
- k. The permittee shall use the test methods specified in 40 CFR 63.1208 to determine compliance with the emission standards in Table V.K.4.

8. Indirect Risk Provisions - Reserved

L. Containment Buildings-Reserved

VI. Groundwater Detection Monitoring

A. Groundwater Monitoring Program

The permittee shall design, construct and maintain a groundwater monitoring program to monitor area groundwater throughout the active life of the facility and any post-closure care period. Groundwater monitoring at the facility shall at a minimum consist of a Detection Monitoring System for the Upper Transmissive Zone (UTZ). The UTZ is part of the Beaumont Formation and consists of clay with interbeds of fine to medium-grained sand and is part of the Gulf Coast Aquifer. The Beaumont Formation occurs near the ground surface and is approximately 100 feet in thickness at the facility. The UTZ occurs at approximately 15 feet below ground surface and varies in thickness between 5 to 37 feet. The Detection Monitoring System shall yield groundwater samples from the uppermost aquifer that represent the quality of background water and the quality of groundwater at the point of compliance.

1. Identification of Detection Monitoring Program Unit(s)/Area(s)

The Detection Monitoring Program is specific to the RCRA-regulated unit(s) or area(s) listed in Table VI.B.3.b. - Unit Groundwater Detection Monitoring System and as authorized by Provision V.G.1. for Cells 51 and 52 for which groundwater monitoring requirements apply pursuant to 30 TAC Section 335.164.

2. Capabilities of Detection Monitoring Systems

The Detection Monitoring System shall yield groundwater samples from the uppermost aquifer/water-bearing zone that represent the quality of background water that has not been affected by operation of the regulated unit(s) and that represent the quality of groundwater passing the point of compliance. This system shall be capable of detecting a release from the regulated unit to the groundwater.

3. Point of Compliance

The point of compliance for the Detection Monitoring System is defined by a vertical surface, located at the hydraulically downgradient limit of the waste management area (or permitted unit) that extends down into the uppermost aquifer/water bearing zone underlying the regulated unit. The waste management area is the limit projected in the horizontal plane of the area on which waste will be placed during the active life of the regulated unit.

4. Detection Monitoring Program

The permittee is required to install and operate a Detection Monitoring System(s) subject to the limitations contained herein. The Detection Monitoring System wells for each unit/area are listed in Table VI.B.3.b. - Unit Groundwater Detection Monitoring System.

a. A Detection Monitoring System shall, at a minimum, consist of two categories of wells, Background and Point of Compliance Wells, which will be used to establish groundwater quality for each RCRA-regulated unit.

(1) Background Well(s) are those wells that are unaffected by the operations of the unit. The Background Well(s) are depicted in "Attachment F" and are also listed in Table VI.B.3.b. - Unit Groundwater Detection Monitoring System.

(2) Point of Compliance (POC) Wells are used to demonstrate compliance with the Detection Monitoring Parameters which are listed on Table VI.B.3.c. - Groundwater Detection Monitoring Parameters. POC Wells are designated in "Attachment F" and are also listed in Table VI.B.3.b. - Unit Groundwater Detection Monitoring System.

(3) The Detection Monitoring System may also include Supplemental Wells, as necessary, to establish groundwater quality and hydrogeologic conditions of the uppermost aquifer/water-bearing zone.

b. The permittee shall determine groundwater quality in the uppermost aquifer throughout the active life of the facility and any post-closure care period in accordance with the parameter list and sampling schedule specified in Provisions VI.C.2. and VI.D.2., respectively.

c. The design, construction, maintenance and operation of the authorized components of the Detection Monitoring Program must be in accordance with this permit and approved Part B Permit Application, Section VI.B., which is incorporated into this permit through Section I.B.

B. Construction, Certification, and Plugging

Wells shall be constructed and maintained so groundwater samples are representative of the aquifer's water quality. A record of drilling and construction details demonstrating compliance with the terms of this permit section shall be prepared in accordance with "Attachment G" (Well Design and Construction Specifications). Wells constructed prior to issuance of this permit may be utilized as groundwater monitoring wells if they meet the standards of "Attachment G".

1. Well Construction

- a. For all groundwater monitor wells to be constructed in accordance with this permit, the permittee shall notify the Executive Director to report the proposed monitor well location and screened interval at least thirty (30) days in advance of the anticipated date of installation or in accordance with an approved schedule for installation. Alternatively, a schedule for installation issued as part of an approved work plan shall constitute such notification. New well construction shall commence upon written approval of the Executive Director within the timeframes specified in this permit.
- b. The permittee shall install the wells of the Detection Monitoring System and submit certification of this installation within sixty (60) days of installation, as described in "Attachment G". The Detection Monitoring Wells shall be installed in accordance with the specifications outlined in "Attachment G".

2. Replacement Wells

Prior to installation of a replacement well, the permittee shall submit to the Executive Director for approval, the replacement well specifications and an explanation of why the well is being replaced. For any Detection Monitoring System well to be considered a replacement well and not a new well, the well shall have no design changes from the well being replaced; shall be drilled within fifteen (15) feet of the well being replaced; and shall be installed in accordance with this Provision and "Attachment G".

3. Well Management Activities Requiring Permit Modification

- a. If the permittee or the Executive Director determines that the well integrity, materials of construction, or well placement no longer enable a well to yield samples representative of groundwater quality from the desired aquifer(s), then the permittee shall submit a permit modification or amendment request to the Executive Director in accordance with the provisions of 30 TAC Sections 305.62 and 305.69, respectively, describing actions the permittee will take to remedy the situation. The permittee shall also notify the Executive Director within fifteen (15) days of such determination regarding a well.
- b. The permittee shall submit a permit modification or amendment request to the Executive Director in accordance with the provisions of 30 TAC Sections 305.62 and 305.69, respectively, when new POC or Background Wells are to be constructed after issuance of this permit (i.e., if the wells have not been included in the approved Part B Permit Application materials referenced in Section I.B.)
- c. The permittee shall submit a permit modification or amendment request, for installation of a new well, to the Executive Director in accordance with the provisions of 30 TAC Sections 305.62 and 305.69, respectively, when any wells being replaced do not meet the requirements of Provision VI.B.2.

4. Plugging and Abandonment Procedures

- a. If a Detection Monitoring Well listed in Table VI.B.3.b. - Unit Groundwater Detection Monitoring System is plugged and abandoned and a replacement well is not installed in accordance with this permit, then a modification request shall be submitted in accordance with 30 TAC Section 305.69 within ninety (90) days of the plugging and abandonment procedure to update Table VI.B.3.b. - Unit Groundwater Detection Monitoring System of the permit.
- b. For all wells to be plugged and abandoned after issuance of this permit, the permittee shall follow the procedures specified in "Attachment G".

C. Detection Monitoring System Operation

1. Uppermost Aquifer/Water-Bearing Zone Monitored by the Detection Monitoring System

The Detection Monitoring System shall be designed to monitor the groundwater in the uppermost aquifer/water-bearing zone. The "Uppermost Aquifer", as referenced in this permit, refers to the Upper Transmissive Zone (UTZ) which is part of Beaumont formation. The UTZ Formation ranges in elevation from approximately 50 feet above Mean Sea Level (MSL) to 20 feet above MSL. The top of the uppermost aquifer/water-bearing zone is approximately 15 feet below ground surface (BGS). Groundwater is typically encountered 17 feet BGS.

2. Groundwater Detection Monitoring Parameters and Compliance

a. The permittee shall monitor well numbers identified in Provision VI.A.4. and Table VI.B.3.b. - Unit Groundwater Detection Monitoring System. The Uppermost Aquifer's groundwater quality will be evaluated based on the parameters listed in Table VI.B.3.c. - Groundwater Detection Monitoring Parameters. Sampling and analysis for the Groundwater Detection Monitoring Parameters of Table VI.B.3.c. - Groundwater Detection Monitoring Parameters shall be conducted in accordance with Provision II.B.1.b. of this permit. [30 TAC Section 335.164(1)]

b. Background groundwater quality for a monitoring parameter or constituent shall be based on a sequence of at least four samples, taken at an interval that assures, to the greatest extent technically feasible, that an independent sample is obtained. The permittee shall sample background monitoring wells regularly throughout the life of the facility, and periodically review and revise the background values as necessary in accordance with the Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Unified Guidance, U.S. EPA, March 2009. The permittee shall determine the concentrations of the detection monitoring parameters and water quality parameters listed in Table VI.B.3.c. - Groundwater Detection Monitoring Parameters for each sample collected.

c. Compliance with the Groundwater Detection Monitoring Parameters listed in Table VI.B.3.c. - Groundwater Detection Monitoring Parameters is defined by the results of the data evaluation of Provision VI.D.4. wherein the groundwater monitoring data for each well do not exhibit evidence of contamination over background values.

If any POC Well is determined to be noncompliant with Table VI.B.3.c. - Groundwater Detection Monitoring Parameters at any time during the Detection Monitoring Program, the permittee shall respond and report according to Provision VI.E.1.

3. Post-Closure Care Period

The area(s) listed in Provision VI.A.1. shall remain in the Detection Monitoring Program during the active life of the unit(s) and during any applicable Post-Closure Care Period. After closure activities are completed for a specified unit and certification of closure is received by the Executive Director, any applicable Post-Closure Care Period shall begin. If the Post-Closure Care Period has expired and evidence of Statistically Significant Increase (SSI) of the Groundwater Detection Monitoring Parameters of Table VI.B.3.c. - Groundwater Detection Monitoring Parameters has not been confirmed in the groundwater, then the permittee shall notify the Executive Director in writing at least thirty (30) days prior to discontinuing the Detection Monitoring Program for the specified unit. Within ninety (90) days of the notification, the permittee shall submit a final report to the Commission for the specified unit. The final report shall include the information required by the annual report of Section VI.G.

4. Waste Management of Recovered Groundwater

- a. Recovered groundwater from a Detection Monitoring Well with no known contamination may be managed as uncontaminated prior to analysis. Following analysis, if the permittee determines that a Table VI.B.3.c. - Groundwater Detection Monitoring Parameter has an SSI over background value, the recovered groundwater shall be managed as contaminated water.
- b. Recovered groundwater with known contamination which exceeds the Table VI.B.3.c. - Groundwater Detection Monitoring Parameters shall be managed as contaminated water.

D. Sampling and Analysis

1. Sampling and Analysis

The permittee shall follow the methods set out in EPA's RCRA Groundwater Monitoring Draft Technical Guidance Document (November 1992) or an alternate method with prior written approval of the Executive Director to collect and preserve samples withdrawn from groundwater monitoring wells. The collected samples shall be managed (i.e., Chain of Custody and handling procedure), analyzed, and statistically evaluated (i.e., QA/QC) in accordance with the current edition of EPA SW-846 and ASTM Standard Test Methods or other equivalent methods with prior written approval of the Executive Director.

- a. All groundwater analyses required by this permit shall be performed using a QA/QC program where all information, data, and resulting decisions are technically sound, statistically valid, and properly documented. All QA/QC program details shall be put in writing and assignments made to qualified personnel. At a minimum, the program shall conform to the QA/QC program details described in the current edition of EPA SW-846 and ASTM Standard Test Methods or other equivalent methods accepted in writing by the Executive Director.
- b. Groundwater analyses required by this permit shall utilize laboratory methods which are capable of measuring concentrations equal to or less than established background values.
- c. Wells shall be sampled according to the Sampling and Analysis Plan presented in Section VI of the approved Part B Permit Application, which is incorporated into this permit through Section I.B.

The permittee or the Executive Director shall propose modifications, as necessary, to the Sampling and Analysis Plan in order to achieve the Detection Monitoring Program objectives. Any and all revisions to the plan shall become conditions of this permit at the beginning of the next full quarter after approval by the Executive Director.

2. Sampling and Analysis Frequencies and Parameters

- a. Frequencies of sampling shall be monthly, quarterly, semiannually or yearly, depending on the sampling objective. These periods of time are defined below:
 - (1) "Month" shall be a calendar month;
 - (2) "Quarter" shall be based on divisions of the calendar year (i.e., January through March, April through June, July through September, October through December);
 - (3) "Semiannual" shall be based on divisions of the calendar year (i.e., January through June, July through December) and consist of two consecutive quarters;

- (4) "Annual" or "Year" shall be four consecutive quarters, beginning with the first quarter. Years shall be designated consecutively, beginning with the "first year", "second year", etc.; and
 - (5) "Calendar year" shall be based on divisions of the calendar (i.e. January through December).
- b. Sampling of wells shall commence during the first complete quarter after issuance of this permit, or during the first quarter of operation if the permit is issued for a new unit. Samples shall be collected during the first thirty (30) days of the specified sampling frequency.
 - c. In the first and subsequent years of the Detection Monitoring Program, the wells of Table VI.B.3.b. - Unit Groundwater Detection Monitoring System shall be sampled and analyzed according to the schedule listed in Table VI.B.3.c. - Groundwater Detection Monitoring Parameters.
 - d. Field determination requirements for wells listed in Table VI.B.3.b. - Unit Groundwater Detection Monitoring System consist of the following measurements or observations which shall be established during each sampling event:
 - (1) Water level measurements relative to MSL measured to within 0.01 foot.
 - (2) Determination of pH, temperature, specific conductivity and turbidity in Nephelometric Turbidity Units for each well.
 - (3) Descriptions of water sample appearance (clarity, color, etc.) shall be recorded.
 - (4) The total depth of each well, which is not equipped with a dedicated pump, shall be measured during each sampling event. The total depth of each well equipped with a dedicated pump shall be measured when pumps are removed for maintenance. At a minimum, the wells with dedicated pumps will be checked for silting every three (3) years. The measured total depth shall be compared to the total depth recorded on the well construction log. Should an analysis of the measured and the recorded total depth reveal that the well is silting in, the permittee shall perform such actions necessary (redevelopment, replacement, etc.) to enable the well to function properly.
 - (5) All wells specified in this permit shall be inspected during each sampling event. Repairs or a proposal for replacement for any affected well shall be performed within ninety (90) days of the routine sampling event inspection which identified the problem well.

3. Statistical Procedures for Data Evaluation

For each POC Well sampled during each sampling event, the permittee shall determine whether there is evidence of an SSI in the concentrations of each Groundwater Detection Monitoring Parameter of Table VI.B.3.c. - Groundwater Detection Monitoring Parameters when compared to the Background Well groundwater quality data. In determining whether or not an SSI has occurred for a Groundwater Detection Monitoring Parameter of Table VI.B.3.c. - Groundwater Detection Monitoring Parameters, the permittee shall establish if the background values have been exceeded by utilizing the statistical procedures and data evaluation described in Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities - Unified Guidance, U.S. EPA, March 2009.

- a. The statistical procedure(s) that shall be used to determine if an SSI has occurred over background values limits shall be Upper Prediction Limit for the following unit(s) identified in Provision VI.A.1.: Cells 51 and 52. To employ the selected statistical procedure listed above, the permittee is required to collect a minimum number of samples as specified in Sampling and Analysis Plan from each unit's Background and POC Wells during each sampling event.
 - b. If it is determined that the selected statistical procedure is not appropriate to conduct data evaluation for a specified unit, then the permittee shall select an alternate statistical procedure. Prior to using a statistical procedure which is different than the one identified in Provision VI.D.3.b. the permittee shall obtain approval from the Executive Director through a permit amendment or modification as specified in 30 TAC Sections 305.62 and 305.69, respectively.
4. Data Evaluation
- a. Data evaluations shall be completed within sixty (60) days of the sampling date unless QA/QC procedures show that data are unacceptable and re-analysis or re-sampling must be performed. In such cases, the Executive Director will be notified as soon as it becomes apparent that the sixty (60) day time limit to conduct data evaluation cannot be met.
 - b. Data evaluation shall determine whether there is evidence of an SSI for Groundwater Detection Monitoring Parameters listed in Table VI.B.3.c. - Groundwater Detection Monitoring Parameters each time groundwater quality is determined at the POC in accordance with 30 TAC Section 335.163(7).

E. Response Requirements for SSI

1. If the permittee has determined an SSI over background values for any of the Groundwater Monitoring Parameters identified in Table VI.B.3.c. - Groundwater Detection Monitoring Parameters in accordance with statistical procedures authorized by Provision VI.D.3. and specified by the permittee, the permittee shall perform the following actions:
 - a. Notify the Executive Director in writing, within seven (7) days. The notification must indicate which Groundwater Detection Monitoring Parameter(s) of Table VI.B.3.c. - Groundwater Detection Monitoring Parameters has exhibited an SSI.
 - b. Immediately sample the groundwater in all wells of Table VI.B.3.b. - Unit Groundwater Detection Monitoring System which exhibit an SSI for the specified unit and determine whether constituents of Appendix IX of 40 CFR 264 are present, and if so, in what concentrations.
 - c. For any Appendix IX hazardous constituent found in the analysis pursuant to Provision VI.E.1.b., the permittee may re-sample for hazardous constituents within one month and repeat the analysis for those compounds detected.

If the results of the second analysis confirm the initial results, then these detected constituents will form the basis for a Compliance Monitoring Program. If the permittee does not re-sample for the constituents found pursuant to Provision VI.E.1.b., the hazardous constituents found during the initial Appendix IX analysis will form the basis for the Compliance Monitoring Program.
 - d. Upon establishing that a release has occurred from a unit(s), the permittee shall submit to the Executive Director a permit amendment or modification to modify the Detection Monitoring Program and a Compliance Plan application to initiate a Compliance Monitoring Program and/or a Corrective Action Program for the specified unit(s). The permit and Compliance Plan applications must be submitted based on the following schedule:

- (1) If groundwater downgradient of the specified unit does not exceed the requirements in 30 TAC Section 335.158 for the proposed groundwater protection standard (GWPS), then within ninety (90) days, the permittee shall submit a permit amendment and a Compliance Plan application to establish a Compliance Monitoring Program for the specified unit;
 - (2) If groundwater downgradient of the specified unit exceeds the requirements in 30 TAC Section 335.158 for the proposed GWPS requested in the application for a specified unit, and an Alternate Concentration Limit (ACL) is not being proposed in the application in accordance with 30 TAC Section 335.160(b) to establish the GWPS, then within 180 days, the permittee shall submit a permit amendment or modification and a compliance plan application to establish a Corrective Action Program for the specified unit; and
 - (3) If groundwater downgradient of the specified unit exceeds the requirements in 30 TAC Section 335.158 for the proposed GWPS requested in the application for a specified unit, and an ACL is being proposed in the application in accordance with 30 TAC Section 335.160(b) to establish the GWPS, then within 180 days, the permittee shall submit a permit amendment or modification and a compliance plan application with an ACL demonstration to establish a Corrective Action Program for the specified unit.
2. If the permittee determines that there is an SSI above background values for the Groundwater Detection Monitoring Parameters specified in Table VI.B.3.c., the permittee may demonstrate a source other than the RCRA-regulated unit caused the increase or that the increase resulted from error in sampling, analysis, or evaluation. In such cases, the permittee shall perform the following actions:
- a. Notify the Executive Director in writing within seven (7) days that the permittee intends to make a demonstration;
 - b. Within ninety (90) days, submit a report to the Executive Director which demonstrates that a source other than a RCRA-regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation;
 - c. Submit to the Executive Director an application for a permit amendment or modification and a compliance plan application to make any appropriate changes to the Detection Monitoring Program at the facility. The applications shall be submitted in accordance with Provision VI.E.1.d.; and
 - d. Continue to monitor groundwater in accordance with the Detection Monitoring Program at the facility.

F. Revised Detection Monitoring Program

If the permittee or the Executive Director determines that the Detection Monitoring Program no longer satisfies the requirements of 30 TAC Section 335.164, the permittee must, within ninety (90) days of either the permittee's determination or Executive Director's notification, submit a permit amendment or modification request to make any appropriate changes to the Detection Monitoring Program which will satisfy the regulations.

G. Annual Detection Monitoring Reporting Requirements

The permittee shall submit an Annual Detection Monitoring Report which shall include the following information determined since the previously submitted report:

1. A statement whether an SSI has occurred over background values in any well during the previous calendar year period and the status of any SSI events;

2. The permittee shall include the results of all monitoring, testing, and analytical work obtained or prepared pursuant to the requirements of this permit, including a summary of background groundwater quality values, groundwater monitoring analyses, statistical calculations, graphs and drawings;
3. The groundwater flow rate and direction in the uppermost aquifer. The groundwater flow rate and direction of groundwater flow shall be established using the data collected during the preceding calendar year's sampling events from the monitoring wells of the Detection Monitoring Program. The permittee shall also include in the report all documentation used to determine the groundwater flow rate and direction of groundwater flow;
4. A contour map of piezometric water levels in the uppermost aquifer based on a minimum upon concurrent measurement in all monitoring wells. All data or documentation used to establish the contour map should be included in the report;
5. Recommendation for any changes; and
6. Any other items requested by the Executive Director.

H. Record Keeping Requirements

1. The permittee shall enter all monitoring, testing, analytical, statistical test computation data in evaluating groundwater monitoring data, and inspection data obtained or prepared pursuant to the requirements of this permit, including graphs and drawings, in the operating record at the facility.
2. The operating record at the facility shall be made available for review by the staff of the Commission upon request.

I. Compliance Scheduling Requirements

The permittee shall submit the following in accordance with the scheduled time periods:

1. The permittee shall complete the installation of detection monitoring wells and shall establish the background concentration for each parameter in accordance with the Groundwater Sampling Plan incorporated into this permit through Section I.B.

VII. Closure and Post-Closure Requirements

A. Facility Closure

1. The permittee shall follow the Closure Plan, developed in accordance with 40 CFR Part 264 Subpart G, and contained in the permit application submittals identified in Permit Section I.B. except as modified in Permit Sections VII.C., and VII.E of this permit. In addition, facility closure shall commence:
 - a. Upon direction of the TCEQ for violation of the permit, TCEQ rules, or state statutes; or
 - b. Upon suspension, cancellation, or revocation of the terms and conditions of this permit concerning the authorization to receive, store, process, or dispose of waste materials; or
 - c. Upon abandonment of the site; or
 - d. Upon direction of the TCEQ for failure to secure and maintain an adequate bond or other financial assurance as required by Provision VII.B.1.

2. Request for Permit Modification or Amendment

The permittee shall submit a written request for a permit modification or amendment to authorize a change in the approved Closure Plan(s), in accordance with 40 CFR 264.112(c). The written request shall include a copy of the amended Closure Plan(s) for approval by the Executive Director.

3. Time Frames for Modification/Amendment Request Submittal

The permittee shall submit a written request for a permit modification or amendment in accordance with the time frames in 40 CFR 264.112(c)(3).

4. Closure Notice and Certification Requirements

a. The permittee shall notify the Executive Director, in writing, at least sixty (60) days prior to the date on which he expects to begin partial or final closure of a surface impoundment, or landfill unit, or final closure of a facility with such a unit; or at least forty-five (45) days prior to the date on which he expects to begin partial or final closure of a facility with processing or storage tanks, container storage, miscellaneous units or incinerator units; or at least forty-five (45) days prior to the date on which he expects to begin partial or final closure of a boiler or industrial furnace, whichever is earlier. A copy of the notice shall be submitted to the TCEQ Regional Office.

b. The permittee shall notify the TCEQ Regional Office at least ten (10) days prior to any closure sampling activity required by the permit in order to afford regional personnel the opportunity to observe these events and collect samples.

5. Unless the Executive Director approves an extension to the closure period, as per the requirements of 40 CFR 264.113(b), the permittee must complete partial and final closure activities within 180 days after receiving the final known volume of hazardous wastes at the hazardous waste management unit or facility.

6. As per the requirements of 40 CFR 264.115, within sixty (60) days of completion of closure of each permitted hazardous waste surface impoundment, or landfill unit, and within sixty (60) days of the completion of final closure, the permittee shall submit to the Executive Director, by registered mail, with a copy to the TCEQ Regional Office, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved Closure Plan and this permit. The certification, which shall be signed by the permittee and by a Professional Engineer licensed in Texas, must be in the form described in Provision II.A.6. A closure certification report shall be submitted with the required certifications which includes a summary of the activities conducted during closure and the results of all analyses performed.

The certification report shall contain the information required by Provision II.A.6. and as may be applicable, and 30 TAC Section 350.32 (Texas Risk Reduction Program (TRRP) Remedy Standard A) and 30 TAC Section 350.33 (TRRP, Remedy Standard B) and 30 TAC Section 350.95 (response Action Completion Report (RACR)).

Documentation supporting the licensed Professional Engineer's certification shall be furnished to the Executive Director upon request until the Executive Director releases the permittee from the financial assurance requirements for closure under 40 CFR 264.143(i).

7. For each disposal unit closed after permit issuance, the permittee shall submit documentation to demonstrate compliance with 40 CFR 264.116 (relating to survey plat) and 264.119 (relating to post-closure notices). Documentation to demonstrate

compliance with survey plat requirements must be submitted to the TCEQ at the time of submission of the certification of closure. Documentation to show compliance with post-closure notices must be submitted to the TCEQ no later than sixty (60) days after certification of closure.

8. Final closure is considered complete when all hazardous waste management units at the facility have been closed in accordance with all applicable closure requirements so that hazardous waste management activities under 40 CFR Parts 264 and 265 are no longer conducted at the facility unless subject to the provisions in 40 CFR 262.34.
9. All units, sumps, pumps, piping and any other equipment or ancillary components which have come in contact with hazardous wastes shall either be decontaminated by removing all waste, waste residues, and sludges or be disposed of in a manner authorized at this facility or disposed of at an authorized off-site facility
10. All contaminated equipment/structures and liners (i.e., debris) intended for land disposal shall be treated in a manner which meets or exceeds the treatment standards for hazardous debris contained in 40 CFR 268.45 or removed and managed at an authorized industrial solid waste management facility. All contaminated dikes and soils intended for land disposal shall be treated in a manner which meets or exceeds the treatment standards for hazardous soils contained in 40 CFR 268.49 or removed and managed at an authorized industrial solid waste management facility.
11. All hard-surfaced areas within the hazardous waste management unit areas shall be decontaminated and the wash water generated treated and/or disposed in a manner authorized at this facility or at an authorized off-site facility.
12. Verification of decontamination shall be performed by analyzing wash water, and as necessary, soil samples for the hazardous constituents which have been in contact with the particular item being decontaminated. In addition, the permittee shall perform visual inspections of the equipment/structures for visible evidence of contamination.
13. Unless it can be demonstrated that soil contamination has not occurred, soils shall be sampled and analyzed. Sufficiently detailed analyses of samples representative of soils remaining in non-hard-surfaced areas of the storage and processing facility area shall be performed to verify removal or decontamination of all waste and waste residues.
14. Soil and/or wash water samples shall be analyzed using laboratory methods specified in Provision II.B.1.b. Equivalent or modified methods must be specified in the Closure Plan and have written approval of the Executive Director prior to use. All data submitted to the TCEQ shall be in a manner consistent with the latest version of the TCEQ QAPP.
15. Decontamination shall be deemed complete when no visible evidence of contamination is observed and when the results from verification sampling and analyses for wash water and soil meet the following criteria:
 - a. Decontamination of hard-surfaced areas used for waste management (such as tank interiors, secondary containment structures, ancillary equipment, sumps, loading/unloading docks, etc.) shall be deemed complete when the concentration of each chemical of concern in the final rinsate sample(s) collected from the wash water is below TCEQ Texas Risk Reduction Program (TRRP), Remedy Standard A, Tier 1 Residential Class 1 Groundwater PCL; and
 - b. Unless it can be demonstrated that soil contamination has not occurred, underlying soils shall be decontaminated or removed to the TRRP Remedy Standard A, Residential PCL, for no further action. If the underlying soils are decontaminated

or removed to the PCL for Remedy Standard A, Commercial/Industrial Land use, the permittee shall comply with the institutional controls requirements of 30 TAC Section 350.111, as required.

B. Financial Assurance for Closure

1. The permittee shall provide financial assurance for closure of all existing permitted units covered by this permit in an amount not less than \$5,407,534 (2015 dollars) as shown on Table VII.E.1. - Permitted Unit Closure Cost Summary. Financial assurance shall be secured and maintained in compliance with 30 TAC Chapter 37, Subchapter P; and 30 TAC Section 335.179. Financial assurance is subject to the following:

a. Adjustments to Financial Assurance Amount

- (1) At least sixty (60) days prior to acceptance of waste in proposed permitted units listed in Table VII.E.1. - Permitted Unit Closure Cost Summary, the permittee shall increase the amount of financial assurance required for closure by the amounts listed in Table VII.E.1. and shall submit additional financial assurance documentation
- (2) The amount of financial assurance for closure of existing units, may be reduced by the amount listed in Table VII.E.1. - Permitted Unit Closure Cost Summary, upon certification of closure of an existing permitted unit, in accordance with Provisions VII.A.4. and VII.A.6., and upon written approval of the Executive Director.

b. Annual Inflation Adjustments

- (1) Financial assurance for closure, including any adjustments after permit issuance, shall be corrected for inflation according to the methods described by 30 TAC Sections 37.131 and 37.141.
- (2) The permittee shall submit to the Executive Director, upon request, such information as may be required to determine the adequacy of the financial assurance.

C. Storage, Processing, and Combustion Unit Closure Requirements

The permittee shall close the storage, processing, and combustion units identified as TCEQ Permit Unit No(s). Table V.B - Container Storage Area, Table V.C. - Tanks and Tank Systems, and V.K. - Miscellaneous Units in accordance with the approved Closure Plans, 40 CFR Part 264, Subpart G, 40 CFR 264.178 (container storage), 264.197 (tanks), and the Texas Risk Reduction Program of 30 TAC Chapter 350 and the following requirements. If all contaminated soils cannot be removed or decontaminated to TRRP Remedy Standard A (RSA), the permittee shall close the tank system including miscellaneous unit and perform post-closure care in accordance with the closure and post-closure requirements for landfills, 30 TAC Section 335.152(a)(5) and 30 TAC Chapter 350, Subchapter B. A Contingent Closure and Post-Closure Plan must be submitted no later than sixty (60) days (Closure Plan) or ninety (90) days (Post-Closure Care Plan) from the date that the permittee or the Executive Director determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of 30 TAC Section 335.174, or no later than sixty (60) days (Closure Plan) from that date if the determination is made during partial or final closure. Within 60 days of determining that the tank system must be closed as a landfill, the permittee shall submit a permit modification for closure and post-closure as a landfill.

D. Surface Impoundment Closure Requirements-Reserved

E. Landfill Closure and Certification Requirements

The permittee shall close the active landfill cells identified as TCEQ Permit Unit Nos. 01g, 01h, and 01i in Table V.G.1. in accordance with the approved Closure Plan, 40 CFR Part 264, Subpart G, 40 CFR 264.310, TRRP Remedy Standard of 30 TAC Chapter 350 Subchapter B, 30 TAC Section 335.174 and the following requirements:

1. The permittee shall close each active landfill cell through a prescribed sequence of interim cover and final cover components, as detailed in the landfill engineering report and/or in the closure plan and the following requirements:
 - a. The interim cover shall consist of a minimum one-foot thick layer of compacted clay-rich material meeting 90 % of standard compaction. This layer shall be sloped to maintain positive drainage away from the crown of the cell with at least 2.0% grade. The cover shall be maintained free of gully erosional features.
 - b. Interim cover shall be applied continuously during landfill operation progressing continuously as the waste material reaches the grade specified in application.
 - c. For the topsoil layer, thickness determinations at a rate of at least one (1) determination shall be made by appropriate surveying techniques per every 10,000 square feet of topsoil placed.
 - d. The permittee shall install a permanent benchmark at each corner of all closed landfill cells at the site within six (6) months after closure.
 - e. Within sixty (60) days of certification closure of the landfill, the permittee shall submit to the Executive Director documentation demonstrating compliance with 40 CFR 264.119, pertaining to deed recordation.
 - f. Within sixty (60) days of completion of closure of the landfill unit, the permittee shall submit to the Executive Director a closure certification report, as specified in Provision VII.A.6. and Section VII.E., for the cells not previously certified as closed. The final certification report for closure of the landfill unit shall provide any additional information as required in 40 CFR 264 Subpart G and by Section VII.E., and shall state that the landfill has been closed in accordance with the specifications in the approved Closure Plan as required by 40 CFR Section 264.115. The closure certification report shall address the technical requirements specified in 30 TAC Section 350.95 for RACR, as applicable.
2. After completion of the interim cover and final cover for a landfill cell, the permittee shall submit certification of proper construction of the cap in accordance with Provision II.A.6. Each final cover certification shall be accompanied by a certification report which contains the results of all tests performed to verify proper construction. The permittee shall conduct whatever tests, inspections, or measurements are necessary in the judgement of the professional engineer for the engineer to certify that the landfill cap has been constructed in conformance with the design and construction specifications of this permit. The certification report shall, at a minimum, contain the following engineering plans and test results:
 - a. Scaled plan-view and east-west and north-south cross-sections which accurately depict the area boundaries and dimensions of the cover; surrounding natural ground surface elevations; minimum, maximum, and representative elevations of the base on which the interim cover was placed; minimum, maximum, and representative elevations of the upper surface of the interim and final covers; thickness, extent, and materials of component parts of the cover system.
 - b. All observations tests and analyses required to ensure that the installation has been completed with the terms of this permit and the incorporated design plans.

F. Containment Buildings Closure Requirements-Reserved

G. Facility Post-Closure Care Requirements

For each hazardous waste management unit which is closed as a landfill, the permittee shall conduct post-closure care of the unit for a period of at least thirty (30) years after certification of closure of each respective unit. The Post-Closure Care Period for each closed unit is specified in Table VII.G - Post-Closure Period. Post-Closure Care shall continue beyond the specified date in Table VII.G until the Executive Director has approved the permittee's request to reduce or terminate the post-closure period, consistent with 40 CFR Section 264.117 and 30 TAC Section 335.152(a)(5). Post-Closure Care shall be performed in accordance with the Post-Closure Plans referenced in Permit Section I.B., 40 CFR 264.117, and the following requirements:

1. Maintain all storm water conveyance structures in good functional condition.
2. Maintain the cover on the affected landfill units, as applicable, such that the cover promotes drainage, prevents ponding, minimizes surface water infiltration, and minimizes erosion of the cover. Any desiccation cracks, erosion, gulying, or other damage shall be repaired upon observance.
3. Maintain a self-sustaining vegetative cover on the capped areas by periodic seeding, fertilizing, irrigation, and/or mowing.
4. Maintain all benchmarks at the facility.
5. Maintain the facility perimeter fence, manned or locked gates, and warning signs in good functional condition.
6. Ensure that all entrances to the facility have manned or locked gates.
7. Ensure that the TCEQ has access to the facility.
8. Prepare and submit the Biennial Report required by Provision II.B.7.
9. Perform all groundwater monitoring and related activities specified in Provision VI.A.1. of the permit and Section XI of the compliance plan.
10. The permittee shall collect and remove pumpable liquids in the leak detection system sumps to minimize the head on the bottom of the liner.
11. All liquids removed from the leak detection systems shall be managed as hazardous waste.
12. The permittee shall maintain a record of the amount of liquids removed from each leak detection system sump at least monthly during the post-closure period.
13. The permittee may record the amount of liquids removed from the each leak detection system sump quarterly or semi-annually during the post-closure period, after the final cover is installed, provided that the liquid level in the sump stays below the pump operating level for two (2) consecutive months or quarters, respectively.
14. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the permittee shall return to monthly recording of amounts of liquids removed from each leak detection system sump until the liquid level again stays below the pump operating level for two (2) consecutive months.
15. The permittee shall determine if the action leakage rate [specify the action leakage rate in gallons per acre per day for each sump or provide as an attachment] has been exceeded by converting the monthly flow rate from the monitoring data obtained under

Provision VII.G.12. to an average daily flow rate (gallons per acre per day) for each sump. The permittee shall calculate the average daily flow rate for each sump on a monthly basis during the post-closure care period.

16. If the action leakage rate is exceeded at any time during the post-closure period, the permittee shall perform the following minimum activities:
- a. Notify the Executive Director in writing of the exceedance within seven (7) days of the determination;
 - b. Submit a preliminary written assessment to the Executive Director within fourteen (14) days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;
 - c. Determine to the extent practicable the location, size, and cause of any leak;
 - d. Determine whether any waste should be removed from the unit for inspection, repairs, or controls;
 - e. Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and
 - f. Within thirty (30) days after the notification that the action leakage rate has been exceeded, submit to the Executive Director the results of the evaluations specified in Provisions VII.G.16.c., d., and e., the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the permittee shall submit to the Executive Director a report summarizing the results of any remedial actions taken and actions planned.
17. To make the leak and/or remediation determinations in Provisions VII.G.16.c., d., e., and f., the permittee shall:
- a. Assess the source of liquids and amounts of liquids by source;
 - b. Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and
 - c. Assess the seriousness of any leaks in terms of potential for escaping into the environment; or
 - d. Document why such assessments are not needed.
18. General Post-Closure Requirements
- a. Request for Permit Modification or Amendment
The permittee shall submit a written request for a permit modification or amendment to authorize a change in the approved Post-Closure Plan(s) in accordance with 40 CFR 264.118 (d)(2). The written request shall include a copy of the amended Post-Closure Plan(s) for approval by the Executive Director.
 - b. Time Frames for Modification/Amendment Request
The permittee shall submit a written request for a permit modification or amendment in accordance with the time frames in 40 CFR 264.118 (d)(3).

19. Post-Closure Notice and Certification Requirements

No later than sixty (60) days after completion of the established post-closure period for each unit, the owner or operator shall submit to the Executive Director, by registered mail with a copy to the TCEQ Regional Office, a certification that the Post-Closure Care Period for the unit was performed in accordance with the specifications of the approved Post-Closure Plan and this permit. The certification shall be signed by the permittee and a registered professional engineer. Documentation supporting the registered professional engineer's certification must be furnished to the Executive Director upon request until the Executive Director releases the owner or operator from the financial assurance requirements for post-closure under 40 CFR 264.145 (i).

H. Financial Assurance for Post-Closure

1. The permittee shall provide financial assurance for post-closure care of all existing units required by this permit in an amount not less than \$1,313,200 (2015 dollars) as shown on Table VII.E.2. - Permitted Unit Post Closure Cost Summary. Financial assurance shall be secured and maintained in compliance with 30 TAC Chapter 37, Subchapter P and 30 TAC Section 335.152.

a. Adjustment to Financial Assurance Amount

At least sixty (60) days prior to management of waste in proposed permitted units listed in Table VII.E.2. - Permitted Unit Post-Closure Cost Summary, the permittee shall increase the amount of financial assurance required for post-closure by the amounts listed in Table VII.E.2. - Permitted Unit Post-Closure Cost Summary and shall submit additional financial assurance documentation.

b. Inflation Factor Correction

During the active life of the facility, financial assurance for post-closure care (including adjustments after permit issuance) shall be corrected for inflation according to the methods described by 30 TAC Sections 37.131 and 37.141.

2. The permittee shall submit to the Executive Director, upon request, such information as may be required to determine the adequacy of the financial assurance.

VIII. Liability Requirements

A. Sudden and Nonsudden Accidental Occurrences

1. The permittee shall demonstrate continuous compliance with the requirements of 30 TAC Chapter 37 Subchapter P and 30 TAC Section 335.152(a)(6) to maintain liability coverage for sudden and accidental occurrences of at least \$1 million per occurrence, with an annual aggregate of at least \$2 million, exclusive of legal defense costs.
2. The permittee also shall demonstrate continuous compliance with the 30 TAC Chapter 37, Subchapter P and 30 TAC Section 335.152(a)(6) requirements to have and maintain liability coverage for nonsudden accidental occurrences in the amount of at least \$3 million per occurrence, with an annual aggregate of at least \$6 million, exclusive of legal defense costs.
3. The permittee may combine the required per-occurrence coverage levels for sudden and nonsudden accidental occurrences into a single per-occurrence level, and combine the required annual aggregate coverage levels for sudden and nonsudden accidental occurrences into a single annual aggregate level. Owners or operators who combine coverage levels for sudden and nonsudden accidental occurrences shall maintain liability coverage in the amount of at least \$4 million per occurrence and \$8 million annual aggregate.

B. Incapacity of Owners or Operators, Guarantors, or Financial Institutions

The permittee shall comply with 30 TAC Section 37.71, regarding bankruptcy, whenever necessary.

IX. Corrective Action for Solid Waste Management Units

A. Notification of Release from Solid Waste Management Unit

If a solid waste management unit (SWMU) or area of contamination not previously addressed in the RCRA Facility Assessment (RFA), or any release of hazardous waste or hazardous constituents that may have occurred from any SWMU and/or Area of Concern (AOC), is discovered subsequent to issuance of this permit, the permittee shall notify the Executive Director in writing within fifteen (15) days of the discovery.

Within forty-five (45) days of such discovery, the permittee shall submit an RFA for that unit or release which shall be based on EPA's RCRA Facility Assessment Guidance, October 1986, NTIS PB 87-107769. If the RFA indicates a release or suspected release warrants further investigation, the permittee shall comply with the requirements of Provision XI.A.6. of this permit.

B. Corrective Action Obligations-Reserved

C. Units Requiring Investigation-Reserved

D. Variance from Investigation-Reserved

E. RCRA Facility Investigation (RFI)/Affected Property Assessment (APA)-Reserved

F. Remedy Selection-Reserved

G. Compliance Plan

The permittee shall follow Section XI, Compliance Plan, developed in accordance with 30 TAC Sections 335.156 - 335.167. Any and all revisions to the Compliance Plan shall become provisions and conditions of this permit upon the date of approval by the Commission.

X. Air Emission Standards

A. General Conditions

1. Emissions from this facility must not cause or contribute to a condition of "air pollution" as defined in Section 382.003 of the Texas Health and Safety Code Ann. or violate Section 382.085 of the Texas Health and Safety Code Ann. If the Executive Director of the TCEQ determines that such a condition or violation occurs, the permittee shall implement additional abatement measures as necessary to control or prevent the condition or violation.
2. The permittee shall include in the Biennial Report, required in Provision II.B.7., a statement that hazardous waste management units or associated ancillary equipment at this facility are not subject to any of the requirements in Section X.B. and X.C., if these requirements are not applicable to any hazardous waste management units or associated ancillary equipment at this facility. If at any time any hazardous waste management units or associated ancillary equipment become subject to the requirements in Section X.B. and X.C., the permittee must immediately comply with these requirements.

B. Process Vents

The permittee must comply with the requirements of 30 TAC Section 335.152(a)(17)/40 CFR Part 264 Subpart AA, as applicable.

C. Equipment Leaks

The permittee must comply with the requirements of 30 TAC Section 335.152(a)(18)/40 CFR Part 264, Subpart BB, as applicable.

D. Tanks, Surface Impoundments and Containers

The permittee must comply with the requirements of 40 CFR Part 264, Subpart CC, as applicable.

XI. Compliance Plan

A. General Information (and Applicability)

1. The term "Uppermost Aquifer" as referenced in this Compliance Plan refers to the groundwater zone which is typically encountered approximately 16 feet below grade and ranging in elevation from approximately 50 feet above Mean Sea Level (MSL) to 20 feet above MSL. The first groundwater zone as reference in the Compliance Plan is also called "Uppermost Transmissive Zone." The second groundwater zone, referred to as the "Second Transmissive Zone" in the Compliance Plan, is encountered approximately 60 feet below grade and ranging in elevation from five (5) feet above MSL to 37 feet below MSL. The uppermost aquifer is part of the Beaumont Formation and consists of distributary and fluvial sands, silts and clays. The Beaumont formation is estimated to occur from the ground surface to approximately 100 feet below grade at the facility. Groundwater flow in the uppermost transmissive zone is generally towards several recovery wells inside the facility boundary; the facility is surrounded and/or enclosed by a slurry wall. In the second transmissive zone, the groundwater flow is generally to the northeast. Contamination has been verified in the uppermost transmissive zone and the compliance plan includes Compliance Monitoring inside and outside the slurry wall at the uppermost transmissive zone. Compliance Monitoring is also being conducted at the second transmissive zone. Currently, corrective action includes groundwater monitoring and groundwater recovery at or near the 12 RCRA hazardous waste landfill cells. Language for both the Corrective Action Program (30 TAC §335.166) and the Compliance Monitoring Program (30 TAC §335.165) is included in this Compliance Plan for reference and as contingency for future changes in accordance with Provision XI.D.6. Applicability of specific Corrective Action Program or Compliance Monitoring Program requirements depends on the status of the units, as defined in Provisions XI.A.2. through A.4. and CP Table I.
2. The Compliance Plan is specific to the waste management units listed in CP Table I (Items A and B) and depicted in CP Attachment A, for which the groundwater Corrective Action Program and Compliance Monitoring Program apply, pursuant to 30 TAC Sections 335.166 and 335.165, for releases from RCRA-regulated units.
3. The Compliance Plan is specific to the waste management units listed in CP Table I (Item D) and depicted in CP Attachment A, for which alternative requirements for the groundwater Corrective Action Program apply, pursuant to 30 TAC Sections 335.151, 335.156 and Chapter 350, for commingled releases from RCRA-regulated units and one or more SWMUs and/or AOC.
4. The Compliance Plan is specific to the SWMU and/or AOC listed in CP Table I (Item C) and depicted in CP Attachment A, for which the Corrective Action Program applies pursuant to 30 TAC Section 335.167 and Chapter 350 for releases from the SWMUs.
5. The Compliance Plan is specific to the SWMU and/or AOC listed in CP Table II for which investigation and necessary corrective action applies pursuant to 30 TAC Section 335.167 and Chapter 350 and Section XI.H.

6. The Compliance Plan applies to any SWMU and/or AOC discovered subsequent to issuance of this Compliance Plan. The permittee shall notify the Executive Director within fifteen (15) days of such a discovery. Within forty-five (45) days of discovering a SWMU or AOC, the permittee shall complete the following: Submit a RFA report for that SWMU and/or AOC which shall be based on EPA RCRA Facility Assessment Guidance, October 1986, NTIS PB 87-107769 or subsequent revisions.

The purpose of the RFA is to identify releases or potential releases of hazardous waste, hazardous constituents or other constituents of concern from SWMU and/or AOC that may require corrective action. If the RFA indicates there is no release, the permittee shall submit the RFA report to document results and the requirements of 30 TAC Chapter 350 shall not apply. However, if the RFA indicates that there is a release or a potential for release that warrants further investigation, the permittee shall conduct an investigation and necessary corrective action based on 30 TAC Chapter 350 requirements, applicable guidance, and the approved schedules in accordance with Section XI.H. Upon written approval of the RFA, the permittee shall include the newly discovered SWMU and/or AOC with each groundwater report in accordance with CP Table VII, and include the new SWMU and/or AOC on CP Tables I or II as appropriate, with the next Compliance Plan modification, amendment or renewal.

7. All dates in this Compliance Plan shall be referenced to the date of issuance of this Permit by the Texas Commission on Environmental Quality (TCEQ) unless otherwise specified. This Compliance Plan was developed based on the Compliance Plan Application dated June 3, 2009, and as revised dated January 15, 2010, and April 12, 2011. The Sampling and Analysis Plan dated August, 2004 and revised in October 2004 is incorporated as reference.

B. Authorized Components and Functions of Corrective Action and Compliance Monitoring Systems

Corrective Action Systems are required for units specified in CP Table I, Items A, C and D. The permittee is authorized to install and operate the Corrective Action System components specified in Provisions XI.B.1. through XI.B.10., subject to the limitations contained herein. Compliance Monitoring System components for units listed in CP Table I, Item B are specified below in Provision XI.B.11.

Corrective Action Systems:

1. Groundwater monitoring system may at a minimum consist of the following categories of wells listed in CP Table V, to monitor groundwater quality. An application to modify or amend the Compliance Plan is required to change the category or wells listed in CP Table V.
 - a. Background Well(s) unaffected by the operation of the facility.
 - b. POC Wells to demonstrate compliance with the Groundwater Protection Standard (GWPS).
 - c. Point of Exposure (POE) Wells, to demonstrate compliance with the GWPS and evaluate the effectiveness of the remediation program.
 - d. Alternate Point of Exposure (APOE) Wells to demonstrate compliance with the GWPS at a location other than the prescribed POE; and in maintaining a Plume Management Zone (PMZ) in accordance with 30 TAC Section 350.33.
2. The permittee is authorized to install and operate the following additional corrective action system wells to monitor groundwater quality and hydrogeological conditions of the aquifer as designated in CP Attachment A. The permittee may propose changes to the following corrective action system wells as part of the reporting requirements in CP Table VII (Item 12) and shall become part of the Compliance Plan upon approval by the

Executive Director. The purpose is to provide the permittee with the flexibility to alter the groundwater monitoring system and Corrective Action System designs, as necessary, to proactively address changing environmental conditions without modification or amendment to the Compliance Plan.

- a. Corrective Action Observation (CAO) Wells to evaluate the lateral and vertical extent of groundwater contamination in the Uppermost Aquifer and evaluate the effectiveness of the remediation program.
 - b. Corrective Action System (CAS) Wells to remediate and/or contain contaminated groundwater.
 - c. Attenuation Monitoring Point (AMP) Wells, located within the migration pathway of a chemical of concern, which demonstrates that Attenuation Action Levels (AALs) representing critical Protective Concentration Levels (PCLs) established as the GWPS will not be exceeded at the applicable point of exposure.
 - d. Supplemental Wells to gauge hydrogeologic conditions of the aquifer.
3. Groundwater Corrective Action System to effect withdrawal, treatment, and/or containment of contaminated groundwater and non-aqueous phase liquids (NAPLs) by means of recovery wells, interceptor trenches, bioremediation, air sparging and/or another alternate Corrective Action System design. Any alternate Corrective Action System designs proposed by the permittee subsequent to issuance of this Compliance Plan that are equivalent to or exceed the performance of the Corrective Action Systems approved herein shall become part of the Compliance Plan upon approval by the Executive Director. The type of Corrective Action System in operation at the facility and an evaluation of system performance shall be reported in accordance with CP Table VII.
4. Collection and conveyance system to store recovered groundwater and NAPLs, if found, prior to disposal at authorized facilities. If the recovered groundwater is characteristically hazardous and/or is contaminated with listed hazardous waste and the collection system does not meet the wastewater treatment unit exemption under 30 TAC Sections 335.2(f) and 335.41(d), the collection system shall comply with the following regulations: 1) If the contaminated groundwater is stored for less than ninety (90) days without a permit or interim status, then the container and tank collection systems shall comply with provisions of 30 TAC Section 335.69(a)(1)/40 CFR Part 265 Subparts I and J; 2) If the contaminated groundwater is stored for more than ninety (90) days, then the container and tank collection system shall comply with the provisions of 30 TAC Section 335.152(a)(7) and (8)/40 CFR Part 264 Subparts I and J. The collection and conveyance system shall consist of the following components.
- a. A groundwater CAS.
 - b. A groundwater storage system.
 - c. Appurtenances for the collection and conveyance of recovered contaminated groundwater and NAPLs, if applicable.
5. Treatment system to reduce the concentration of hazardous constituents in contaminated groundwater to the GWPS specified in CP Table III by means of biological, physical, and chemical treatment processes.
6. Groundwater containment system to inhibit contaminated groundwater above CP Table III GWPS from migrating beyond the influence of the CAS.
7. Reinjection of fresh or recovered groundwater, after treatment, into the contaminated aquifer in accordance with 30 TAC Sections 331.9 and 331.10.

8. The following handling methods are authorized for recovered groundwater having concentrations of hazardous constituents exceeding the GWPS:

- a. Treatment through an on-site wastewater treatment system and discharge via a permitted outfall in compliance with a current industrial wastewater discharge permit.
- b. Treatment of recovered groundwater by means of air stripping and carbon adsorption. The air stripper shall be maintained in compliance with applicable air quality regulations.
- c. Disposal at permitted deep injection well facility.
- d. Disposal at other authorized on-site facility or permitted off-site facility.
- e. Any other treatment methods approved by the Executive Director.

The method(s) utilized for handling, disposing and recording volumes of all recovered/purged contaminated groundwater shall be reported in accordance with CP Table VII.

9. Recovered NAPLs, if found, shall be managed (treated, stored, and disposed), or recycled in an authorized on-site unit(s) or an off-site facility.

10. The Corrective Action Program shall consist of the system components listed in Provisions XI.B.1. through XI.B.9., to be operated according to the plans and specifications as approved in Provision XI.C.1. and the specifications of this Compliance Plan.

- a. If groundwater recovery wells are utilized in the Corrective Action System, the flow rate at each recovery well shall be set and recorded once a week. This weekly flow rate data shall be used to calculate a semiannual total flow which shall be reported in accordance with CP Table VII of this Compliance Plan.
- b. All Corrective Action System components shall be maintained in a functional and leak-free condition. All above ground collection system pipes shall be inspected weekly. In addition, the area surrounding the wells shall be inspected weekly for visible signs indicating leaks in buried sections of the collection system. If a release of reportable quantity is detected in any part of the collection system, it must be reported within twenty-four (24) hours to the local TCEQ Region Office, and immediate action must be taken to stop the release and resolve the problem.
- c. The permittee shall notify the Executive Director of any scheduled or non-scheduled periods of Corrective Action System shutdown, Corrective Action System malfunction, or treatment system shutdown for maintenance lasting more than thirty (30) days. The permittee shall notify the Executive Director in writing no later than seven (7) days following the date the permittee determines that the shutdown will last more than thirty (30) days. All shutdowns and malfunctions, irrespective of duration, shall be recorded in the facility's inspection log, and shall be reported in accordance with CP Table VII.

Compliance Monitoring Systems:

11. Groundwater monitoring system may at a minimum consist of the following categories of wells listed in CP Table V, to monitor groundwater quality. An application to modify or amend the Compliance Plan is required to change the category or the wells listed in CP Table V.

- a. Background well(s) that is unaffected by the operation of the facility.
- b. POC wells to demonstrate compliance with the GWPS.

- c. POE wells to demonstrate compliance with the GWPS.
- d. APOE wells to demonstrate compliance with the GWPS at a location other than the prescribed POE.

C. General Design and Construction Requirements

1. All plans submitted with the Compliance Plan Application referenced in Provision XI.A.7., concerning the design, construction, and operation of the authorized components of the Corrective Action and Groundwater Monitoring Programs and/or groundwater Compliance Monitoring Program, are approved subject to the terms established by this Compliance Plan. All plans must comply with this Compliance Plan and TCEQ Rules. Any alternate Corrective Action System design proposed by the permittee subsequent to issuance of this Compliance Plan that are equivalent to or exceed the performance of the Corrective Action Systems approved herein shall become part of the Compliance Plan upon approval by the Executive Director.
2. Well Design, Construction, Installation, Certification, Plugging and Abandonment Procedures and Specifications

For all wells to be constructed after issuance of this Compliance Plan that do not meet the well construction specifications identified in CP Attachment C of this permit, the permittee shall submit to the Executive Director the proposed well location and construction diagram for approval at least ninety (90) days in advance of the anticipated date of installation or in accordance with an approved schedule for installation. These requirements may be met through submittal of a work plan by the permittee and subsequent approval by the Executive Director. Well installation shall commence upon written approval of the Executive Director. Wells constructed prior to issuance of this Compliance Plan may be utilized as groundwater monitoring wells if they meet the standards of CP Attachment C or are otherwise authorized by issuance of the Compliance Plan.

Unless the permittee proposes an alternate well design that will result in wells of equivalent performance, each well installed after issuance of this Compliance Plan shall follow the design specifications contained in CP Attachment C of this permit. The permittee shall follow the certification and reporting requirements for installation of new, plugging/ abandonment and replacement of existing wells as specified in CP Attachment C of this permit and CP Table VII.

3. The permittee shall not install or maintain any drinking water or supply wells that are screened within plumes of groundwater contamination at the facility.

D. Corrective Action and Compliance Monitoring Objectives and the Groundwater Protection Standard

Corrective Action and Compliance Monitoring Objectives for Units Specified in CP Table I

1. The GWPS defines the concentration limits of hazardous constituents, with respect to groundwater quality restoration in the Uppermost Aquifer and any lower interconnected aquifers, which are to be achieved at the POC, (and POE, and APOE, if applicable) and beyond in accordance with Provision XI.E.1. by operation of the Corrective Action Program and/or Compliance Monitoring Program at this facility.
2. POC wells are designated in CP Attachment A and further defined for purposes of this Compliance Plan by CP Table V, which also identifies the POE (and APOE, if any) wells for which groundwater monitoring procedures will apply (Section XI.F.)
3. For Corrective Action, the hazardous constituents detected in groundwater are specified in Column A of CP Table III and IIIA. For Compliance Monitoring, hazardous constituents that are reasonably expected to be in or derived from waste placed in the

units and that are to be monitored annually at the POC are listed in Column A of CP Table IV. The hazardous constituents detected in the groundwater are specified in Column A of CP Table IVA. Additional constituents shall be added to CP Tables IIIA (Corrective Action) and IVA (Compliance Monitoring) through a Compliance Plan modification or amendment in accordance with Provision XI.I.4.

Groundwater analysis for each hazardous constituent shall utilize an analytical method, listed in the EPA SW-846 and as listed in the July 8, 1987 edition of the Federal Register and later editions, which is capable of measuring the concentration of the hazardous constituent at a level equal to or less than the corresponding value specified in CP Tables III, IIIA, and IVA and equal to the quantitation level specified in CP Table IV except when matrix interference prevents achievement of that level.

4. The GWPS are specified in Column B of CP Tables III and IIIA (Corrective Action) or IVA (Compliance Monitoring). The GWPS shall be the values for statistical comparisons unless CP Tables III, IIIA or IVA are amended in accordance with current guidance and regulations, or if any other accepted levels are promulgated by the TCEQ or the EPA. The values in CP Tables III and IIIA or IVA will change as updates to 30 TAC Section 335.160 and Chapter 350 are promulgated. The Executive Director or the permittee may request to replace concentration limits through a modification or amendment to this Compliance Plan in accordance with 30 TAC Chapter 305 Subchapter D.
5. Compliance Period for each unit is specified in CP Table VI.
6. The GWPS Achieved for the Corrective Action Program and Compliance Monitoring Program.

Corrective Action Program

- a. Achievement of the GWPS, in accordance with Provision XI.E.1., is defined by the results of the data evaluation of Provision XI.F.4., wherein the concentrations of hazardous constituents have been reduced by the Corrective Action Program (Section XI.E.) to concentrations of hazardous constituents that do not exhibit a statistically significant increase or exceed the concentration limits when directly compared to the GWPS of CP Table III.
- b. If the GWPS is achieved at the RCRA-regulated units or waste management areas, in accordance with Provision XI.E.1., during the Compliance Period, the permittee may apply to modify or amend this Compliance Plan to revise the Corrective Action Program to the extent necessary to demonstrate by means of the Groundwater Monitoring Program that the GWPS will not be exceeded during the remainder of the Compliance Period.
- c. If the GWPS is not achieved at the RCRA-regulated units or waste management areas, in accordance with Provision XI.E.1., during the Compliance Period, the Corrective Action Program must continue until the GWPS has not been exceeded in all wells for that corrective action area for three (3) consecutive years.
- d. If the GWPS established in this Compliance Plan for the RCRA-regulated unit or waste management area have not been exceeded for three (3) consecutive years at the end of the Compliance Period, then the permittee must, within ninety (90) days, submit an application for a Compliance Plan/Permit modification or amendment to establish a Compliance Monitoring Program or a Detection Monitoring Program for the aquifer(s) during the remaining portion of the thirty (30) year post-closure care period in accordance with 40 CFR Part 264.117. If the thirty (30) year post-closure

care period has expired, the permittee may request groundwater monitoring for that RCRA-regulated unit or waste management area be discontinued. Until approval of the request, the permittee shall continue groundwater monitoring under current Compliance Plan provisions for each RCRA-regulated unit or waste management area.

- e. If the GWPS established in this Compliance Plan for SWMUs and/or AOCs listed in CP Table I, Item C have not been exceeded for three (3) consecutive years in all wells for that unit, then the permittee may apply for a modification or amendment to the Compliance Plan to terminate the Corrective Action Program for that unit.
- f. If the GWPS established by this Compliance Plan for those units/areas listed in CP Table I, Item D (regarding alternative corrective action requirements for commingled plumes) have not been exceeded for three (3) consecutive years for all wells for those units/areas, and the performance standards of 30 TAC Sections 335.8 and 335.167 are met, then the permittee may apply for a modification or amendment to the Compliance Plan to terminate the Corrective Action Program for those units/areas.

Compliance Monitoring Program

- 7. Compliance with the GWPS for each well is defined by the results of the data evaluation of Provision XI.F.4., wherein the concentrations of hazardous constituents do not exhibit a statistically significant increase (SSI) or exceed the concentration limits when directly compared to the concentration limits of CP Table IVA. If any POC (and/or POE, if any) well of CP Table V is non-compliant with the GWPS at any time during the Compliance Monitoring Program, the permittee shall respond and report according to CP Table VII. The groundwater Compliance Monitoring Program established by this Compliance Plan shall extend until expiration of the Compliance Period specified in CP Table VI. At the end of the Compliance Period, the permittee shall either:
 - a. Submit a permit modification or amendment request to re-establish a Detection Monitoring Program under 30 TAC Section 335.164 for the remaining portion of the thirty (30) year post-closure care period in accordance with 40 CFR Part 264.117 if none of the hazardous constituents are detected at concentrations equal to or greater than the values listed in CP Table IV. Until approval of the request, the permittee shall continue groundwater monitoring under current Compliance Plan provisions;
 - b. Continue monitoring under the Compliance Monitoring Program if any hazardous constituent continues to be detected at concentrations equal to or greater than the value listed in CP Table IV and the GWPS in CP Table IVA is not exceeded during remaining portion of the thirty (30) year post-closure care period; or
 - c. If the thirty (30) year post-closure care period has expired and hazardous constituents continue to be detected in groundwater by Compliance Monitoring Program, then the permittee may request groundwater monitoring be discontinued if the GWPS of CP Table IVA are not exceeded at the end of the Compliance Period. Until approval, the permittee shall continue groundwater monitoring under current Compliance Plan provisions.

E. Corrective Action Program

The Corrective Action Program applies to units specified in CP Table I, Items A, C and D. The Corrective Action Program shall remediate, recover, and/or contain contaminated groundwater from the Uppermost Aquifer and any interconnected lower aquifers, if applicable. The Corrective Action Program shall consist of the system components of Section XI.B., to be operated according to the specifications of this Compliance Plan.

The permittee shall conduct the Corrective Action Program until the performance standards of Provision XI.E.1. are met. The permittee shall initiate the Corrective Action Program immediately upon issuance of this Compliance Plan, except where other specific TCEQ response deadlines may apply.

1. Performance Standard

The permittee shall conduct the Corrective Action Program to remedy the quality of groundwater by removing or treating in place the hazardous constituents so as to achieve the concentration limits specified in the GWPS of Section XI.D. in accordance with the following:

- a. At the POC (POE and APOE, if any) and between the POC (POE and APOE, if any) and the downgradient facility property line;
- b. Beyond the facility boundary where necessary to protect human health and the environment, unless the permittee demonstrates to the satisfaction of the Executive Director that, despite the permittee's best efforts, the necessary permission from the property owner(s) was not received to undertake such action. The permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied;
- c. Operate the Corrective Action System so as to intercept, contain and/or treat the contamination in the Uppermost Aquifer unless the system is under repair or maintenance;
- d. Recommend changes to the configuration of the Corrective Action System at any time that it is determined that the contamination present in the Uppermost Aquifer, deeper zone, or any interconnected lower aquifers is not being effectively contained and/or remediated; and
- e. The permittee is required to actively remove NAPLs from the Uppermost Aquifer and any interconnected aquifers wherever found, to the extent technically practicable.

F. Groundwater Monitoring Program Requirements

The permittee shall install, operate and maintain the Groundwater Monitoring System to evaluate the compliance status of the waste management units under the Compliance Monitoring Program, or to evaluate the effectiveness of the Corrective Action Program for those units undergoing remediation, as applicable. The Groundwater Monitoring System, shall be composed of wells specified in CP Table V, and shall include at a minimum Background, and Point of Compliance, and other wells as necessary which have been approved by the Executive Director (e.g. POE, and APOE, etc.).

1. Waste Management Area Specific Background Groundwater Quality

The permittee may submit to the Executive Director for review and approval a plan to determine site-specific background values of the naturally-occurring hazardous constituents of CP Table III, IIIA (for Corrective Action) or CP Table IVA (for Compliance Monitoring) in lieu of the concentration limits given in these CP Tables. The plan shall include appropriate background well locations and screened intervals, well sampling schedules, and methodology for determining and expressing background values in a form appropriate for the statistical evaluation of the monitoring results. Once background values have been established, the permittee shall submit a modification or amendment, in accordance with Provision XI.I.4., to add background values.

2. Sampling and Analysis Plan

- a. Wells shall be sampled according to the Sampling and Analysis Plan referenced in Provision XI.A.7. The Sampling and Analysis Plan is hereby incorporated into the Compliance Plan by reference as if set out fully herein. The permittee or the Executive Director shall propose modifications to the plan, as necessary to reflect current methods in EPA SW-846 and ASTM Standard Test Methods or other methods accepted by the TCEQ. The laboratory methods utilized for groundwater analysis shall be capable of measuring concentration of each hazardous constituent equal to or less than the values in CP Tables CP III, IIIA or IVA. Any and all revisions to the plan shall become conditions of this Compliance Plan at the beginning of the first quarter following approval by the Executive Director.
- b. An up-to-date and approved Sampling and Analysis Plan shall be maintained at the facility and made available for inspection upon request.

3. Sampling and Analysis Frequencies and Parameters

- a. Frequencies of sampling are defined below:
 - (1) "Week" and "month" shall be based upon a calendar week and month;
 - (2) "Quarter" shall be based on divisions of the calendar year (i.e., January through March, April through June, July through September, October through December);
 - (3) "Semiannual" shall be based on divisions of the calendar year (i.e., January through June, and July through December) and consist of two consecutive quarters;
 - (4) "Annual" or "Year" shall be four consecutive quarters, beginning with the first quarter. Years shall be designated consecutively, beginning with the "first year", "second year", etc; and
 - (5) "Calendar year" shall be based on divisions of the calendar (i.e. January through December).
- b. Sampling of wells shall commence during the first complete quarter after issuance of this Compliance Plan. Thereafter, samples shall be collected on a semiannual basis during the first thirty (30) days of each first and third quarter. Data evaluations shall be completed within sixty (60) days of collection of the last sample unless QA/QC procedures show that data is unacceptable and re-analyses or re-sampling must be performed. In such cases, the Executive Director will be notified as soon as it becomes apparent that the sixty (60) day time limit will not be met.
- c. In the first and subsequent years of groundwater monitoring, the wells shall be sampled and analyzed according to the following schedules:
 - (1) Corrective Action Monitoring for units specified in CP Table I, Items A, C and D.
 - (a) Each Background, POC, POE, and APOE well listed in CP Table V; and each AMP if applicable, CAO, and CAS well depicted in CP Attachment A shall be sampled and analyzed semiannually for the constituents of CP Table IIIA until the achievement of the GWPS in accordance with Provision XI.D.6.
 - (b) Each CAO well, AMP well (if applicable) and CAS well shall continue to be sampled, according to Section XI.D., until any changes to these groups of wells are approved by the Executive Director pursuant to Provision XI.B.3.

- (c) Each well of CP Table V shall be sampled for the constituents of CP Table IIIA, according to Provision XI.D.3., until analytical results satisfy the GWPS of CP Table IIIA for all wells of CP Table V of that unit or area for two consecutive sampling events. All wells listed in CP Table V shall then be sampled and analyzed semiannually for the constituents of CP Table III until all constituents of CP Table III are below the GWPS for all CP Table V wells of that unit or area in accordance with Provision XI.D.6.
 - (d) If the GWPS is achieved in all wells (Background, POC, POE, APOE, AMP, CAO and CAS), in accordance with Provision XI.D.6.a., then the permittee may apply to modify or amend the Compliance Plan according to Provisions XI.D.6.b., XI.D.6.d., XI.D.6.e., or XI.D.6.f.
 - (e) Any well with NAPLs detected in the wellbore shall be considered as non-compliant with the GWPS and is not required to be analyzed for the constituents of CP Table III or IIIA.
- (2) Compliance Monitoring for units specified in CP Table I, Item B.
- (a) If data evaluation is performed in accordance with Provision XI.F.4.a., one sample from each well of CP Table V shall be taken and analyzed semiannually for the constituents of CP Table IVA. If data evaluation is performed in accordance with Provision XI.F.4.b., a sequence of at least four independent samples from each well of CP Table V shall be taken and analyzed semiannually for the constituents of CP Table IVA; and
 - (b) One sample from each well of CP Table V shall be taken and analyzed annually for constituents in CP Table IV during the first quarter of each year. Analysis for the hazardous constituents of CP Table IV and CP Table IVA may be accomplished with the same sample when sampling events coincide.
- d. Field Determination Requirements - All Wells Specified in CP Table VII (Item 12).
- (1) Water level measurements relative to Mean Sea Level shall be measured to within 0.01 ft and shall be performed during each sampling event effective immediately with issuance of this Compliance Plan. Measurements shall be taken in all monitor wells specified in this Compliance Plan.
 - (2) Field determinations of pH, temperature and Specific Conductivity are required for all wells of CP Table V and as depicted in CP Attachment A excluding wells containing NAPLs. Turbidity in nephelometric turbidity units is required if micropurging techniques are utilized during sample collection.
 - (3) Field observations including descriptions of appearance (clarity, color, etc.) shall be recorded semiannually for all wells of CP Table V and wells depicted in CP Attachment A, excluding wells containing NAPL.
 - (4) The total depth of each well which is not equipped with a dedicated pump shall be measured during each sampling event. Total depth of each well which is equipped with a dedicated pump shall be measured when: 1) pumps are removed for maintenance; or 2) the groundwater production rate of the dedicated pump decreases by 25% from the initial production rate when the pump was installed. The measured total depth shall be compared to the total depth recorded on the well construction log. Should a comparison of the measured and the recorded total depth reveal that greater than 20% of the well screen has been silted in, the permittee shall perform such actions necessary (redevelopment, replacement, etc.) to enable the well to function properly.

- (5) All wells specified in CP Table VII (Item 12) shall be inspected during each sampling event in accordance with specifications in the Sampling and Analysis Plan. Repairs or a proposal for replacement for any affected well shall be performed within ninety (90) days of the routine sampling event inspection which identified the problem well.

4. Data Evaluation Procedures

Data evaluation in accordance with this provision shall be performed for all wells within sixty (60) days of collection of the last sample for the duration of the Corrective Action Monitoring and Compliance Monitoring programs. When evaluating the monitoring results of each well, pursuant to Section XI.F., for the constituents of CP Tables III or IIIA for corrective action monitoring, or CP Tables IV or IVA for compliance monitoring, the permittee shall either:

- a. **Corrective Action Monitoring:** Directly compare the value of each constituent to the respective concentration limit of CP Table III or IIIA and determine if it is less than, equal to, or greater than the concentration limits.

If the values for all the constituents are less than or equal to the respective concentration limits, then the well shall be considered compliant with the GWPS for the sampling event. If one or more constituent value is greater than the respective concentration limit, then the well shall be considered non-compliant with the GWPS for the sampling event; or

Compliance Monitoring: Directly compare the value of each constituent to the respective concentration limit of CP Table IV or IVA and determine if it is less than, equal to, or greater than the listed value. For constituents listed in CP Table IV that are not also listed in CP Table IVA, if constituents are detected at concentrations equal to or greater than the value listed in CP Table IV, then the procedures of Provision XI.G.2.b. apply. For constituents listed in CP Table IVA, if the values for all the constituents are less than or equal to the respective concentration limits of CP Table IVA, then the well shall be considered compliant with the GWPS for the sampling event. If one or more constituent value is greater than the respective concentration limit, then the well shall be considered non-compliant with the GWPS for the sampling event and the procedures of Provision XI.G.2.a. apply; or

- b. Compare the value of each constituent to its respective concentration limit of CP Table III or IIIA for corrective action monitoring, or CP Table IV or IVA for compliance monitoring, using one of the following procedures:
 - (1) The Confidence Interval Procedure for the mean concentration based on a normal, log-normal, or non-parametric distribution. The 95 percent confidence coefficient of the t-distribution will be used in constructing the confidence interval (Chapter 21 of Statistical Analysis of Groundwater Data at RCRA Facilities-Unified Guidance, U.S. EPA, March 2009), and subsequent updates acceptable to the Executive Director. The confidence interval upper limit for each constituent shall be compared with the corresponding concentration limit in CP Table III or IIIA for corrective action monitoring, or CP Table IV or IVA for compliance monitoring. To be considered in compliance, the confidence interval upper limit for a well in question must not exceed the tabled concentration limit. A confidence interval upper limit above the tabled concentration limit shall be considered as evidence of statistically significant contamination; or

concentration limit of CP Table IVA is being exceeded pursuant to the procedures used in Provision XI.F.4. at any POC (POE, and APOE, if applicable) well of CP Table V, then the permittee must notify the Executive Director of this finding in writing within seven (7) days. The notification must identify what concentration limits have been exceeded and indicate that the permittee will either:

- (1) Submit a Compliance Plan modification or amendment to the Executive Director to establish a Corrective Action Program meeting the requirements of 30 TAC Section 335.166 within 180 days of such determination in accordance with 30 TAC Section 335.165(8)(B);
 - (2) Demonstrate that a source other than the regulated unit caused the exceedance of the concentration limits of CP Table IVA or that the concentration is an artifact caused by errors in sampling, analysis, or statistical evaluation or natural variation in the groundwater within ninety (90) days in accordance with 30 TAC Section 335.165(9); or
 - (3) Re-evaluate the criteria originally used to establish the concentration limits of the GWPS to determine if a Corrective Action Program is necessary. If it is determined that revised concentration limits will result in a GWPS that is protective of human health and the environment, then the permittee may request to replace the concentration limits of the GWPS through a modification or amendment to this Compliance Plan in accordance with Provision XI.D.6. Such a request must be submitted within ninety (90) days and may require a proposal for additional groundwater monitoring wells to verify attenuation of the contaminant plume to levels that are protective of human health and the environment.
- b. If the permittee detects CP Table IV constituents at concentration levels equal to or greater than the listed Quantitation Limit and which exceed background groundwater quality in groundwater samples from POC (POE, APOE, if any) wells of CP Table V that are not already identified in CP Table IVA as monitoring constituents, then the permittee must either:
- (1) Report the concentration of the newly detected constituents to the Executive Director within seven (7) days after the completion of the analysis. Within ninety (90) days after the completion of the analysis, the permittee shall submit a modification or amendment application, in accordance with Provision XI.I.4., requesting that the constituent be added to the CP Table IVA. The request shall propose a concentration limit for the GWPS based on 30 TAC Section 335.160 for each constituent; or
 - (2) Resample within thirty (30) days of the initial findings and repeat the CP Table IV analysis. If the second analysis does not confirm the presence of the newly detected constituents, then the permittee shall continue monitoring under the current Compliance Plan provisions. If the second analysis confirms the presence of the newly detected constituents, then the permittee shall report the concentration of these additional constituents to the Executive Director within seven (7) days after the completion of the second analysis. Within ninety (90) days after completion of the second analysis, the permittee shall submit a modification or amendment application, in accordance with Provision XI.I.4., requesting that the confirmed constituents be added to the CP Table IVA. The request shall propose a concentration limit for the GWPS based on 30 TAC Section 335.160 for each constituent.

- c. If the permittee or the Executive Director determines that the Compliance Monitoring Program required by this Compliance Plan no longer satisfies the requirements of 30 TAC Section 335.165, the permittee must, within ninety (90) days of either the permittee's determination or Executive Director's notification, submit a Compliance Plan application, in accordance with Provision XI.J.4., to make changes to the Compliance Monitoring Program which will satisfy the regulations.
 3. For Corrective Action and Compliance Monitoring Programs, the permittee shall submit a groundwater monitoring report(s) in accordance with the frequency specified in Column B, CP Table VII, and contain the information listed in CP Table VII required for the specific program(s) that are applicable.
- H. Corrective Action and Interim Corrective Measures (ICMs) for Solid Waste Management Units

1. Corrective Action Obligations

The permittee shall conduct corrective action as necessary to protect human health and the environment for all releases of hazardous waste, hazardous constituents listed in Appendix VIII and/or 40 CFR Part 264, Appendix IX and/or other COCs from any SWMU and/or AOC according to 30 TAC Section 335.167. Corrective action shall consist of an Affected Property Assessment (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 reports according to 30 TAC Chapter 350.

In the case of SWMUs and/or AOCs that have been grandfathered under 30 TAC Chapter 335, Subchapters A and S, Risk Reduction Standards (RRS), corrective action shall consist of the RCRA Facility Investigation (RFI) and if necessary, Interim Corrective Measures (ICM), Baseline Risk Assessment (BLRA), Corrective Measures Study (CMS) 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, Subchapters A and S, provided the permittee complies with the notification and schedule requirements pursuant to 30 TAC Sections 335.8 and 350.2(m). If on the basis of the APA /RFI, it is determined that COC have been or are being released into the environment, the permittee may be required to conduct necessary ICMs and/or corrective actions.

Upon Executive Director's review of corrective action obligations, the permittee may be required to perform any or all of the following:

- a. Conduct investigation(s);
- b. Provide additional information;
- c. Investigate additional SWMU(s) and/or AOC(s); and/or
- d. Submit an application for a modification/amendment to a Compliance Plan to implement corrective action.

Any additional requirements must be completed within the time frame(s) specified by the Executive Director.

2. The permittee shall conduct an RFI/APA for the SWMUs and/or AOC listed in CP Table II, in accordance with Provision XI.A.5., and for any new SWMUs and/or AOC discovered after the issuance of this Compliance Plan in accordance with Provision XI.A.6.

3. Variance From Investigation

The permittee may elect to certify that no COCs are currently or never have been present or managed in a SWMU and/or AOC referenced in Provision XI.H.2. in lieu of performing the investigation required in Provisions XI.H.1. and XI.H.4., provided that confirming data is submitted for the current and past waste(s) managed in the respective unit or area. The permittee shall submit such information and certification(s) on a unit-by-unit basis in the time frame required in Provision XI.H.4. for review and approval by the Executive Director of the TCEQ. Should the permittee fail to demonstrate and certify that COCs are not or were not present in a particular unit, the investigation required in Provisions XI.H.1. and XI.H.4. shall be performed for the SWMU and/or AOC.

4. RCRA Facility Investigation (RFI)/Affected Property Assessment (APA)

Within sixty (60) days from the date of issuance of this Compliance Plan and/or approval of the RFA Report of Provision XI.A.5., the permittee shall submit a schedule for completion of the RFI(s)/APA to the Executive Director for review and approval. The permittee shall initiate the investigations in accordance with the approved schedule and guidance contained in the EPA publication EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994 and in accordance with state regulations referenced in Provision XI.H.1. The results of the RFI/APA must be appropriately documented in a report and submitted to the Executive Director for approval within the time frame established in the approved schedule. The Report shall be considered complete when the full nature and extent of the contamination, the QA/QC procedures and the Data Quality Objectives are documented to the satisfaction of the Executive Director. The permittee shall propose or conduct ICMs, as necessary, to protect human health and the environment.

5. Remedy Selection

Upon approval of RFI Report/APA Report (APAR), if it is determined that there has been a release of COCs into the environment, which poses a potential risk to human health and the environment, then the permittee shall propose a remedy in accordance with the 30 TAC Chapter 335, Subchapters A and S, Risk Reduction Standards (if applicable), the TRRP rules, or as otherwise authorized by the Executive Director. This may require a BLRA and/or CMS Report to be submitted for review and approval within the time frame(s) specified by the Executive Director. For facilities that are grandfathered under 30 TAC Chapter 335, Subchapter S, this report shall address RRS requirements, and the applicable items contained in the EPA publications referenced in Provision XI.H.4. or other guidance acceptable to the Executive Director. For projects conducted under TRRP, the risk assessment process shall be addressed in the APAR and the evaluation of corrective measures shall be conducted as part of the remedy standard selection process.

6. Corrective Measures Implementation (CMI)/Remedial Action Plan (RAP)

If on the basis of the RFI and/or BLRA and/or CMS or APA, it is determined that there is a risk to the human health and environment, then the permittee shall submit for approval a CMI Work Plan(s) or propose a response action (TRRP) within 180 days of receipt of approval of the RFI and/or BLRA/CMS Report or APAR unless otherwise extended by the Executive Director. The CMI Workplan shall address all of the applicable items contained in the EPA publications referenced in Provision XI.H.4. or other guidance acceptable to the Executive Director. Response actions, including TRRP Remedy Standard A or Risk Reduction Standard (RRS) No. 2, cannot be self-implemented as normally allowed by TRRP or RRS because under Hazardous Solid Waste Amendments (HSWA) corrective action and permit provisions requires the CMI workplan to be reviewed prior to approval and public participation (see also Provision

XI.H.7.) For TRRP response actions, the permittee shall submit a RAP in accordance with schedules and requirements of 30 TAC Chapter 350. The CMI Workplan or RAP shall contain detailed final proposed engineering design, monitoring plans and schedule to implement the selected remedy and assurances of financial responsibility for completing the corrective action. Upon completion of the response action, the permittee shall submit a CMI Report or Response Action Completion Report (RACR) to the TCEQ for review and approval. The CMI Report shall address all the applicable items in the EPA publications EPA/520-R-94-004, OSWER Directive 9902.3-2A, RCRA Corrective Action Plan (Final), May 1994 or other guidance acceptable to the Executive Director. The RACR shall address all the applicable items in Title 30 TAC Chapter 350 and applicable guidance.

If the response action does not propose a permanent remedy (e.g., RRS No. 3 or Remedy Standard B), or the response action requires long-term groundwater monitoring in order to demonstrate attainment of a permanent remedy (e.g., monitored natural attenuation to demonstrate Remedy Standard A), the permittee must submit a CMI Workplan or RAP as part of a Compliance Plan application and/or modification/amendment in accordance with Provision XI.J.4. to establish corrective action and provide financial assurance to satisfy the requirements of 30 TAC Section 335.167. The Compliance Plan application and/or modification/amendment must be submitted within 180 days of approval of the CMS/BLRA or APAR. The permittee may propose an alternative schedule to be approved by the Executive Director to incorporate several approved CMI Workplans or RAPs into a single Compliance Plan modification/or amendment when CMI Workplans or RAP schedules coincide. Implementation of the corrective measure(s) shall be addressed through issuance of a new or modified/amended Compliance Plan.

To report the progress of the corrective measures, the permittee shall submit to the TCEQ CMI Progress Reports or RAERs (TRRP) semiannually as a section of the Compliance Plan report required by CP Table VII of this Compliance Plan, or as otherwise directed.

If deed recordation and necessary institutional controls are required as part of the final corrective action, the permittee shall within ninety (90) days of approval for the final corrective action submit to the Executive Director for review and approval the required proof of deed notice in accordance with Provision XI.I.1.

7. Public Notice

a. The permittee shall conduct public notice when:

- (1) CMI Work Plan or RAP is submitted to the Executive Director, in accordance with Provision XI.H.6., which contains the proposed final corrective measure for SWMU(s) and/or AOC(s) from which a release has occurred, and with proposed institutional control (as applicable). This process occurs through Compliance Plan renewal, or modification/ amendment; or
- (2) If on the basis of the RFI/BLRA or APAR required by Provisions XI.H.4. and XI.H.5., it is determined the release from SWMU(s) and/or AOC(s) meets the performance standards under RRR or TRRP such that no remedy is needed, there is no risk to the human health and environment, and the permittee seeks approval of no further action determination by the Executive Director. This process occurs through corrective action process.

- b. No public notice is required when it is determined based on the results of the RFA required by Provision XI.A.6., or the RFI or APAR required by Provision XI.H.4., that no release occurred from a SWMU and/or AOC.

The purpose of the public notice is to give the members of the public the opportunity to submit written comments on the proposed corrective measure(s) or proposed no further action determination. Refer to CP Attachment B of this Compliance Plan for further guidance on public notice participation in HSWA corrective action.

8. Interim Corrective Measures (ICM)

- a. The ICM apply to waste management units or AOC under investigation for which a final Corrective Action Program has not been authorized by the Compliance Plan. ICM also apply to units/AOC that are discovered after issuance of this Compliance Plan.
- b. The objectives of the ICM are to remove, decontaminate, and/or stabilize the source (i.e., waste and waste residues) and contaminated media to protect human health and the environment. The permittee shall modify the ICM, as necessary, to achieve these objectives.
- c. The permittee is authorized to design, construct, operate and maintain ICM for waste management units/AOC as necessary to protect human health and the environment. The ICM shall be operated until final corrective measures established, in accordance with Provision XI.H.6., are authorized in the Compliance Plan. At a minimum, the ICM shall consist of the following:
 - (1) Specific performance goals to protect human health and the environment;
 - (2) A monitoring system to evaluate the ICM and determine if the objectives outlined in Provision XI.H.8.b. are being met. All ICM wells must comply with the requirements of Provision XI.C.2. and CP Attachment C, Well Design and Construction Specifications, of this permit;
 - (3) An implementation schedule to initiate ICMs;
 - (4) Submittal of a report specifying the design of the ICM upon installation. During implementation of the ICM, periodic ICM Status Reports shall be submitted in accordance with CP Table VII (Item 25) to document the objectives of Provision XI.H.8.b. are being achieved; and
 - (5) A procedure to modify the design, as necessary, to achieve the objectives outlined in Provision XI.H.8.b.

I. Financial Assurance

The permittee shall provide financial assurance for operation of the Groundwater Monitoring and Corrective Action Programs, as applicable, in accordance with this Compliance Plan in a form acceptable to the Executive Director in an initial amount not less than \$8,317,330 (2015 Dollars) within sixty (60) days of issuance of this Compliance Plan. The financial assurance shall be secured, maintained, and adjusted in compliance with TCEQ regulations on hazardous waste financial requirements (30 TAC Chapter 37, Subchapter P).

J. General Provisions

1. Deed Recordation Requirements

For waste and contaminated media approved to remain in place above background or health-based concentration levels after completion of the corrective action and/or groundwater monitoring programs, the permittee shall record an instrument in the

county deed records for the facility to specifically identify the areas of contamination exceeding background or health-based values. The deed certification shall follow the requirements of 30 TAC Sections 335.560 and 335.569 or 30 TAC Section 350.111, where applicable.

2. Notification Requirements

The permittee shall notify the local TCEQ region office at least ten (10) days prior to any well installation or sampling activity required by the Compliance Plan in order to afford Region personnel the opportunity to observe these events and collect samples. This notification requirement will not apply to the routine semiannual or annual groundwater sampling events specified in this Compliance Plan.

3. Distribution of Copies

The permittee shall submit all schedules, plans, and reports required by this Compliance Plan according to the following distribution list:

- a. An original and one copy to the Corrective Action Section, Mail Code MC-127, Remediation Division, Texas Commission on Environmental Quality in Austin, Texas; and
- b. One copy to the Waste Program, Texas Commission on Environmental Quality Region 14 Office in Corpus Christi, Texas.

4. Compliance Plan Modification or Amendment

Any application to modify or amend the Compliance Plan shall be accomplished in accordance with the provisions of 30 TAC Chapter 305 Subchapter D and submitted in accordance with the Compliance Plan Application's general instructions.

5. Any changes to the Corrective Action or Groundwater Monitoring Systems are subject to Executive Director's approval.
6. The permittee shall maintain all reports, monitoring, testing, analytical, and inspection data obtained or prepared pursuant to the requirements of this Compliance Plan, including graphs and drawings, in the operating record at the facility. The operating record at the facility shall be made available for review by the staff of the TCEQ upon request.
7. The permittee shall submit a compliance schedule in accordance with CP Table VIII.

K. Force Majeure

The permittee's non-compliance with one or more of the provisions of this Compliance Plan may be justified only to the extent and for the duration that non-compliance is caused by a "Force Majeure" event. For purposes of this Compliance Plan, "Force Majeure" is defined as an event that is caused by an Act of God, labor strike, or work stoppage, or other circumstance beyond the permittee's control that could not have been prevented by due diligence, and that makes substantial compliance with the applicable provision or provisions of this Compliance Plan impossible.

The occurrence of a "Force Majeure" event that justifies the missing of one deadline shall not automatically justify the missing of later deadlines unless there is a cumulative effect due to such an event. The permittee shall keep a record of any delaying events.

If the permittee anticipates or experiences an inability to comply with any of the provisions of this Compliance Plan due to a "Force Majeure" event, the permittee shall notify the Executive Director of the TCEQ within twenty-four (24) hours. A written notice must be submitted to the TCEQ within ten (10) days, which describes the nature, cause, and anticipated length of the delay and all steps which the permittee has taken and will take, with a schedule for their implementation, to avoid or minimize the delay. In the event that

performance of any of the activities required by this Compliance Plan is affected by a "Force Majeure" event, then the permittee shall propose a plan for approval by the Executive Director of the TCEQ, for achieving the objectives of the Compliance Plan by alternative means in the most timely manner.

XII. Special Permit Conditions

- A. Reserved
- B. The permittee shall install an emergency warning siren or other warning device audible at a distance of at least one-half mile in all directions from the facility to be used in conjunction with the permittee's contingency plan in warning adjacent landowners of emergency conditions at the facility.
- C. No landfill trench, waste storage area, or impoundment may be constructed less than 200 feet from the site property boundaries with the exception of Landfill Cells 39 and 40/41/42. Landfill Cells 39 and 40/41/42 may be constructed less than 200 feet from the facility property boundary, however waste shall not be placed within 200 feet of the property boundary.

The distance between waste placed within landfill trenches and closed oil and gas and drinking water wells shall be a minimum of 50 feet in distance; or prior to landfill construction, the area within a minimum of a 50 foot radius of the well shall be over excavated and backfilled with a minimum of five (5) feet of compacted clay meeting the specifications given in Provision V.D.2.a.

- D. The following provisions are included in this permit pursuant to a settlement agreement dated March 23, 1999, between the permittee and Kenneth and Virginia Ahlrich and P.E.T.R.O. This provision is not intended to require any action by TCEQ that is not required by law.
 - 1. In accordance with an agreement executed with the People's Environmental Toxic Reform Organization (P.E.T.R.O.), within 90 days of issuance of this permit, the permittee shall complete and submit to the TCEQ and P.E.T.R.O. an air emissions inventory report for the facility that provides the following information in plain, non-technical language: a) a list of the types of industrial solid wastes, special wastes, and hazardous wastes that have been accepted at TECO's facility in the past and that may be accepted in the future, with the generator of each waste stream designated on the list; b) the volumes of such wastes received in the past and which may be received in the future; c) the hazardous air pollutants which could be emitted as a result of the storage, treatment, and disposal of these waste streams; and d) the amounts of any fugitive air emissions that have occurred and that TECO expects to occur when such wastes are stored, treated, and/or disposed of at its hazardous waste landfill facility. This report shall also be placed in the Robstown, Nueces County Library.
 - 2. In accordance with an agreement executed with P.E.T.R.O., the permittee shall initiate the following ambient air monitoring program.
 - a. Within ninety (90) days of issuance of this permit TECO shall conduct an initial ambient air monitoring sampling event for volatile and semi-volatile organics using EPA-approved, standard methodologies and procedures to evaluate the nature and amount of fugitive emissions from its hazardous waste management activities in accordance with the plan proposed in Attachment E (Exhibit A). The samples shall be collected and analyzed by independent, qualified consultants and laboratories that have been approved by counsel for P.E.T.R.O. and any and all data obtained as a result of this sampling event shall be maintained in the facility records for a period of not less than three (3) years. Once TECO has received and verified the data obtained during this initial ambient air sampling event, TECO shall prepare a report which contains the raw data, all QA/QC records and which shall interpret and

summarize the data, along with any appropriate findings and recommendations, in plain, non-technical language. This report shall be submitted to P.E.T.R.O. and the Region 14 Offices of the TCEQ within 120 days of the issuance of the renewed and amended permit.

- b. A second ambient air monitoring event shall be conducted by the permittee according to the plan proposed in Attachment K, approximately six months after the initial sampling event. The samples shall be collected and analyzed by independent, qualified consultants, and laboratories that have been approved by counsel for P.E.T.R.O. and any and all data obtained as a result of this sampling event shall be maintained in the facility records for a period of not less than three (3) years. Once TECO has received and verified the data obtained during this initial ambient air sampling event, TECO shall prepare a report which contains the raw data, all QA/QC records and which shall interpret and summarize the data, along with any appropriate findings and recommendations, in plain, non-technical language.

This report shall be submitted to P.E.T.R.O. and the TCEQ Region 14 offices within 60 days of the completion of the second round of ambient air monitoring (sampling).

- (1) If, as the result of these ambient air monitoring events, TECO and/or the TCEQ and P.E.T.R.O. determine that any hazardous air pollutant and/or hazardous waste constituent has been detected at levels which exceed TCEQ health effects screening levels for such constituent, the Permittee shall immediately report the exceedance(s) to the TCEQ Region 14 Office and to P.E.T.R.O., and in no event later than 24 hours after confirmation of the exceedance. The Permittee shall then take such action as is necessary to minimize, if not prevent, continuing emissions above such levels as soon as possible.

Within ten (10) working days of any exceedance(s), the Permittee shall provide a report to P.E.T.R.O. and to the TCEQ in plain, non-technical language which describes the incident and any and all corrective actions taken to halt such emissions and to prevent their recurrence. Within thirty (30) working days of detecting such exceedance(s), TECO shall prepare an Emissions Reduction Plan for submission to the TCEQ and to P.E.T.R.O. for their review and comment which shall describe the steps to be taken to minimize the emission of hazardous air pollutants and hazardous waste constituents from all facility operations. This plan shall be implemented within sixty (60) days of the detection of the exceedance(s) and shall include, at a minimum, a schedule for increased monitoring, corrective action and such other actions as may be necessary to prevent future fugitive emissions from exceeding health effects screening levels at the TECO Facility.

- (2) Following an incident in which emissions from the TECO Facility are found to be in excess of TCEQ health effects screening levels for such constituent, TECO shall commence monthly ambient air monitoring until such time as no exceedance(s) are detected for any hazardous air pollutant and hazardous waste constituent for a period of three (3) consecutive months. Once TECO can demonstrate that there have been no exceedance(s) for a period of at least three (3) months for any hazardous air pollutant and hazardous waste constituent, TECO can resume semiannual ambient air monitoring in accordance with the ambient air monitoring plan provided in Exhibit A (Attachment E -Formerly Attachment K).

Table III.D – Inspection Schedule

<i>Facility Unit(s) and Basic Elements</i>	<i>Possible Error, Malfunction or Deterioration</i>	<i>Frequency of Inspection¹</i>
Deepwell Pretreatment and Groundwater Recovery Tank Farm	Improper functioning of overfill prevention controls; Tank corrosion; Erosion or signs of releases of hazardous waste (e.g. wet spots, dead vegetation); Visible cracks, holes, or gaps in fixed roofs and closure devices; Broken, cracked, or otherwise damaged seals or gaskets in closure devices; Broken or missing hatches, access covers, caps, or other closure devices.	Daily
Mixing Tanks	Improper functioning of overfill prevention controls; Tank corrosion; Erosion or signs of releases of hazardous waste (e.g. wet spots, dead vegetation); Visible cracks, holes, or gaps in fixed roofs and closure devices; Broken, cracked, or otherwise damaged seals or gaskets in closure devices; Broken or missing hatches, access covers, caps, or other closure devices.	Daily
Oil Reclamation Facility Tanks	Improper functioning of overfill prevention controls; Tank corrosion; Erosion or signs of releases of hazardous waste (e.g. wet spots, dead vegetation); Visible cracks, holes, or gaps in fixed roofs and closure devices; Broken, cracked, or otherwise damaged seals or gaskets in closure devices; Broken or missing hatches, access covers, caps, or other closure devices.	Daily
Oil Reclamation Facility Containment Pad	Gaps, cracks, or structural defects in containment system base; Spilled or leaked waste and accumulated precipitation in secondary containment; Spilled or leaked waste in loading /unloading areas; Signs of hazardous waste release surrounding pad (i.e. wet spots, dead vegetation).	Weekly
Security Fence: Active	Unauthorized entry; Damage or vandalism to site fencing; Improperly secured and/or monitored gates.	Daily
Security Fence: Post-Closure	Unauthorized entry; Damage or vandalism to site fencing; Improperly secured and/or monitored gates.	Quarterly
Safety Signs: Active	Missing, damaged or vandalized signs that read "Danger- Unauthorized Personnel Keep Out".	Daily
Safety Signs: Post-Closure	Missing, damaged or vandalized signs that read "Danger- Unauthorized Personnel Keep Out".	Quarterly
Two-Way Radios	Inoperable radios; Radios unavailable for emergency communication.	Daily
Portable Water Tank	Insufficient water; Portable tank unavailable for fire control.	Daily
Fire Extinguishers, Safety Showers, Eyewash Stations	Inoperable equipment; Equipment unavailable for emergency use.	Monthly

¹ **Daily** – Every working day.
Working Day – Day when hazardous waste is being actively managed
Weekly – A calendar week
Monthly – A calendar month
Quarterly – Based on the divisions of the calendar year

Table III.D - Inspection Schedule

<i>Facility Unit(s) and Basic Elements</i>	<i>Possible Error, Malfunction or Deterioration</i>	<i>Frequency of Inspection¹</i>
Personal Protective Equipment (PPE); First Aid Supplies; Decontamination, Spill Control and Response Equipment	Inadequate supply of equipment; Equipment inoperable or damaged.	Monthly
Container Storage Building	Poor condition of containers (e.g. severe rusting, apparent structural defects, leaking); Open containers; Improperly labeled containers; Inadequate aisle space; Gaps, cracks, or structural defects in containment system base; Spilled or leaked waste and accumulated precipitation in secondary containment; Spilled or leaked waste in loading /unloading areas; Signs of hazardous waste release surrounding building (i.e. wet spots, dead vegetation).	Weekly
Oil Reclamation Facility Containers	Poor condition of containers (e.g. severe rusting, apparent structural defects, leaking); Open containers; Improperly labeled containers; Inadequate aisle space;	Weekly
Controlled Truck Storage Areas	Leakage; Improper placarding of trailers; Insecure landing gear; Improperly secured tarps; Cracks, deterioration or presence of liquids on containment structure; Poor housekeeping.	Weekly
Waste Stabilization / Bulk Stabilization Building	Gaps, cracks, or structural defects in containment system base; Spilled or leaked waste and accumulated precipitation in secondary containment; Spilled or leaked waste in loading /unloading areas; Signs of hazardous waste release surrounding building (e.g. wet spots, dead vegetation); Gaps, cracks or structural defects in the stabilization vessel.	Weekly
Landfill: Construction and Active Cells	Significant erosion of cover; Ineffective run-on/run-off control systems; Damaged or uncapped sump riser; Presence of standing water; Liner damage; Wind dispersal problems; Improperly covered bulk material; Inoperable leachate collection and removal system.	Weekly, after storms of 0.5" or more
Landfill: Closed Cells	Significant erosion of cap; Ineffective run-on/run-off controls; Inoperable leachate collection and removal system.	Weekly, after storms of 0.5" or more
Landfill: Post-Closure	Significant erosion or settlement of final cover and perimeter berms; Ineffective run-on/run-off controls; Damaged riser pipes; Erosion or siltation of stormwater drainage system.	Quarterly
Leachate Collection System: Post-Closure	Improper pump operations. Liquid levels in sumps.	Monthly
Landfill Leak Detection Collection System Sump: Active and Closure	Presence of leachate.	Weekly

¹ Daily – Every working day.
 Working Day – Day when hazardous waste is being actively managed
 Weekly – A calendar week
 Monthly – A calendar month
 Quarterly – Based on the divisions of the calendar year

Table III.D – Inspection Schedule

<i>Facility Unit(s) and Basic Elements</i>	<i>Possible Error, Malfunction or Deterioration</i>	<i>Frequency of Inspection¹</i>
Landfill Leak Detection Collection System Sump: Post-Closure	Improper pump operation; Presence of leachate.	Monthly (unless a reduced frequency is allowed under 40 CFR 264.303(c)(2))
Monitoring Wells and Equipment	Deterioration or cracks in riser, riser lid, grout or well casing; Tampered seal or lock; Inoperable pumps or equipment; Missing identification number.	Quarterly
Permanent Benchmark: Post-Closure	Damage.	Every 5 years
Oil Reclamation Facility Miscellaneous Unit TDU and Thermal Oxidizer (T.O.)	Presence of leaks, spills, fugitive emissions and signs of tampering. of pumps, valves, conveyors, and pipes	Daily
Oil Reclamation Facility Miscellaneous Unit TDU and T.O.	Malfunction of TDU automatic waste feed cutoff (AWFCO) system and associated alarms	At least once per scheduled maintenance outage, (at least 12 times per year)
Oil Reclamation Facility T.O.	Faulty readings from TDU purge vent flow meter (FT-101), as well as the future distillation unit process vent flow meter, and the combustion chamber temperature monitor of the T.O. (TT-121)	Daily
Oil Reclamation Facility Closed-Vent System and T.O.	Detectible emissions from the closed-vent system components and connections exceed regulatory limits	Annual
Oil Reclamation Facility Closed-Vent System and T.O.	Defects in the closed vent system that could result in air pollutant emissions	Quarterly

¹ **Daily** – Every working day.
Working Day – Day when hazardous waste is being actively managed
Weekly – A calendar week
Monthly – A calendar month
Quarterly – Based on the divisions of the calendar year

Table III.D - Inspection Schedule

<i>Facility Unit(s) and Basic Elements</i>	<i>Possible Error, Malfunction or Deterioration</i>	<i>Frequency of Inspection¹</i>
Oil Reclamation Facility Pumps, Valves, Pressure Relief Devices, Flanges and Other Connectors	Monitored within 5 days by the method specified in §264.1063(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. For listed equipment that contains or contacts hazardous waste (or hazardous secondary materials) with organic concentrations of at least 10 percent by weight.	As Indicated
Oil Reclamation Facility Miscellaneous Unit TDU and T.O	Exceedance of the hourly rolling average parameters for TT-121, KY-110, OE-1, and FE-101.	Weekly
Subpart AA Process Vents - §264.1033		
Process Vent: Future Distillation Unit	An initial and annual leak check will be done on the closed-vent system to ensure no emissions are present. Monitoring will be completed to demonstrate no detectable emission in accordance with Reference Method 21 in 40 CFR 60 as per requirements of Section 264.1063(b) and Section 265.1063(b). The scope of monitoring shall include all piping connections, filters, valves, and blowers associated with the distillation unit process vent.	Initially/Annually
Control Device: Thermal Oxidizer (T.O.)	Monitoring will be conducted to assure that the T.O. performs at high efficiency and achieves consistent control. Continuous monitoring shall include a temperature monitor at a location in the combustion chamber downstream of the combustion zone, and a process vent gas flow rate meter.	Daily
Control Device: Carbon Adsorption System (CAS)	Review to confirm that the carbon media in the distillation unit process vent backup carbon adsorber has been replaced with fresh carbon at the regular predetermined time interval that is less than the design carbon replacement interval	Monthly
Control Devices	A visual inspection will be completed on the control device. The visual inspection shall include inspection of ductwork, piping, and connections to covers and control devices for evidence of visible defects such as holes in ductwork or piping and loose connections.	Quarterly

¹ Daily – Every working day.
 Working Day – Day when hazardous waste is being actively managed
 Weekly – A calendar week
 Monthly – A calendar month
 Quarterly – Based on the divisions of the calendar year

Table III.D - Inspection Schedule

<i>Facility Units(s) and Basic Element</i>	<i>Possible Error, Malfunction or Deterioration</i>	<i>Frequency of Inspection</i>
Oil Reclamation Facility Equipment Subject to 40 CFR Part 61 Subpart FF- National Emission Standard for Benzene Waste Operations		
Process Vent Bypass	Check that vapors are being routed to the thermal oxidizer	Daily
Carbon Adsorption System	Review to confirm that carbon media in the tank vent backup carbon adsorber has been replaced with fresh carbon at the regular predetermined time interval that is less than the design carbon replacement interval	Monthly
Closed-Vent System and Control Devices	A visual inspection will be completed on the closed vent systems and control devices. The visual inspection shall include inspection of ductwork, piping, and connections to covers and control devices for evidence of visible defects such as holes in ductwork or piping and loose connections.	Quarterly
Tanks	A visual inspection will be completed on tanks. A visual inspection will be completed on roofs, seals, access doors, and all other openings to ensure that no cracks or gaps exist. Each opening will be maintained in a closed, sealed position at all times that the tank is holding waste except when it is necessary to open it for waste sampling or removal, equipment inspection, maintenance, or repair.	Quarterly
Oil-water separators	A visual inspection will be completed on cover seals, access hatches, and all other openings to ensure that no crack or gaps are present. Each opening will remain in a closed, sealed position at all times that the waste is in the oil water separator unless it is being opened for waste sampling or removal, equipment inspection, maintenance, or repair.	Quarterly
Treatment processes	A visual inspection will be completed on treatment process seals, access doors, and all openings to ensure that no cracks or gaps are present. All openings shall be sealed and kept closed all the time waste is being treated except during inspection or maintenance.	Quarterly
Containers	A visual inspection will be completed on covers and all openings to ensure that they are closed and gasketed properly. All openings shall be maintained in a closed, sealed position at all times that the waste is in the container except when opening for waste loading, removal, inspections, or sampling.	Quarterly

¹ Daily – Every working day.
 Working Day – Day when hazardous waste is being actively managed
 Weekly – A calendar week
 Monthly – A calendar month
 Quarterly – Based on the divisions of the calendar year

Table III.D - Inspection Schedule

<i>Facility Units(s) and Basic Element</i>	<i>Possible Error, Malfunction or Deterioration</i>	<i>Frequency of Inspection</i>
Closed-Vent Systems	An annual leak check will be done on the closed-vent systems. Monitoring will be completed to demonstrate no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background by methods specified in §61.355(h). The scope of monitoring shall include all piping connections, filters, valves, and blowers in the process vent and tank vent systems.	Annual
Tanks	An annual leak check will be done on all covers and openings of tanks to ensure their operations are emission free. Monitoring will be completed to demonstrate no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background by methods specified in §61.355(h). Monitoring will be performed on access hatches, sampling ports, gauge wells, etc. Each opening will be maintained in a closed, sealed position at all times that the tank is holding waste except when it is necessary to open it for waste sampling or removal, equipment inspection, maintenance or repair.	Annual
Oil Water Separators	An annual leak inspection is required for oil water separators to ensure their operation is emission free. Monitoring will be completed to demonstrate no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background by the methods specified in §61.355(h). Monitoring will be performed on covers and all other openings. Each opening will remain closed, sealed position at all times that the waste is in the oil water separator unless it is being opened for waste sampling or removal, equipment inspection, maintenance, or repair.	Annual
Treatment Process	An annual inspection is required for treatment process to ensure their operations are emission free. Monitoring will be completed to demonstrate no detectable emission as indicated by an instrument reading of less than 500 ppmv above background by methods specified in §61.355(h). Monitoring will be performed on covers and all other openings. All openings shall be sealed and kept closed at all times the waste is being treated except during inspections or maintenance.	Annual
Containers	An annual leak inspection is required for containers. Monitoring will be completed to demonstrate no detectable emissions as indicated by an instrument reading of less than 500 ppm above background by methods specified in §61.355(h). Monitoring will be performed on covers and all other openings. All openings shall be maintained in a closed, sealed position at all times that waste is in the container except when opening for waste loading, removal, inspection, or sampling.	Annual

¹ Daily – Every working day.
 Working Day – Day when hazardous waste is being actively managed
 Weekly – A calendar week
 Monthly – A calendar month
 Quarterly – Based on the divisions of the calendar year

Table III.D - Inspection Schedule

<i>Facility Unit(s) and Basic Elements</i>	<i>Possible Error, Malfunction or Deterioration</i>	<i>Frequency of Inspection¹</i>
Landfill Units/Cells Closed and Post-closure (Alternate Cover System with Engineered Closure-Turf) *	Differential settlement (to the extent of grade reversal or ponding water); exposed geotextile backing, exposed geomembrane, damage to engineered turf fibers in high traffic access areas, significant sand migration and drainage channel ballast materials (HydroBinder, rip rap, stone, etc.); physical damage from equipment and animals.	Semiannual

* Permittee shall comply with the inspection requirements for the other landfill components in the Table III.D. during closure and post-closure (such as Leachate collection and Leak detection System)

¹ Daily - Every working day.
 Working Day - Day when hazardous waste is being actively managed
 Weekly - A calendar week
 Monthly - A calendar month
 Quarterly - Based on the divisions of the calendar year
 Semiannual - Six calendar months

Table IV.B - Wastes Managed In Permitted Units

Waste No.	Waste	EPA Hazardous Waste Number ¹	TCEQ Waste Form Code and Classification Code
1	Old chemicals lab pack	Any characteristic or listed waste code or combination from 40 CFR 261 may apply	001; H, 1, 2
2	Debris only lab packs	"	002; H, 1, 2
3	Mixed lab packs	"	003; H, 1, 2
4	Acute hazardous waste lab packs	"	004; H
5	Other lab packs	"	009; H, 1, 2
6	Aqueous waste with low solvents	"	101; H, 1, 2
7	Aqueous waste with low toxic organics	"	102; H, 1, 2
8	Spent acid with metals	"	103; H, 1
9	Spent acid without metals	"	104; H, 1
10	Acidic aqueous waste	"	105; H, 1
11	Caustic solution with metals but no cyanide	"	106; H, 1
12	Caustic solution with metals and cyanides	"	107; H, 1
13	Caustic solutions with cyanides but no metals	"	108; H, 1
14	Spent caustic	"	109; H, 1, 2
15	Caustic aqueous waste	"	110; H, 1, 2
16	Aqueous waste with reactive sulfides	"	111; H
17	Aqueous waste with other reactives	"	112; H, 1
18	Other aqueous waste with high dissolved solids	"	113; H, 1, 2
19	Other aqueous waste with low dissolved solids	"	114; H, 1, 2
20	Scrubber water	"	115; H, 1, 2
21	Leachate	"	116; H, 1, 2
22	Waste liquid mercury	"	117; H, 1, 2
23	Other inorganic liquids	"	119; H, 1, 2
24	Nonhazardous photographic chemical waste (inorganic)	"	198; 1, 2
25	Brine solution with high dissolved solids	"	199; H, 1, 2
26	Concentrated solvent-water solution	"	201; H, 1
27	Halogenated solvent	"	202; H, 1
28	Non-halogenated solvent	"	203; H, 1
29	Halogenated/non-halogenated solvent	"	204; H, 1
30	Oil-water emulsion mixture	"	205; H, 1, 2
31	Waste oil	"	206; H, 1, 2

Table IV.B – Wastes Managed In Permitted Units

Waste No.	Waste	EPA Hazardous Waste Number ¹	TCEQ Waste Form Code and Classification Code
32	Concentrated aqueous solutions of other organics	Any characteristic or listed waste code or combination from 40 CFR 261 may apply	207; H, 1, 2
33	Concentrated phenolics	"	208; H, 1
34	Organic paint, ink, lacquer, or varnish	"	209; H, 1
35	Adhesives or epoxies	"	210; H, 1
36	Paint thinner or petroleum distillates	"	211; H, 1
37	Reactive or polymerizable organic liquids	"	212; H, 1
38	Other organic liquids	"	219; H, 1
39	Ethylene glycol based antifreeze	"	296; H, 1
40	Non hazardous photographic chemical waste (organic)	"	299; 1
41	Soil contaminated with organics	"	301; H, 1, 2
42	Soil contaminated with inorganics only	"	302; H, 1, 2, 3
43	Ash, slag, or other residue from incineration of waste	"	303; H, 1, 2, 3
44	Other dry ash, slag, or thermal residue	"	304; H, 1, 2, 3
45	Dry lime or metal hydroxide solids not chemically fixed	"	305; H, 1, 2
46	Dry lime or metal hydroxide chemically fixed	"	306; H, 1, 2, 3
47	Metal scale, filings or scrap	"	307; H, 1, 2, 3
48	Empty or crushed metal drums or containers	"	308; H, 1, 2, 3
49	Batteries or battery parts, casings, cores	"	309; H, 1, 2
50	Spent solid filters or adsorbents	"	310; H, 1, 2, 3
51	Asbestos solids and debris	"	311; H, 1, 2
52	Metal-cyanide salts/chemicals	"	312; H, 1, 2
53	Reactive cyanide salts/chemicals	"	313; H, 1
54	Reactive sulfide salts/chemicals	"	314; H, 1
55	Other reactive salts and chemicals	"	315; H, 1
56	Other metal salts/chemicals	"	316; H, 1, 2
57	Other waste inorganic solids	"	319; H, 1, 2, 3
58	Empty or crushed glass containers	"	388; H, 1, 2, 3
59	Non hazardous sandblasting waste	"	389; 1, 2, 3
60	Non hazardous concrete/cement/construction debris	"	390; 1, 2, 3
61	Non hazardous dewatered wastewater treatment sludge	"	391; 1, 2, 3
62	Non hazardous dewatered pollution control device sludge	"	392; 1, 2, 3
63	Catalyst waste	"	393; H, 1, 2

Table IV.B – Wastes Managed In Permitted Units

Waste No.	Waste	EPA Hazardous Waste Number ¹	TCEQ Waste Form Code and Classification Code
64	Non hazardous solids containing greater than or equal to 50 ppm and less than 500 ppm PCBs	Any characteristic or listed waste code or combination from 40 CFR 261 may apply	394; 1, 2, 3
65	Non hazardous solids containing greater than or equal to 500 ppm PCBs	"	395; 1, 2, 3
66	Non hazardous electrical equipment/devices containing greater than or equal to 50 ppm and less than 500 ppm PCBs	"	396; 1, 2, 3
67	Non hazardous electrical equipment/devices containing greater than or equal to 500 ppm PCBs	"	397; 1, 2, 3
68	Non hazardous soils containing greater than or equal to 50 ppm and less than 500 ppm PCBs	"	398; 1, 2, 3
69	Non hazardous soils containing greater than or equal to 500 ppm PCBs	"	399; 1, 2, 3
70	Halogenated pesticide solid	"	401; H, 1, 2
71	Non-halogenated pesticide solid	"	402; H, 1, 2
72	Solid resins or polymerized organics	"	403; H, 1, 2
73	Spent carbon	"	404; H, 1, 2, 3
74	Reactive organic solids	"	405; H, 1, 2
75	Empty fiber or plastic containers	"	406; H, 1, 2, 3
76	Other halogenated organic solids	"	407; H, 1, 2
77	Other non-halogenated organic solids	"	409; H, 1, 2
78	Wood debris	"	488; H, 1, 2, 3
79	Petroleum contaminated solids	"	489; H, 1, 2
80	Sand blasting wastes	"	490; H, 1, 2, 3
81	Dewatered biological treatment sludge	"	491; H, 1, 2, 3
82	Dewatered sewage or other untreated biological sludge	"	492; H, 1, 2
83	Catalyst waste	"	493; H, 1, 2
84	Solids containing greater than or equal to 50 ppm and less than 500 ppm PCBs	"	494; H, 1, 2, 3
85	Solids containing greater than or equal to 500 ppm PCBs	"	495; H, 1, 2, 3
86	Electrical equipment/devices containing greater than or equal to 50 ppm and less than 500 ppm PCBs	"	496; H, 1, 2, 3
87	Electrical equipment/devices containing greater than or equal to 500 ppm PCBs	"	497; H, 1, 2, 3

Table IV.B – Wastes Managed In Permitted Units

Waste No.	Waste	EPA Hazardous Waste Number ¹	TCEQ Waste Form Code and Classification Code
88	Soil containing greater than or equal to 50 ppm and less than 500 ppm PCBs	Any characteristic or listed waste code or combination from 40 CFR 261 may apply	498; H, 1, 2, 3
89	Soils containing greater than or equal to 500 ppm PCBs	"	499; H, 1, 2, 3
90	Lime sludge without metals	"	501; H, 1, 2
91	Lime sludge with metals/metal hydroxide sludge	"	502; H, 1
92	Wastewater treatment sludge with toxic organics	"	503; H, 1
93	Other wastewater treatment sludge	"	504; H, 1, 2, 3
94	Untreated plating sludge without cyanides	"	505; H, 1, 2
95	Untreated plating sludge with cyanides	"	506; H, 1
96	Other sludge with cyanides	"	507; H, 1
97	Sludge with reactive sulfides	"	508; H
98	Sludge with other reactives	"	509; H, 1
99	Degreasing sludge with metal scale or filings	"	510; H, 1, 2
100	Air pollution control device sludge (e.g., fly ash, wet scrubber sludge)	"	511; H, 1, 2
101	Sediment or lagoon dragout contaminated with organics	"	512; H, 1, 2
102	Sediment or lagoon dragout contaminated with inorganics only	"	513; H, 1, 2
103	Drilling mud	"	514; H, 1, 2
104	Chloride or other brine sludge	"	516; H, 1, 2
105	Other inorganic sludges	"	519; H, 1, 2
106	Catalyst waste	"	597; H, 1, 2
107	Non hazardous sludges containing greater than or equal to 50 ppm and less than 500 ppm PCBs	"	598; 1, 2, 3
108	Non hazardous sludges containing greater than or equal to 500 ppm PCBs	"	599; 1, 2, 3
109	Still bottoms of halogenated solvents or other organic liquids	"	601; H, 1
110	Still bottoms of non-halogenated solvents or other organic liquids	"	602; H, 1
111	Oily sludge	"	603; H, 1, 2
112	Organic paint or ink sludge	"	604; H, 1, 2
113	Reactive or polymerizable organics	"	605; H, 1
114	Resins, tars, or tarry sludge	"	606; H, 1, 2
116	Biological treatment sludge	"	607; H, 1, 2

Table IV.B - Wastes Managed In Permitted Units

Waste No.	Waste	EPA Hazardous Waste Number ¹	TCEQ Waste Form Code and Classification Code
117	Other organic sludges	"	609; H, 1, 2
118	Petroleum contaminated sludges other than still bottoms and oily sludges	Any characteristic or listed waste code or combination from 40 CFR 261 may apply	695; H, 1, 2
119	Grease	"	696; H, 1, 2
120	Catalyst waste	"	697; H, 1, 2
121	Non hazardous sludges containing greater than or equal to 50 ppm and less than 500 ppm PCBs	"	698; 1, 2, 3
122	Non hazardous sludges containing greater than or equal to 500 ppm PCBs	"	699; 1, 2, 3
123	Supplemental Plant Production Refuse	"	902;2
124	Plant Trash/Production Refuse	"	999;2

Note 1. Regarding wastes to be managed in the Oil Reclamation Facility, reclamation is suitable for Oil Bearing Hazardous Waste from petroleum refining, production and transportation practices, as follows: F037, F038, K048, K049, K050, K051, K052, K169, K170, K171, K172, D001, D018; Characteristic byproducts and characteristic sludges, as follows: D001, D002, D004 thru D008, D009 (less than 260 mg/kg total Hg), D010, D011, and D018 thru D043. In limited mode of operation, Oil Reclamation Facility may process listed wastes to generate LDR compliant desorber solids for disposal with the recovered oil collected separately for disposal in an off-site RCRA permitted facility; in that mode of operation, all EPA waste numbers that meet TDU feed OPL restricted chemical criteria are acceptable, excluding prohibited wastes as per Section 1.2.3 of the WAP that have been prohibited for "treatment" except that "Bulk waste containing a volatile organic concentration (VOC) of twenty (20) percent by weight or greater" is acceptable for treatment in the Oil Reclamation Facility.

Note 2. Dioxin-containing wastes, identified by EPA as F020, F021, F022, F023, F026, and F027 wastes in 40 CFR 261.31 for storage, treatment, and/or disposal is prohibited.

Table IV.C - Sampling and Analytical Methods

Waste No. ¹	Sampling Location	Sampling Method	Frequency	Parameters	Test Method	Desired Accuracy Level
<i>Lab Packs:</i> Nos. 1 - 5	Staging areas	Visual	Every load, or technical reviewer's discretion	Inspection/confirmation of waste profile	SW-846, ASTM, or Standard Methods, as needed to confirm waste profile	Method Detection Limit, if applicable
<i>Inorganic Liquids:</i> Nos. 6 - 25	Sampling rack, staging areas, stabilization tanks	Open Tube, Coliwasa	Every load, or technical reviewer's discretion	Free Liquids pH Reactivity TCLP Metals Cyanides (total and amenable) Total Metals Sulfides Unconfined Compressive Strength	SW-846 Method 9095B SW-846 Method 9040C/9041A SW-846 Methods 9014 & 9034 SW-846 Method 1311/7470A/3015A SW-846 Method 9013/9010/9014 and Methods 01A-1677 & SM4500CN SW-846 Method 3051A/6010B SW-846 Method 9034, SM4500S2-E ASTM D 2166-66 (or equivalent USEPA, Standard or ASTM methods appropriate to parameter)	Method Detection Limit
<i>Organic Liquids:</i> Nos. 26 -40	Sampling rack, staging areas, stabilization tanks	Open Tube, Coliwasa	Every load, or technical reviewer's discretion	Free Liquids pH Reactivity Organics Cyanides (total and amenable) Sulfides Oil & Grease Unconfined Compressive Strength	SW-846 Method 9095B SW-846 Method 9040C/9041A SW-846 Methods 9014 & 9034 EPA 625/624 or SW-846 Method 5035A/5030C/3550B/8260B/8260C/8270D SW-846 Method 9013/9010/9014 and Methods 01A-1677 & SM4500CN SW-846 Method 9034, SM4500S2-E SWG-846 Method 1664 ASTM D 2166-66(or equivalent USEPA, Standard or ASTM methods appropriate to parameter)	Method Detection Limit
<i>Inorganic Solids:</i> Nos. 41 - 69	Sampling rack, staging areas, stabilization tanks	Sampling Trier, Trowel, Scoop, Spoon	Every load, or technical reviewer's discretion	Free Liquids pH Reactivity TCLP Metals Cyanides (total and amenable) Total Metals Sulfides	SW-846 Method 9095B SW-846 Method 9040C/9041A SW-846 Methods 9014 & 9034 SW-846 Method 1311/7470A/3015A SW-846 Method 9013/9010/9014 and Methods 01A-1677 & SM4500CN SW-846 Method 3051A/6010B SW-846 Method 9034, SM4500S2-E (or equivalent USEPA, Standard or ASTM methods appropriate to parameter)	

Table IV.C - Sampling and Analytical Methods

Waste No. ¹	Sampling Location	Sampling Method	Frequency	Parameters	Test Method	Desired Accuracy Level
<i>Organic Solids:</i> Nos. 70 - 89	Sampling rack, staging areas, stabilization tanks	Sampling Trier, Trowel, Scoop, Spoon	Every load, or technical reviewer's discretion	Free Liquids pH Reactivity Organics Cyanides (total and amenable) Sulfides Oil & Grease	SW-846 Method 9095B SW-846 Method 9040C/9041A SW-846 Methods 9014 & 9034 EPA 625/624 or SW-846 Method 5035A/5030C/3550B/8260B/8260C/8270D SW-846 Method 9013/9010/9014 and Methods 01A-1677 & SM4500CN SW-846 Method 9034, SM4500S2-E SWG-846 Method 1664 (or equivalent USEPA, Standard or ASTM methods appropriate to parameter)	Method Detection Limit
<i>Inorganic Sludges:</i> Nos. 90 - 108	Sampling rack, staging areas, stabilization tanks	Sampling Trier, Trowel, Scoop, Spoon	Every load, or technical reviewer's discretion	Free Liquids pH Reactivity TCLP Metals Cyanides (total and amenable) Total Metals Sulfides Unconfined Compressive Strength	SW-846 Method 9095B SW-846 Method 9040C/9041A SW-846 Methods 9014 & 9034 SW-846 Method 1311/7470A/3015A SW-846 Method 9013/9010/9014 and Methods 01A-1677 & SM4500CN SW-846 Method 3051A/6010B SW-846 Method 9034, SM4500S2-E ASTM D 2166-66 (or equivalent USEPA, Standard or ASTM methods appropriate to parameter)	Method Detection Limit
<i>Organic Sludges:</i> Nos. 109 - 122	Sampling rack, staging areas, stabilization tanks	Open Tube	Every load, or technical reviewer's discretion	Free Liquids pH Reactivity Organics Cyanides (total and amenable) Sulfides Oil & Grease Unconfined Compressive Strength	SW-846 Method 9095B SW-846 Method 9040C/9041A SW-846 Methods 9014 & 9034 EPA 625/624 or SW-846 Method 5035A/5030C/3550B/8260B/8260C/8270D SW-846 Method 9013/9010/9014 and Methods 01A-1677 & SM4500CN SW-846 Method 9034, SM4500S2-E SWG-846 Method 1664 ASTM D 2166-66 (or equivalent USEPA, Standard or ASTM methods appropriate to parameter)	Method Detection Limit

Table IV.C - Sampling and Analytical Methods – Oil Reclamation Facility

Waste No. ¹	Sampling Location	Sampling Method	Frequency	Parameters	Test Method	Desired Accuracy Level
<i>Organic Liquids:</i> Various Nos. from Table IV.B	Sampling rack, staging areas, mix tanks, generator waste tank or container	Open Tube, Coliwasa grab into cup from tank sample tap	Initial sample during generator waste profile approval, Every load, or technical reviewer's discretion	Basic sediment and water pH Reactivity Organics Total Halogens Total Metals Sulfides Oil & Grease Flash Point	API MPMS 10.4 SW-846 Method 9040C/9041A SW-846 Methods 9014 & 9034 EPA 625/624 or SW-846 method 5035A/5030C/3550B/8260B/8260C/8270D SW-846 8021B/8260B/5050&9056 SW-846 Method 3051A/6010B/7471A SW-846 Method 9034, SM4500S2-E SW-846 Method 1664 SW-846 1020B (or equivalent USEPA, Standard or ASTM methods appropriate to parameter)	Method Detection Limit
<i>Organic Solids and Sludges:</i> Various Nos. from Table IV.B	Sampling rack, staging areas, feed bins, generator waste tank or container	Sampling Trier, Trowel, Scoop, Spoon	Initial sample during generator waste profile approval, Every load, or technical reviewer's discretion	Free Liquids pH Reactivity Organics Total Halogens Total Metals Sulfides Oil & Grease Flash Point	SW-846 Method 9095B SW-846 Method 9040C/9041A SW-846 Methods 9014 & 9034 EPA 625/624 or SW-846 Method 5035A/5030C/3550B/8260B/8260C/8270D SW-846 8021B/8260B/5050&9056 SW-846 Method 3051A/6010B /7471A SW-846 Method 9034, SM4500S2-E SWG-846 Method 1664 SW-846 1020B (or equivalent USEPA, Standard or ASTM methods appropriate to parameter)	Method Detection Limit

¹From Table IV.B, first column

Technical reviewer's discretion= analyzed as necessary to verify waste characterization; scope of testing and frequency may vary on a case-by-case basis.

Table V.B Container Storage Areas

List the container storage areas covered by this application to be permitted. List the waste managed in each unit and the rated capacity or size of the unit.

No.	Container Storage Area ⁵	NOR Unit #	Rated Capacity	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Ignitable, ¹ Reactive, ¹ or Incompatible ² Waste (Yes/No)
2	Drum Processing Building ⁵	24	972 55-gallon containers for a total of 53,460 gallons ⁴	Three (3) 25.6 ft x 55 ft Bays housed in 8,000 ft ² building	7,039 gallons	Yes. Compliance with 264.17, 264.176, and 264.177 addressed in the Container Management Report, Section V.B. of the Application
3	Controlled Parking/Storage Building I (East Side)	17	Twenty (20) roll-off boxes or trailers, 20 cubic yards each for a total of 400 cubic yards	Ten (10) 12.7 ft x 50 ft bays housed in a 6,500 ft ² (50 ft x 130 ft) building.	29,172 gallons (144 cubic Yards)	Yes. Compliance with 264.17, 264.176, and 264.177 addressed in the Container Management Report, Section V.B. of the Application.
4	Controlled Parking/Storage Building II (West Side)	70	55-gallon containers, roll-off boxes or trailers for a total of not more than 500 cubic yards or 101,000 gallons	Two (2) modules housed in a 17,500 ft ² (100 ft x 175 ft) building	28,125 gallons (98 cubic Yards)	Yes. Compliance with 264.17, 264.176, and 264.177 addressed in the Container Management Report, Section V.B. of the Application.
9	Uncovered Waste Storage Areas ³	62	Maximum combined capacity is 5,285 cubic yards ⁴	Nine (9) Areas totaling 246,725 ft ² (9-1: 260 ft x 105 ft; 9-2: 200 ft x 110 ft; 9-3: 60 ft x 100 ft; 9-4: 120 ft x 87.5 ft; 9-5: 200 ft x 350 ft; 9-6: 55 ft x 320 ft; 9-7: Thermal Pad: 125 ft x 350 ft; 9-8: Future Distillation Unit (trapezoidal shape): 70 ft x 111.66 ft x 63.33 ft; 9-9: 191 ft x 225 ft	Not Applicable	Yes. Compliance with 264.17, 264.175(c), 264.176, and 264.177 addressed in the Container Management Report, Section V.B. of the Application. Storage of liquids prohibited in 9-1 through 9-6 and 9-9 Areas.

1 Containers managing ignitable wastes must be located at least 15 meters (50 Feet) from the facility's property line. If managing ignitable wastes, provide in the engineering report drawings demonstrating compliance with the buffer zone requirement of 40 CFR 264.17 and 264.176.
 2 Incompatible wastes must be separated from other waste or materials stored nearby in other containers, piles, open tanks, or surface

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- impoundments by means of a dike, berm, wall, or other device. If managing incompatible wastes, provide in the engineering report a description of the procedures used to ensure compliance with 40 CFR 264.17 and 264.177.
- 3 Maximum combined capacity of TCEQ Permit Unit No. 9 shall not exceed 5285 cubic yards of waste at any time.
 - 4 When catalyst processing and packaging activities are occurring within the Container Storage Area, the amount of RCRA/TSCA waste stored in the building will be limited 864 55-gallon drums, or the volume equivalent, as described in the Permit Renewal Application.
 - 5 The following wastes are not managed in any of the permitted container storage areas: D003 (Reactive), FO20, FO21, FO22, FO23, FO26, & FO27.

Table V.C - Tanks and Tank Systems

No.*	Tank	N.O.R. Unit #	Storage and/or Processing	Waste Nos¹	Rated Capacity Note²	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit Will Manage Ignitable, Reactive, or Incompatible Waste (State all that apply)
5	Tank M-6	12	Processing/Storage	Waste Nos. 18, 19, and 21 **	22,530 gallons	15.5 feet diameter x 16 feet Height	35,985 gallons	No Ignitable, Reactive or Incompatible Wastes
6	Tank S-1	42	Processing	Waste Nos. 18, 19, and 21 **	20,235 gallons	15.5 feet diameter x 14.3 feet Height	35,985 gallons	No Ignitable, Reactive or Incompatible Wastes
7	Tank S-2	43	Processing	Waste Nos. 18, 19, and 21 **	20,235 gallons	15.5 feet diameter x 14.3 feet Height	35,985 gallons	No Ignitable, Reactive or Incompatible Wastes
8	Tank M-7	45	Processing	Waste Nos. 18, 19, and 21 **	8,800 gallons	10 feet diameter x 15 feet Height	27,369 gallons	No Ignitable, Reactive or Incompatible Wastes
10	Tank M-3	41	Processing/Storage	Waste Nos. 18, 19, and 21 **	21,000 gallons	15.5 feet diameter x 16 feet Height	27,369 gallons	No Ignitable, Reactive or Incompatible Wastes
11	Mixing Tank MT-1 (East)	065	Processing	Any waste listed in Table IV.B	26,798 gallons (132 cubic yards)	13.125 feet x 18.92 feet x 16.92 feet	40,796 gallons (202 cubic yards)	Yes Ignitable, Reactive or Incompatible Wastes
12	Mixing Tank MT-2 (West)	068	Processing	Any waste listed in Table IV.B	26,798 gallons (132 cubic yards)	13.125 feet x 18.92 feet x 16.92 feet	40,796 gallons (202 cubic yards)	Yes Ignitable, Reactive or Incompatible Wastes

Table V.C - Tanks and Tank Systems

No.*	Tank	N.O.R. Unit #	Storage and/or Processing	Waste Nos¹	Rated Capacity Note ²	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit Will Manage Ignitable, Reactive, or Incompatible Waste (State all that apply)
13	Mixing Tank MT-3	073	Processing	Any waste listed in Table IV.B	24, 563 gallons (122 yd ³)	16 feet x 22 feet x 10 feet	32,178 gallons (159 cubic yards)	Yes Ignitable, Reactive or Incompatible Wastes
14	Mixing Tank MT-4	074	Processing	Any waste listed in Table IV.B	24, 563 gallons (122 yd ³)	16 feet x 22 feet x 10 feet	32,178 gallons (159 cubic yards)	Yes Ignitable, Reactive or Incompatible Wastes
17	Bulk Stabilization Tanks	49	Inactive	Any waste listed in Table IV.B	7,358 gallons	15.42 feet x 27.71 feet x 1.75 feet each	31,797 gallons	Yes Ignitable, Reactive or Incompatible Wastes
20	Wastewater Tank WT-1	089*	Processing/Storage	Waste Nos. 18, 19, and 21 **	20,000 gallons	15 feet dia x 15 feet Height	55,083 gallons (7,364 cubic feet)	No Ignitable, Reactive or Incompatible Wastes
21	Wastewater Tank WT-2	090	Processing/Storage	Waste Nos. 18, 19, and 21 **	20,000 gallons	15 feet dia x 15 feet Height	55,083 gallons (7,364 cubic feet)	No Ignitable, Reactive or Incompatible Wastes
22	Wastewater Tank WT-3	091	Processing/Storage	Waste Nos. 18, 19, and 21 **	20,000 gallons	15 feet dia x 15 feet Height	55,083 gallons (7,364 cubic feet)	No Ignitable, Reactive or Incompatible Wastes
23	Wastewater Tank WT-4	092	Processing/Storage	Waste Nos. 18, 19, and 21 **	20,000 gallons	15 feet dia x 15 feet Height	55,083 gallons (7,364 cubic feet)	No Ignitable, Reactive or Incompatible Wastes
24	T-5	093	Processing	Note 3	15,000 gallons	30 feet 7" L x 7 feet 7" W x 8 feet 8" Height	232,214 gallons (31,044 cubic feet)	Ignitable Wastes

Table V.C - Tanks and Tank Systems

No.*	Tank	N.O.R. Unit #	Storage and/or Processing	Waste Nos¹	Rated Capacity Note ²	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit Will Manage Ignitable, Reactive, or Incompatible Waste (State all that apply)
25	T-6	094	Processing	Note 3	17,700 gallons	36 feet L x 7 feet 7"W X 8 feet 8" Height	232,214 gallons (31,044 cubic feet)	Ignitable Wastes
26	T-6A	095	Processing	Note 3	200 gallons	38 feet dia x 41 feet Length	232,214 gallons (31,044 cubic feet)	Ignitable Wastes
27	T-10	096	Processing / Storage	Note 3	11,000 gal	10 feet dia x 18 feet 3" Height	15,649 gallons (2,092 cubic feet)	Ignitable Wastes
28	T-11	097	Processing / Storage	Note 3	11,000 gal	10 feet dia x 18 feet 3" Height	15,649 gallons (2,092 cubic feet)	Ignitable Wastes
29	T-12	098	Processing / Storage	Note 3	11,000 gal	10 feet dia x 18 feet 3" Height	15,649 gallons (2,092 cubic feet)	Ignitable Wastes
30	T-13	099	Processing / Storage	Note 3	11,000 gal	10 feet dia x 18 feet 3" Height	15,649 gallons (2,092 cubic feet)	Ignitable Wastes
31	T-16	100	Processing / Storage	Note 3	39,500 gallons	15 feet 6" dia x 28 feet 6" Height	232,214 gallons (31,044 cubic feet)	Ignitable Wastes
32	T-17	101	Processing / Storage	Note 3	39,500 gallons	15 feet 6" dia x 28 feet 6" Height	232,214 gallons (31,044 cubic feet)	Ignitable Wastes
33	T-30	102	Processing / Storage	Note 3	20,500 gallons	44 feet 9"L x 8 feet 4" Width x 6 feet 6" Height	232,214 gallons (31,044 cubic feet)	Ignitable Wastes
34	T-31	103	Processing / Storage	Note 3	13,900 gallons	10 feet dia x 23 feet 2" Height	232,214 gallons (31,044 cubic feet)	Ignitable Wastes
35	T-32	104	Processing / Storage	Note 3	13,900 gallons	10 feet dia x 23 feet 2" Height	232,214 gallons (31,044 cubic feet)	Ignitable Wastes
36	T-33	105	Processing / Storage	Note 3	13,900 gallons	10 feet dia x 23 feet 2" Height	232,214 gallons (31,044 cubic feet)	Ignitable Wastes
37	T-34	106	Processing / Storage	Note 3	20,350 gallons	36 feet 10"L x 7 feet 11"w x8 feet Height (nom)	232,214 gallons (31,044 cubic feet)	Ignitable Wastes

Table V.C - Tanks and Tank Systems

No.*	Tank	N.O.R. Unit #	Storage and/or Processing	Waste No.s¹	Rated Capacity Note ²	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit Will Manage Ignitable, Reactive, or Incompatible Waste (State all that apply)
38	T-35	107	Processing/Storage	Note 3	20,000 gallons	12 feet dia x 23 feet 6" Height	232,214 gallons (31,044 cubic feet)	Ignitable Wastes
39	T-36	108	Processing/Storage	Note 3	20,000 gallons	12 feet dia x 23 feet 6" Height	232,214 gallons (31,044 cubic feet)	Ignitable Wastes
40	T-37	109	Processing/Storage	Note 3	20,000 gallons	12 feet dia x 23 feet 6" Height	232,214 gallons (31,044 cubic feet)	Ignitable Wastes
41	T-3A	110	Processing	Note 3	20,000 gallons	12 feet dia x 23 feet 6" Height	232,214 gallons (31,044 cubic feet)	No Ignitable, Reactive or Incompatible Wastes
42	T-40	111	Processing/Storage	Note 3	20,000 gallons	12 feet dia x 23 feet 6" Height	34,910 gallons (4,667 cubic feet)	Ignitable Wastes
43	T-41	112	Processing/Storage	Note 3	20,000 gallons	12 feet dia x 23 feet 6" Height	34,910 gallons (4,667 cubic feet)	Ignitable Wastes
44	T-42	113	Processing/Storage	Note 3	20,000 gallons	12 feet dia x 23 feet 6" Height	34,910 gallons (4,667 cubic feet)	Ignitable Wastes
45	T-43	114	Processing/Storage	Note 3	20,000 gallons	12 feet dia x 23 feet 6" Height	34,910 gallons (4,667 cubic feet)	Ignitable Wastes

¹from Table IV.B, first column

* If the unit is already permitted, use the established "Permit Unit No." If the unit is not yet permitted, the number given here for the unit will become the "Permit Unit No." The numbers should be in an order that will be convenient for the facility operator.

** Waste Nos. 18, 19, and 21 correspond to TCEQ Waste Form and Classification Codes 113H, 114H, and 116H, respectively.

*** Waste No. 92 corresponds to TCEQ Waste Form and Classification Code 503H.

Note 2: The design capacity is listed in the table as the "Rated Capacity" and the operating capacity may be less than the design capacity

Note 3: Waste Nos. for liquids managed in tanks as per Table IV.B itemization for the Oil Reclamation Unit; 6, 7, 10, 14, 15, 18, 19, 20, 23, 25, 26, 28, 29, 30-34, 36, 38, 90, 92, 93, 94, 98, 99, 103, 109, 110-114, 117-122

TBD* - To Be Determined

Table V.G.1. Landfills

No.	Landfill	N.O.R. Unit #	Waste Nos ¹ (From Table IV. B)	Rated Capacity (cubic yards)	Dimensions ⁶	Distance from lowest liner to ground water	Action Leakage Rate (if required) ²	Ignitable ³ , Reactive ³ , Incompatible ⁴ , or F020, F021, F022, F023, F026, and F0275 Waste ⁵ (Y/N)
01c	Cell 40	038	Closed	80,800 cubic yards	321 feet x 419 feet	5 feet	106 g/ac/day	Closed
01d	Cell 41	039	Closed	83,500 cubic yards	413 feet x 283 feet	5 feet	106 g/ac/day	Closed
01d	Cell 42	039	Closed	76,000 cubic yards	Dimensions 413 feet x 287 feet 210 feet x 231 feet x 130 feet	5 feet	106 g/ac/day	Closed
01e	Cells 43/44/45/46 (Part of Cell 50)	040	Any wastes listed in Table IV. B	412,000 cubic yards	Trapezoidal-Shape Dimensions 774 feet x 519 feet x 929 feet x 495 feet	5 feet	Cell 43:2480 g/ac/day Cells 44/45/46:1,752 g/ac/day	Yes for Incompatible ⁴ No for Dioxin listed wastes; No for Reactive or Ignitable Wastes.
01f	Vertical Expansion of Cells 40/41/42 and Cell 48 (Closed)	054	Closed	847,000 cubic yards	1466 feet x 410 feet	2 feet	6921g/ac/day	Closed

¹ from Table IV.B, first column

² If not required in accordance with 40 CFR 264.302, state as NOT REQUIRED.

³ If YES, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.312.

⁴ If YES, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.313.

⁵ If YES, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.317

⁶Dimensions should be provided as average length, width and depth, also include the surface acreage for the unit.

Table V.G.1. Landfills

No.	Landfil l	N.O.R. Unit #	Waste Nos ¹ (From Table IV. B)	Rated Capacity (cubic yards)	Dimensions ⁶	Distance from lowest liner to ground water	Action Leakage Rate (if required) ²	Ignitable ³ , Reactive ³ , Incompatible ⁴ , or F020, F021, F022, F023, F026, and F0275 Waste ⁵ (Y/N)
01g	Cell 50	72	Any wastes listed in Table IV.B	2,436,602 cubic yards	1025 feet x 1757 feet	In accordance with permit Provision V.G.3. a.	Cells 50-1, 50-3:732 g/ac/day Cells 50-2, 50-4, 50-5 1,347 g/ac/day	Yes for Incompatible ⁴ No for Dioxin listed wastes; No for Reactive or Ignitable Wastes.
01h	Cell 51	128	Any waste listed in Table IV.B	3,463,000 cubic yards	1,370 feet x 1,248 feet (Approximately 39 acres)	5 feet	740	Yes for incompatible No for Dioxin listed Wastes; No for Reactive Ignitable Wastes
01i	Cell 52	129	Any waste listed in Table IV.B	7,355,000 cubic yards	1,370 feet x 2,180 feet (Approximately 69 acres)	5 feet	740	Yes for incompatible No for Dioxin listed Wastes; No for Reactive Ignitable Wastes

¹ from Table IV.B, first column

² If not required in accordance with 40 CFR 264.302, state as NOT REQUIRED.

³ If YES, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.312.

⁴ If YES, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.17 and 264.313.

⁵ If YES, describe in the engineering report the procedures used to ensure compliance with 40 CFR 264.317.

⁶ Dimensions should be provided as average length, width and depth, also include the surface acreage for the unit.

Table V.G.3. Landfill Liner System

No.	Landfill	Primary Liner			Secondary Liner			Clay Liner		
		Material	Permeability (cm/sec)	Thickness	Material	Permeability (cm/sec)	Thickness	Material	Permeability (cm/sec)	Thickness
01c	Cell 40	HDPE/ Clay	$1 \times 10^{-13}/$ 1×10^{-7}	80 mil/1 ft	HDPE	1×10^{-13}	80 mil	Clay Soil	$\leq 1 \times 10^{-7}$	≥ 3 feet
01d	Cell 41	HDPE/ Clay	$1 \times 10^{-13}/$ 1×10^{-7}	80 mil/1 ft	HDPE	1×10^{-13}	80 mil	Clay Soil	$\leq 1 \times 10^{-7}$	≥ 3 feet
01d	Cell 42	HDPE	1×10^{-13}	80 mil	HDPE/ GCL	$1 \times 10^{-13}/$ 1×10^{-8}	80 mil -40 mil	Clay Soil	$\leq 1 \times 10^{-7}$	≥ 3 feet
01e	Cells 43, 44, 45, 46	HDPE GCL HDPE	1×10^{-13} 5×10^{-9} 1×10^{-9}	80 mil-40 mil	HDPE	$1 \times 10^{-13}/$	80 mil	Clay Soil	$\leq 1 \times 10^{-7}$	≥ 3 feet
01f	(Vertical Expansio n of Cells 40,41,42, and Cell 48	HDPE	1×10^{-13}	80 mil	HDPE	1×10^{-13}	80mil	Clay Soil	$\leq 1 \times 10^{-7}$	≥ 3 feet
01g	Cell 50	HDPE	1×10^{-13}	60 mil	HDPE	1×10^{-13}	60 mil	Clay Soil	$\leq 1 \times 10^{-7}$	≥ 3 feet
1-51	Cells 51	HDPE	1×10^{-13}	60 mil	HDPE	1×10^{-13}	60 mil	Clay Soil	$\leq 1 \times 10^{-7}$	≥ 3 feet
1-52	Cells 52	HDPE	1×10^{-13}	60 mil	HDPE	1×10^{-13}	60 mil	Clay Soil	$\leq 1 \times 10^{-7}$	≥ 3 feet

Table V.G.4. Landfill Leachate Collection System

Landfill	Primary Leachate Collection System					Secondary Leachate Collection System				
	Drainage Media	Collection Pipes (including risers)	Filter Fabric	Geofabric	Sump Material	Drainage Media	Collection Pipes (including risers)	Filter Fabric	Geofabric	Sump Material
01c (Cell 40)	Sand/Gravel	HDPE 4", 10", 12"	60 mil Geotextile	Not Applicable	Gravel	Sand/Gravel	HDPE 4", 6", 10"	60 mil geotextile	Not Applicable	Gravel
01d (Cell 41)	Sand/Gravel	HDPE 4", 10", 12"	60 mil Geotextile	Not Applicable	Gravel	Sand/Gravel	HDPE 4", 6", 10"	60 mil geotextile	Not Applicable	Gravel
01d (Cell 42)	Gravel	12" HDPE (Riser)	60 mil Geotextile	Not Applicable	Gravel	Geonet	12" HDPE (Riser)	Not Applicable	Not Applicable	Gravel
01e (Cell 43)	Gravel	18" HDPE (Riser)	15 oz Geotextile	Not Applicable	Gravel	Geonet	14" HDPE (Riser)	Not Applicable	Not Applicable	Gravel
01e (Cell 44, Cell 45, Cell 46)	Geocomposite + 12" Protective soil cover.	6" HDPE 18" HDPE (Riser)	Geotextile	Not Applicable	Gravel	Geonet	4" HDPE 14" HDPE (Riser)	Not Applicable	Not Applicable	Geonet & Gravel
01f (Vertical Expansion of Cells 40,41,42, and Cell 48)	Geonet + 12" Protective soil cover.	6" HDPE, 12" HDPE (Riser)	60 mil Geotextile	Not Applicable	Gravel	Geonet	Geonet +4" HDPE + 12" HDPE (Riser)	Not Applicable	Not Applicable	Geonet
01g (Cell 50)	Geocomposite	6" HDPE 8" HDPE 18" HDPE (Riser)	8 oz Geotextile (floor) 6 oz Geotextile (side wall)	Not Applicable	Gravel	Geonet/Geocomposite (sidewall)	Geonet +4" HDPE + 14" HDPE (Riser)	6 oz Geotextile (side wall)	Not Applicable	Gravel
Cell 51 & Cell 52	Geocomposite	6" HDPE 18" HDPE (Risiers)	8 oz. Geotextile	N/A	Gravel	Geocomposite	Geonet 4" HDPE 12" HDPE (Riser)	6 oz. Geotextile (sidewall)	N/A	Geonet & Gravel

Table V.K.1 - Miscellaneous Units

Permit Unit No.	Miscellaneous Unit	N.O. R. No.	Storage, Processing, and/or Disposal	Waste Nos. ¹	Rated Capacity	Dimensions	Unit will manage Ignitable, Reactive, or Incompatible Waste (state all that apply)
046	Thermal Desorption Unit (TDU) (Oil Reclamation Facility)	085	Processing	Note ²	60,000 ton/yr	350' x 125' pad	Ignitable

¹from Table IV.B, first column

²Oil Bearing Hazardous Waste (OBHW) from petroleum refining, production and transportation practices: F037, F038, K048, K049, K050, K051, K052, K169, K170, K171, K172, D001, D018; Characteristic byproducts and characteristic sludges: D001, D002, D004 thru D008, D009 (less than 260 mg/kg total Hg), D010, D011, and D018 thru D043. In limited mode of operation, TDU may process listed wastes to generate LDR compliant desorber solids for disposal with the recovered oil collected separately for disposal in an off-site RCRA permitted facility; in that mode of operation, all EPA waste numbers that meet TDU feed Operating Parameter Limit (OPL) restricted chemical criteria are acceptable, excluding prohibited wastes per Section 1.2.3 of the WAP that have been prohibited for "treatment" except that "Containerized bulk waste containing a volatile organic concentration (VOC) of twenty (20) percent by weight or greater" is acceptable for treatment in the Oil Reclamation Facility. TCEQ Waste Nos. 44, 47, 50, 56, 57, 59, 63, 72, 73, 77, 79, 80, 81, 90-94, 98-101, 103, 105, 106, 107-114, 117-122.

Table V.K.2. - Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems

Parameter	Monitoring Basis ¹	Monitoring Device	Device Location	Permit Limit	AWFCO to TDU Y/N ²
Operating Parameters					
Maximum Total Volumetric Flow Rate of Thermal Dryer Unit (TDU) Vent Gas to to Thermal Oxidizer	HRA	FIT-101 Volumetric Flow Meter	Purge Vent Line	250 scfm	Y
Minimum Thermal Oxidizer Temperature	HRA	TT-121 Thermocouple	Thermal Oxidizer Chamber Exit	1560°F	Y
Maximum Combustion Gas Velocity Indicator - Minimum Residence Time in Thermal Oxidizer Chamber	HRA	KY-110 Programmable Logic Controller (PLC) Computation	PLC	2.0 seconds	Y
Feed Rates: (Mercury, Low Volatility Metals, Semivolatile Metals, Total Chlorine)	Screening Feed Concentration in ppmw Daily TDU Feed Rate Measurement ³	Feed Blending	Feed Systems	Limits Specified in Table V.K.3	N
TDU Maximum Pressure	Six-Minute Rolling Average	PT-1 Pressure Transmitter	TDU	0.0 inches water column (in. wc)	Y
TDU Maximum Pressure ⁵	One-Minute Average	PT-1 Pressure Transmitter	TDU Dryer	2.0 in. wc	Y
Air Pollution Control Parameters					
Pressure Drop (dP) Across Purge Vent HEPA Filter	Once per Shift	Local dP Indicator	HEPA filter	dP Monitored Once Each Shift	N
Pressure Drop Across Purge Vent HEPA Filter ⁶	Continuous	Pressure Transmitters	HEPA Filters	Operating dP ranges Per Manufacturer Specifications	N
Absorber Minimum pH of Incoming Liquid When in Scrubber Mode ⁴	HRA	AT-212-A AT-212B	Scrubber Recirculation Line	Reserved	Y

Table V.K.2. - Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems

Parameter	Monitoring Basis ¹	Monitoring Device	Device Location	Permit Limit	AWFCO to TDU Y/N ²
Absorber Minimum Liquid to Gas Ratio (L/G) When in Scrubber mode ⁴	HRA	FET-205	Scrubber Recirculation Line	Reserved	Y
Condenser System Maximum Outlet Temperature	HRA	TE-28 Resistance Temperature Detector	Condenser Outlet	122°F	Y
Carrier Gas, Purge Vent Gas, Maximum Oxygen Concentration	Instantaneous	OE-1/AIT-01	Purge Vent	7% Oxygen	Y
Purge Vent Bypass Stack Valve Status	60-Second Delay	FCV-102 Position	Purge Vent	Open	Y
Gas Treatment System Recirculation Blower (RB) Operational Status	Instantaneous	M-21 Motor	RB Motor Starter	Off	Y

¹Instantaneous as defined in 40 CFR 266.102(e)(6)(i)(A) shall mean a value which occurs at any time. A value shall be determined by the monitoring device no less than every 15 seconds. Hourly Rolling Average (HRA) as defined in 40 CFR 266.102(e)(6)(i)(B), Six-Minute Rolling Average is defined as the average of the most recent six one-minute averages.

²AWFCO: Automatic Waste Feed Cutoff. For AWFCOs indicated by "Y", the Permit Limit in the table triggers an AWFCO.

³The daily TDU feed rate will be measured by difference of the weight placed in the feed bins and the weight remaining. Weights will be determined using the truck scale. A monthly rolling average TDU feed rate will be computed and updated weekly. The monthly rolling average will be used to compute mass-based operating parameter limit (OPL) for organic chlorine from volatile organic compounds (VOCs), volatile metals, semivolatile metals, and low volatility metals feed rates. Concentrations of the wastes shall be obtained per the waste analysis plan in parts per million by weight (ppmw).

⁴In a separate mode of operation with the hydrogen chloride scrubber energized on the Thermal Oxidizer exhaust, a higher OPL for organic chlorine from VOCs will be authorized. The operating parameter limits will be determined from the results of a trial burn test.

⁵See Provision V.K.7.i.

⁶See Provision V.K.7.h.

Table V.K.3. - Miscellaneous Unit Maximum Constituent Feed Rates

Constituent	Maximum Allowable Feed Rate to TDU Hourly Average Basis (lb/hr)
Low Volatility Metals ¹ (As+Be+Cr)	169
Semivolatile Metals ¹ (Pb+Cd)	169
Mercury	5.18
Total Organic Chlorine from Volatile Organic Compounds (VOCs) (Not in Scrubber Mode)	0.22
Total Organic Chlorine from Volatile Organic Compounds (VOCs) (In Scrubber Mode)	Reserved ²

Notes:

¹ Low Volatility Metals include arsenic (As), beryllium (Be) and chromium (Cr). Semi Volatile Metals include lead (Pb) and cadmium (Cd). The feed rates of each metal within the volatility group are summed to compare with the respective feed rate limit for each volatility group.

²The final feed rate limit shall be determined based upon trial burn testing subsequent to installation of the scrubber system.

Table V.K.4. - Miscellaneous Unit Maximum Allowable Emissions

Constituent	Maximum Allowable Emission Concentration ³	Units
Low Volatility Metals ¹ (As+Be+Cr)	23	ug/dscm, 7% O2 correction
Semivolatile Metals ¹ (Pb+Cd)	10	ug/dscm, 7% O2 correction
Mercury (Hg)	8.1	ug/dscm, 7% O2 correction
Chloride Equivalent (Cl-)	21	ppmv, 7% O2 correction, dry basis
Particulate Matter	0.016	Grains/dscf, 7% O2 correction
Dioxins and Furans	0.2	ng TEQ/dscm, 7% O2 correction
Carbon Monoxide ²	100	ppmv, 7% O2 correction, dry basis, hourly rolling average
Hydrocarbons ²	10	ppmv, 7% O2 correction, dry basis, hourly rolling average

¹Low Volatility Metals include arsenic (As), beryllium (Be) and chromium (CR). Semivolatile Metals include lead (Pb) and cadmium (Cd). The emissions of each metal within the volatility classification are summed to compare with the respective emission standard.

²Applicable during testing required under this permit.

³The emission standards are applicable to the emissions from the thermal oxidizer.

Table V.K.5. - Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems - Short-Term Operation (Scrubber Mode)

Parameter	Monitoring Basis ¹	Monitoring Device	Device Location	Short-Term Operating Permit Limits			AWFCO to TDU Y/N ³
				Pre-Trial Burn - Shakedown	Trial Burn	Post Trial Burn ²	
Operating Parameters							
Maximum Total Volumetric Flow Rate of Thermal Dryer Unit (TDU) Vent Gas to Thermal Oxidizer	HRA	FIT-101 Volumetric Flow Meter	Purge Vent Line	250 scfm	250 scfm	250 scfm	Y
Minimum Thermal Oxidizer (TO) Combustion Chamber Temperature	HRA	TT-121, Thermocouple	TO Chamber Exit	1400°F	1400°F	1560°F	Y
Maximum Combustion Gas Velocity Indicator - Minimum Residence Time in Thermal Oxidizer Chamber	HRA	KY-110 Programmable Logic Controller (PLC) Computation	PLC	2.0 sec.	2.0 sec.	2.0 sec.	Y
Feed Rates: (Mercury, Low Volatility Metals, Semivolatile Metals, Volatile Organic Chlorine) Not in Scrubber Mode	Feed Concentration in ppmw TDU Feed Rate Measurement ¹	Screening Limits with Feed Blending	Feed Systems	Limits Specified in Table V.K.3	Limits Specified in Table V.K.3	Limits Specified in Table V.K.3	N
Average Hourly Feed Rate: Volatile Organic Chlorine In Scrubber Mode	Feed Concentration in ppmw TDU Feed Rate Measurement ¹	Screening Limits with Feed Blending	Feed Systems	100 lb/hr	150 lb/hr	100 lb/hr	N

Table V.K.5. – Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems - Short-Term Operation (Scrubber Mode)

Parameter	Monitoring Basis ¹	Monitoring Device	Device Location	Short-Term Operating Permit Limits			AWFCO to TDU Y/N ³
				Pre-Trial Burn - Shakedown	Trial Burn	Post Trial Burn ²	
TDU Maximum Pressure	Six-Minute Rolling Average	PT-1 Pressure Transmitter	TDU	0.0 inches water column (in. wc)	0.0 in. wc	0.0 in. wc	Y
TDU Maximum Pressure ⁵	One-Minute Average	PT-1 Pressure Transmitter	TDU	2.0 in. wc	2.0 in. wc	2.0 in. wc	Y
Air Pollution Control Device Parameters							
Pressure Drop (dP) Across Purge Vent HEPA Filter	Once per Shift	Local dP indicator	HEPA filter	dP monitored once each shift	dP monitored once each shift	dP monitored once each shift	N
Pressure Drop Across Purge Vent HEPA Filter ⁶	Continuous	Pressure Transmitter	HEPA filters	Operating Range Per Manufacturer Specifications	Operating Range Per Manufacturer Specifications	Operating Range Per Manufacturer Specifications	N
Absorber Minimum pH of Incoming Liquid (In Scrubber Mode)	HRA	AT-212A AT-212B	Scrubber Recirculation Line	8.0 pH	7.0 pH	8.0 pH	Y
Absorber Minimum Liquid to Gas Ratio (L/G) (In Scrubber Mode) - Minimum Liquid Flow Rate	HRA	FET-205	Scrubber Recirculation Line	85 gpm	85 gpm	85 gpm	Y

Table V.K.5. – Miscellaneous Unit Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems - Short-Term Operation (Scrubber Mode)

Parameter	Monitoring Basis ¹	Monitoring Device	Device Location	Short-Term Operating Permit Limits			AWFCO to TDU Y/N ³
				Pre-Trial Burn - Shakedown	Trial Burn	Post Trial Burn ²	
Condenser System Maximum Outlet Temperature	HRA	TE-28 Resistance Temperature Detector	Condenser Outlet	122°F	122°F	122°F	Y

¹Instantaneous as defined in 40 CFR 266.102(e)(6)(i)(A) shall mean a value which occurs at any time. A value shall be determined by the monitoring device no less than every 15 seconds.

Continuous monitor is one which continuously samples or measures the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

Hourly Rolling Average (HRA) as defined in 40 CFR 266.102(e)(6)(ii).

²The Post Trial Burn Period is the period immediately following the completion of the trial burn, consisting of the minimum period sufficient to allow for sample analysis, data computation, submittal of the trial burn results, and approval of a permit modification by the TCEQ to reflect the trial burn results. (40 CFR 270.66(b)(3)).

³AWFCO: Automatic Waste Feed Cutoff. For AWFCOs indicated by “Y”, the Permit Limit in the table triggers an AWFCO.

⁴A daily feed rate will be determined by difference of the weight of feed placed in the feed bins and the weight remaining at the end of the day. A monthly rolling average waste feed rate will be computed and updated weekly. The monthly rolling average feed rate will be used to compute a mass-based operating parameter limit for organic chlorine from volatile organic compounds (VOCs), mercury, semivolatile metals, and low volatility metals feed rates. Concentrations of the wastes shall be obtained per the waste analysis plan in parts per million by weight (ppmw).

⁵See Provision V.K.7.i.

⁶See Provision V.K.7.h.

Table VI.B.3.b. - Unit Groundwater Detection Monitoring System

Waste Management Unit/Area Name ¹				
Well Number(s):	MW-UTZ-08A	MW-UTZ-09A		
Hydrogeologic Unit Monitored	UTZ	UTZ		
Type (e.g., point of compliance, background, observation, etc.)	POC	POC		
Up or Down Gradient	Down	Down		
Casing Diameter and Material	4" PVC ²	4" PVC ²		
Screen Diameter and Material	4" PVC ²	4" PVC ²		
Screen Slot Size (in.)	0.010	0.010		
Top of Casing Elevation (feet, MSL)	71.49	71.10		
Grade or Surface Elevation (feet, MSL)	68.56	68.41		
Well Depth (feet, Below Grade Surface [BGS])	25	25		
Well Depth (feet, Below Top of Casing [BTOC])	27.93	27.69		
Screen Interval, From (feet, BGS) To (feet, BGS)	15-25	15-25		
Screen Interval, From (feet, BTOC) To (feet, BTOC)	17.93-27.93	17.69-27.69		
Facility Coordinates (e.g., lat/long or company coordinates) Easting, Northing (SP NAD 83)	1255313.3 17158594.6	1255975.8 17158598.8		

¹From Tables in Section V.

²2" or greater (e.g., 4").

³See Sampling and Analysis Plan for background determination.

⁴For existing wells, top of casing elevation, grade or surface elevation, and well depths may be adjusted to account for embankments installed during landfill construction.

MSL: Mean Sea Level; MLGL: Mean Low-tide Gulf Level; BGS: Below Grade Surface; BTOC: Below Top of Casing.

Table VI.B.3.b. - Unit Groundwater Detection Monitoring System (Continued)

Waste Management Unit/Area Name ¹	Landfill Cell 51, Mayo Tract						
	Well Number(s):	MW-UTZ-09B	MW-UTZ-10A	MW-UTZ-11A	MW-UTZ-22A	MW-UTZ-23A	
Hydrogeologic Unit Monitored	UTZ	UTZ	UTZ	UTZ	UTZ	UTZ	
Type (e.g., point of compliance, background, observation, etc.)	POC	POC	POC	POC	POC	POC	
Up or Down Gradient	Down	Down	Down	Cross	Down		
Casing Diameter and Material	4" PVC ²	2" PVC ²	2" PVC ²	2" PVC ²	4" PVC ²		
Screen Diameter and Material	4" PVC ²	2" PVC ²	2" PVC ²	2" PVC ²	4" PVC ²		
Screen Slot Size (in.)	0.010	0.010	0.010	0.010	0.010		
Top of Casing Elevation (feet, MSL)	71.31	To be determined during installation					
Grade or Surface Elevation (feet, MSL)	68.22						
Well Depth (feet, Below Grade Surface [BGS])	35						
Well Depth (feet, Below Top of Casing [BTOC])	38.09						
Screen Interval, From (feet, BGS) To (feet, BGS)	25-35						
Screen Interval, From (feet, BTOC) To (feet, BTOC)	28.09-38.06						
Facility Coordinates (e.g., lat/long or company coordinates) Easting, Northing (SP NAD 83)	1255989.8 17158599.3						

¹From Tables in Section V.

²2" or greater (e.g., 4").

³See Sampling and Analysis Plan for background determination.

⁴For existing wells, top of casing elevation, grade or surface elevation, and well depths may be adjusted to account for embankments installed during landfill construction.

MSL: Mean Sea Level; MLGL: Mean Low-tide Gulf Level; BGS: Below Grade Surface; BTOC: Below Top of Casing.

Table VI.B.3.b. - Unit Groundwater Detection Monitoring System (Continued)

Waste Management Unit/Area Name ¹	Landfill Cell 52, Mayo Tract			
	Well Number(s):	MW-UTZ-01A (DH-14-01- MW)	MW-UTZ-01B	MW-UTZ-02A (DH-14-05- MW)
Hydrogeologic Unit Monitored	UTZ	UTZ	UTZ	
Type (e.g., point of compliance, background, observation, etc.)	POC	POC	POC	
Up or Down Gradient	Down	Down	Down / Cross	
Casing Diameter and Material	4" PVC	2" PVC ²	4" PVC	
Screen Diameter and Material	4" PVC	2" PVC ²	4" PVC	
Screen Slot Size (in.)	0.010	0.010	0.010	
Top of Casing Elevation (feet, MSL)	70.44	To be determined during installation	68.43	
Grade or Surface Elevation (feet, MSL)	67.24		65.50	
Well Depth (feet, Below Grade Surface [BGS])	24.5		26.5	
Well Depth (Feet, Below Top of Casing [BTOC])	27.7		29.43	
Screen Interval, From (feet, BGS) To (feet, BGS)	14 - 24		16 - 26	
Screen Interval, From (feet, BTOC) To (feet, BTOC)	17.2-27.2		18.93-28.93	
Facility Coordinates (e.g., lat/long or company coordinates) Easting, Northing (SP NAD 83)	1253485, 17158238.9		1253485.8, 17156399.3	

¹From Tables in Section V.

²2" or greater (e.g., 4").

³See Sampling and Analysis Plan for background determination.

⁴For existing wells, top of casing elevation, grade or surface elevation, and well depths may be adjusted to account for embankments installed during landfill construction.

MSL: Mean Sea Level; MLGL: Mean Low-tide Gulf Level; BGS: Below Grade Surface; BTOC: Below Top of Casing.

Table VI.B.3.b. - Unit Groundwater Detection Monitoring System (Continued)

Waste Management Unit/Area Name ¹	Landfill Cell 52, Mayo Tract				
	Well Number(s):	MW-UTZ-12A	MW-UTZ-13A	MW-UTZ-13B	MW-UTZ-14A
Hydrogeologic Unit Monitored	UTZ	UTZ	UTZ	UTZ	UTZ
Type (e.g., point of compliance, background, observation, etc.)	POC	POC	POC	POC	POC
Up or Down Gradient	Down	Down	Down	Down	Down
Casing Diameter and Material	2" PVC ²				
Screen Diameter and Material	2" PVC ²				
Screen Slot Size (in.)	0.010	0.010	0.010	0.010	0.010
Top of Casing Elevation (feet, MSL)	To be determined during installation				
Grade or Surface Elevation (feet, MSL)					
Well Depth (feet, Below Grade Surface [BGS])					
Well Depth (feet, Below Top of Casing [BTOC])					
Screen Interval, From (feet, BGS) To (feet, BGS)					
Screen Interval, From (feet, BTOC) To (feet, BTOC)					
Facility Coordinates (e.g., lat/long or company coordinates) Easting, Northing (SP NAD 83)					

¹From Tables in Section V.

²2" or greater (e.g., 4").

³See Sampling and Analysis Plan for background determination.

⁴For existing wells, top of casing elevation, grade or surface elevation, and well depths may be adjusted to account for embankments installed during landfill construction.

MSL: Mean Sea Level; MLGL: Mean Low-tide Gulf Level; BGS: Below Grade Surface; BTOC: Below Top of Casing.

Table VI.B.3.b. - Unit Groundwater Detection Monitoring System (Continued)

Waste Management Unit/Area Name ¹	Landfill Cell 52, Mayo Tract				
Well Number(s):	MW-UTZ-16A	MW-UTZ-16B	MW-UTZ-17A	MW-UTZ-18A	MW-UTZ-19A
Hydrogeologic Unit Monitored	UTZ	UTZ	UTZ	UTZ	UTZ
Type (e.g., point of compliance, background, observation, etc.)	POC	POC	POC	POC	POC
Up or Down Gradient	Down	Down	Down	Down	Down
Casing Diameter and Material	2" PVC ²				
Screen Diameter and Material	2" PVC ²				
Screen Slot Size (in.)	0.010	0.010	0.010	0.010	0.010
Top of Casing Elevation (feet, MSL)	To be determined during installation				
Grade or Surface Elevation (feet, MSL)					
Well Depth (feet, Below Grade Surface [BGS])					
Well Depth (feet, Below Top of Casing [BTOC])					
Screen Interval, From (feet, BGS) To (feet, BGS)					
Screen Interval, From (feet, BTOC) To (feet, BTOC)					
Facility Coordinates (e.g., lat/long or company coordinates) Easting, Northing (SP NAD 83)					

¹From Tables in Section V

²2" or greater (e.g., 4").

³See Sampling and Analysis Plan for background determination.

⁴For existing wells, top of casing elevation, grade or surface elevation, and well depths may be adjusted to account for embankments installed during landfill construction.

MSL: Mean Sea Level; MLGL: Mean Low-tide Gulf Level; BGS: Below Grade Surface; BTOC: Below Top of Casing.

Table VI.B.3.C. - Groundwater Detection Monitoring Parameters

**Unit/Waste Management Area: Cell 51 and 52
 for Well Nos listed on Table VI.B.3.b**

Parameter	Sampling Frequency	Analytical Method	Method Detection Limit (MDL) or Method Quantification Limit (MQL) Value, (units) ²	Concentration Limit ¹
Arsenic	Semi-Annual	SW-6020	MQL 0.002 mg/L	Upper Prediction Limit (TBD) ³
Nickel	Semi-Annual	SW-6020	MQL 0.002 mg/L	Upper Prediction Limit (TBD) ³
Mercury	Biennial (Every other year)	SW-7470	MQL 0.02 mg/L	Upper Prediction Limit (TBD) ³
Acetone	Semi-Annual	SW-8260	MQL 0.01 mg/L	Upper Prediction Limit (TBD) ³
Acetonitrile	Semi-Annual	SW-8260	MQL 0.02 mg/L	Upper Prediction Limit (TBD) ³
Benzene	Semi-Annual	SW-8260	MQL 0.001 mg/L	Upper Prediction Limit (TBD) ³
2-Butanone	Semi-Annual	SW-8260	MQL 0.002 mg/L	Upper Prediction Limit (TBD) ³
1,4-Dioxane	Semi-Annual	SW-8260	MQL 0.02 mg/L	Upper Prediction Limit (TBD) ³
Ethylbenzene	Semi-Annual	SW-8260	MQL 0.001 mg/L	Upper Prediction Limit (TBD) ³
Propionitrile	Semi-Annual	SW-8260	MQL 0.02 mg/L	Upper Prediction Limit (TBD) ³
Toluene	Semi-Annual	SW-8260	MQL 0.001 mg/L	Upper Prediction Limit (TBD) ³
1,1,2-Trichloroethane	Semi-Annual	SW-8260	MQL 0.001 mg/L	Upper Prediction Limit (TBD) ³
o-Xylene	Semi-Annual	SW-8260	MQL 0.001 mg/L	Upper Prediction Limit (TBD) ³
m,p-Xylene	Semi-Annual	SW-8260	MQL 0.002 mg/L	Upper Prediction Limit (TBD) ³

Table VI.B.3.C. - Groundwater Detection Monitoring Parameters

Unit/Waste Management Area: Cell 51 and 52
 for Well Nos listed on Table VI.B.3.b

Parameter	Sampling Frequency	Analytical Method	Method Detection Limit (MDL) or Method Quantification Limit (MQL) Value, (units) ²	Concentration Limit ¹
2,4-Dimethylphenol	Semi-Annual	SW-8270	MQL 0.01 mg/L	Upper Prediction Limit (TBD ³)
2-Methylphenol	Semi-Annual	SW-8270	MQL 0.01 mg/L	Upper Prediction Limit (TBD ³)
3&4-Methylphenol	Semi-Annual	SW-8270	MQL 0.01 mg/L	Upper Prediction Limit (TBD ³)
Phenol	Semi-Annual	SW-8270	MQL 0.01 mg/L	Upper Prediction Limit (TBD ³)
Pyridine	Semi-Annual	SW-8270	MQL 0.01 mg/L	Upper Prediction Limit (TBD ³)
pH	Semi-Annual	Field	n/a	n/a
Specific Conductance	Semi-Annual	Field	n/a	n/a
Temperature	Semi-Annual	Field	n/a	n/a

- 1 The concentration limit is the basis for determining whether a release has occurred from the waste management unit/area.
- 2 a. Enter the laboratory expected *Method Detection Limit* if determination of *Statistically Significant Increase (SSI)* occurrence is based on detection of the presence of the constituent of concern in the sample.
- 2 b. Enter the laboratory expected *Method Quantification Limit* if determination of SSI is based on statistical analysis of detection monitoring data or direct comparison to a limit value. This should be based on the laboratory's minimum expected level of performance. Please designate which type of limit has been entered for each constituent, with its value and units.
3. See Geology Report Appendix E (Groundwater Detection Monitoring Program).

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

<i>Existing Unit Closure Cost Estimate</i>	
Unit	Cost
Permit Unit No. 1-Cell 43-46 (Included with Cell 50)	\$0.00
Permit Unit No. 1-Cell 48 (includes Cell 40/41/42)	\$0.00
Permit Unit No. 1-Cell 50	\$8,759,289.58
Permit Unit No. 2-Drum Processing Building	\$258,903.79
Permit Unit No. 3-Controlled Parking/Storage Building I (East Side)	\$165,693.35
Permit Unit No. 4-Controlled Parking/Storage Building II (West Side)	\$238,054.08
Permit Unit No. 5, 6, 7, 8, 10-Deepwell Pretreatment System	\$224,686.43
Permit Unit No. 9-Uncovered Waste Storage Area	\$2,013,461.38
Permit Unit No. 11-Mixing Tank (MT-1) (East)	\$57,765.49
Permit Unit No. 12-Mixing Tank (MT-2) (west)	\$57,765.49
Permit Unit No. 13-Mixing Tank (MT-3)	\$53,472.90
Permit Unit No. 14-Mixing Tank (MT-4)	\$53,472.90
Permit Unit No. 20-Tank WT-1	\$9,772.51
Permit Unit No. 21-Tank WT-2	\$9,772.51
Permit Unit No. 22-Tank WT-3	\$9,772.51
Permit Unit No. 23-Tank WT-4	\$9,772.51
Permit Unit No. 24-Tank T-5	\$18,167.05
Permit Unit No. 25-Tank T-6	\$20,880.27
Permit Unit No. 26-Tank T-6A	\$2,740.31
Permit Unit No. 27-Tank T-10	\$13,828.31
Permit Unit No. 28-Tank T-11	\$13,828.31
Permit Unit No. 29-Tank T-12	\$13,828.31
Permit Unit No. 30-Tank T-13	\$13,828.31
Permit Unit No. 31-Tank T-16	\$43,800.19
Permit Unit No. 32-Tank T-17	\$43,800.19
Permit Unit No. 33-Tank T-30	\$24,040.00
Permit Unit No. 34-Tank T-31	\$16,743.11
Permit Unit No. 35-Tank T-32	\$16,743.11
Permit Unit No. 36-Tank T-33	\$16,743.11
Permit Unit No. 37-Tank T-34	\$23,889.24
Permit Unit No. 38-Tank T-35	\$23,537.45
Permit Unit No. 39-Tank T-36	\$23,537.45
Permit Unit No. 41-Tank T-3A	\$23,537.45
Permit Unit No. 46-Thermal Desorption Unit (TDU)	\$332,723.74
Permit Unit No. 1.h. Cell 51*	\$2,478,365.74
Phase I (51-1 and 51-2) *	\$1,656,934.22

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

<i>Existing Unit Closure Cost Estimate</i>	
Unit	Cost
Phase II (51-3 and 51-4) *	\$1,656,934.22
Permit Unit No. 40-Tank T-37	\$23,537.45
Permit Unit No. 42-Tank T-40	\$23,537.45
Permit Unit No. 43-Tank T-41	\$23,537.45
Permit Unit No. 44-Tank T-42	\$23,537.45
Permit Unit No. 45-Tank T-43	\$23,537.45
Total Existing Unit Closure Cost Estimate	\$18,517,772.77 ¹ (2021 Dollars)

<i>Proposed Unit Closure Cost Estimate</i>	
Unit	Cost
Permit Unit No. 1.h Cell 51*	\$0.00
Phase III (51-5and 51-6) *	\$1,656,934.22
Phase IV (51-7and 51-8) *	\$1,656,934.22
Permit Unit No. 1.i. Cell 52**	\$2,495,566.03
Phase I (52-1 and 52-2) **	\$1,633,786.19
Phase II (52-3 and 52-4) **	\$1,633,786.19
Phase III (52-5and 52-6) **	\$1,633,786.19
Phase IV (52-7and 52-8) **	\$1,633,786.19
Phase V (52-9 and 52-10) **	\$1,633,786.19
Phase VI (52-11 and 52-12) **	\$1,633,786.19
Phase VII (52-13 and 52-14) **	\$1,633,786.19
Total Proposed Unit Closure Cost Estimate	\$17,245,937.80 ¹ (2021 Dollars)

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.

* For Cell 51, the permittee shall maintain a minimum of \$2,478,365.74 (2021 Dollars) for Unscheduled worst-case closure costs until all phases have received the closure acceptance and final closure of the Cell 51 has been approved by the TCEQ Executive Director.

** For Cell 52, the permittee shall maintain minimum of \$2,495,566.03(2021 Dollars) for Unscheduled worst-case closure costs until all phases have received the closure acceptance and final closure of the Cell 52 has been approved by the TCEQ Executive Director.

TABLE VII.E.2. - Permitted Unit Post-Closure Cost Summary

<i>Existing Unit Post-Closure Cost Estimate</i>	
Unit	Cost
Landfill Cells (Excluding Cell 50)	\$553,902
Cell 50	\$796,800
Cell 51	\$2,434,600
TOTAL EXISTING UNIT POST-CLOSURE COST ESTIMATE	\$3,785,302 (2020 Dollars)¹

<i>Proposed Unit Post-Closure Cost Estimate</i>	
Unit	Cost
Proposed Landfill Cell 52 (Mayo Tract)	\$4,146,800
TOTAL PROPOSED UNITS POST-CLOSURE COST ESTIMATE	\$4,146,800 (2020 Dollars)

¹As 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.

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

Item	Applicable Program*	Unit Type	Unit Name	Notice of Registration (NOR) Number, if applicable	Date Program Requirement and Remedy Standard Completed ⁽⁴⁾
A.	Corrective Action ⁽¹⁾ 30 TAC 335.166	Landfill Waste Management Area includes: 1. Landfill - Permit Unit No. 1c-01g (Closed RCRA Subcells 21, 26-39, 40-42, 48; and Subcells 43-46, 50)	Permit Unit 1c-1g	Multiple	N/A
B.	Compliance Monitoring ⁽¹⁾ 30 TAC 335.165	N/A			
C.	Corrective Action ⁽²⁾ 30 TAC 335.167	Landfill Waste Management Area includes: 1. Landfill - Permit Unit No. 1 (Closed Pre-RCRA Subcells 1-16, 19-20, 23-25, and the Closed Mix Area)	Permit Unit 1	Multiple	N/A
		2. SWMU-12	Former Tank Farm	N/A	
		3. AOC-1;	Maintenance Shop Area	N/A	
		4. AOC-3;	Nueces County Ditch No. 1	N/A	
D.	Alternative Corrective Action ⁽³⁾ 30 TAC 335.151	N/A			
E.	Facility Operations Area (FOA) 30 TAC 50.131-350.135, 335.156, and 350	N/A			

Foot Note:

1. Program applies to RCRA-regulated units only.
2. Program applies to releases from solid waste management units (SWMUs) and/or areas of concern (AOCs).
3. Program applies to commingled releases from RCRA-regulated unit and from one or more SWMUs and/or AOCs.
4. Specify the date of Commissions approval letter for program requirement and remedy standard completed.

CP Table II - Solid Waste Management Units and/or Areas of Concern Addressed In Provision XI.H.

Corrective Action for the SWMUs and AOCs listed in this table is implemented within the Landfill Waste Management Area which also includes 12 regulated units.

Unit Number ⁽¹⁾	Unit Name	Notice of Registration (NOR) Number, if applicable	SWMU or AOC	Media Affected ⁽²⁾	Date Program Requirement and Remedy Standard Completed ⁽³⁾
1.	Landfill - Permit Unit No. 1 (Closed Pre-RCRA Subcells 1-16, 19-20, 23-25, and the Closed Mix Area)	Multiple	SWMU	Groundwater	
2.	SWMU-12: Former Tank Farm	N/A	SWMU	Groundwater*	
3.	AOC-1: Maintenance Shop Area	N/A	AOC	Groundwater*	
4.	AOC-3: Nueces County Ditch No.1	N/A	AOC	Groundwater*	

Note: Affected groundwater associated with a release from any of the units listed in this table would be managed under the Correction Action Program for the entire Landfill Waste Management Area pursuant to 30 TAC §335.166, which meets or exceeds the requirements of 30 TAC §335.167.

SWMU = Solid Waste Management Unit

AOC = Area of Concern

1. For sites with Facility Operations Area (FOA) Authorization, list SWMUs and AOC that were not included in the FOA, and are subject to corrective action.
2. Specify affected media groundwater, soils, etc.
3. Specify the date of Commission's approval letter for program requirement and remedy standard completion.

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

*[*Note: Long list of hazardous constituents that are reasonably expected to be in or derived from waste placed in the units, and may not necessarily be detected and that are to be monitored annually in accordance with Provision XI.B.6.c.(3)(b)*]*

	COLUMN A Hazardous Constituents	COLUMN B Groundwater Protection Standard (mg/l)
Landfill Waste Management Area		
Volatile Organics	Acetone	(22.0) ^{GW} GW _{Ing}
	Benzene	(0.005) MCL
	Ethyl benzene	(0.700) MCL
	Toluene	(1.000) MCL
	Xylenes (Total)	(10.00) MCL
	Carbon disulfide	(2.40) ^{GW} GW _{Ing}
	Carbon Tetrachloride	(0.005) MCL
	Chlorobenzene	(0.100) MCL
	Chloromethane	(0.070) ^{GW} GW _{Ing}
	Chloroform	(0.100) MCL
	1,2-Dichloropropane	(0.005) MCL
	1,1-Dichloroethylene	(0.007) MCL
	1,2-Dichloroethane	(0.005) N.D.
	cis-1,2-Dichloroethylene	(0.070) MCL
	Methylene Chloride	(0.005) MCL
	Tetrachloroethylene	(0.005) MCL
	Trichloroethylene	(0.005) MCL
	1,1,1-Trichloroethane	(0.200) MCL
	Methyl Ethyl Ketone	(15.0) ^{GW} GW _{Ing}
	Vinyl Chloride	(0.002) MCL
Semi-Volatile Organics	Acenaphthene	(1.50) ^{GW} GW _{Ing}
	Anthracene	(7.30) ^{GW} GW _{Ing}
	Benzo(a)Anthracene	(0.0013) ^{GW} GW _{Ing}
	Benzo(a)Pyrene	(0.0002) MCL
	1,2-Dichlorobenzene	(0.600) MCL
	2,4-Dimethylphenol	(0.490) ^{GW} GW _{Ing}
	Chrysene	(0.130) ^{GW} GW _{Ing}
	o-Cresol	(1.20) ^{GW} GW _{Ing}
	m-Cresol	(1.20) ^{GW} GW _{Ing}
	p-Cresol	(1.20) ^{GW} GW _{Ing}
	Fluoranthene	(0.980) ^{GW} GW _{Ing}
	Fluorene	(0.980) ^{GW} GW _{Ing}
	Naphthalene	(0.010) N.D.
	Phenanthrene	(0.010) N.D.
	Phenol	(0.010) N.D.
Pyrene	(0.010) N.D.	
Metals	Antimony	(0.006) MCL
	Arsenic	(0.010) MCL

**CP Table III - Corrective Action Program
 Table of Detected Hazardous and Solid Waste Constituents and
 the Groundwater Protection Standard (continued)**

	COLUMN A Hazardous Constituents	COLUMN B Groundwater Protection Standard (mg/l)
Landfill Waste Management Area		
Metals	Barium	(2.0) MCL
	Cadmium	(0.005) MCL
	Chromium	(0.10) ^{GW} Ing
	Lead	(0.015) MCL
	Mercury	(0.002) ^{GW} Ing
	Nickel	(1.500) ^{GW} Ing
	Selenium	(0.050) MCL
	Silver	(0.370) ^{GW} Ing

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

MCL ACL pursuant to 30 TAC Section 335.160(b) based upon the Groundwater Maximum Contaminant Level specified in 40 CFR Part 141, National Primary Drinking Water Regulations Subparts B and G.

Changes to the rule automatically change the concentration value established in Column B in this table.

AAL ACL derived pursuant to 30 TAC Section 335.160(b) based upon the Protective Concentration level (PCL) established as an Attenuation Action Level as defined in 30 TAC Section 350(a)(4).

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

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

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

*[*Note: Short list of constituents developed from CP Table III – CORRECTIVE ACTION PROGRAM Table of Detected Hazardous and Solid Waste Constituents and the Groundwater Protection Standard to be monitored semiannually during the Corrective Action Program to verify GWPSs are met.*]*

	COLUMN A Hazardous Constituents	COLUMN B Groundwater Protection Standard (mg/l)
Landfill Waste Management Area		
Volatile Organics	Benzene	(0.005) N.D.
	Ethyl benzene	(0.700) MCL
	Toluene	(1.000) MCL
	Xylenes (Total)	(10.00) MCL
	Carbon Tetrachloride	(0.005) N.D.
	Chlorobenzene	(0.100) MCL
	Chloromethane	(0.010) N.D.
	Chloroform	(0.100) MCL
	1,2-Dichloropropane	(0.005) N.D.
	1,1-Dichloroethylene	(0.007) MCL
	1,2-Dichloroethane	(0.005) N.D.
	cis-1,2-Dichloroethylene	(0.070) MCL
	Methylene Chloride	(0.005) N.D.
	Monochlorobenzene	(0.100) MCL
	Tetrachloroethylene	(0.005) N.D.
	Trichloroethylene	(0.005) N.D.
	1,1,1-Trichloroethane	(0.200) MCL
	Methyl Ethyl Ketone	(0.100) N.D.
	Vinyl Chloride	(0.002) MCL
Semi-Volatile Organics	2-4,Dimethylphenol	(0.010) N.D.
	Naphthalene	(0.010) N.D.
	Phenanthrene	(0.010) N.D.
	Pyrene	(0.010) N.D.
Trace Metals	Arsenic	(0.010) MCL
	Chromium	(0.10) ^{GW} GW _{Ing}
	Lead	(0.015) ^{GW} GW _{Ing}
	Nickel	(1.500) ^{GW} GW _{Ing}

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

CP Table IIIA - Corrective Action Program
Table of Indicator Parameters and the Groundwater Protection Standard (continued)

MCL ACL pursuant to 30 TAC Section 335.160(b) based upon the Groundwater Maximum Contaminant Level specified in 40 CFR Part 141, National Primary Drinking Water Regulations Subparts B and G. Changes to the rule automatically change the concentration value established in Column B in this table.

AAL ACL derived pursuant to 30 TAC Section 335.160(b) based upon the Protective Concentration level (PCL) established as an Attenuation Action Level as defined in 30 TAC Section 350(a)(4).

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

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

**CP Table IV - Compliance Monitoring Program
 Table of Hazardous and Solid Waste Constituents and
 Quantitation Limits for Compliance Monitoring**

RESERVED

	COLUMN A Hazardous Constituents	COLUMN B Concentration Limits (mg/l)
Reserved		

* (Note:

- Or reference the entire 40 CFR 264, Appendix IX list and associated Quantitation Limits, if that is more appropriate than listing individual COC. This table is the list of COC reasonably expected to be in or derived from wastes managed in the units.*
- In the Footnote use one of the following Quantitation Limit designations as the concentration limit if RRR or TRRP apply)*

Foot Note:

* For RRR use the following designation, or*

ND Non-detectable at PQL as determined by the analytical methods of the EPA SW-846 most recent edition, and as listed in the July 8, 1987 edition of the Federal Register and later editions. PQL is indicated in parentheses. PQL is the lowest concentrations of analytes in groundwaters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating condition.

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

* Use the following designation if TRRP applies:*

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

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

CP Table V - Designation of Wells

POINT OF COMPLIANCE WELLS

1. Upper Transmissive Zone (UTZ)
Well Nos. 6A, 8, 10, 11, 12, E-12, 200, 407, 412, 417, 422, 903
2. Second Transmissive Zone (STZ)
Well Nos. 16, 17, 19, 101, 107

BACKGROUND WELLS

1. Upper Transmissive Zone (UTZ)
Well Nos. 1, 2, 3, 4, 5, 7, 202, 516, 522, 524R, 527, MW6, W15B, W15A
2. Second Transmissive Zone (STZ)
Well Nos. 18, 104, 106

Notes:

- 1) Wells and piezometers identified on Attachment A maps that are not listed in this table are subject to change, upon approval by the Executive Director, without modification to the Compliance Plan.

CP Table VI - Compliance Period for RCRA-Regulated Units

<u>Unit name</u> Landfill Waste Management Area	
Year Waste Management Activities Initiated	1972
Year Closed	TBD
Compliance Period	Not yet begun.
Compliance Period Began	Not yet begun.

CP Table VII – Reporting Requirements

ITEM	PROGRAM	REPORTING FREQUENCY	REQUIREMENTS
1.	All programs	Semiannual or Annually by January 21	Each report shall be certified by a qualified engineer and/or geologist.
2.	Corrective Action Compliance Monitoring	Semiannual January 21	A table of all modifications and amendments made to this Compliance Plan with their corresponding approval dates by the Executive Director or the Commission and a brief description of each action;
3.	Corrective Action Compliance Monitoring	Semiannual January 21	A summary of any activity within an area subject to institutional control.
4.	Corrective Action Compliance Monitoring	Semiannual January 21	Tabulation of well casing elevations in accordance with CP Attachment C;
5.	Corrective Action Compliance Monitoring	Semiannual January 21	Certification and well installation diagram for any new well installation or replacement and certification for any well plugging and abandonment;
6.	Corrective Action Compliance Monitoring	Semiannual January 21	Recommendation for any changes to the program;
7.	Corrective Action Compliance Monitoring	Semiannual January 21	Any other items requested by the Executive Director;
8.	Corrective Action Compliance Monitoring	Semiannual January 21	Water table maps shall be prepared from the groundwater data collected pursuant to <u>Provision XI.G.</u> and shall be evaluated by the permittee with regard to the following parameters: a. Development and maintenance of a cone of depression during operation of the system; b. Direction and gradient of groundwater flow; c. Effectiveness of hydrodynamic control of the contaminated zone during operation; and d. Estimation of the rate and direction of groundwater contamination migration.
9.	Corrective Action	Semiannual	The permittee shall submit a report to each recipient listed in <u>Provision XI.I.3.</u> , which includes the following information in items 3 through 7 determined since the previously submitted report, if those items are applicable.

CP Table VII – Reporting Requirements

ITEM	PROGRAM	REPORTING FREQUENCY	REQUIREMENTS
	Compliance Monitoring	January 21	If both Corrective Action and Compliance Monitoring Programs are authorized, then the January 21st report shall contain information required for both programs.
10.	Corrective Action	Semiannual	The Corrective Action System(s) authorized under <u>Provision XI.B.3.</u> in operation during the reporting period and a narrative summary of the evaluations made in accordance with <u>Provisions XI.E., XI.F., and XI.G.</u> of this Compliance Plan for the preceding reporting period. The reporting periods shall be January 1 through June 30 and July 1 through December 31 for Corrective Action Monitoring, unless an alternative semiannual schedule is approved by the Commission. The period for Compliance Monitoring shall be based on the calendar year;
	Compliance Monitoring	January 21	
11.	Corrective Action	Semiannual	The method(s) utilized for management of recovered/purged groundwater shall be identified in accordance with <u>Provision XI.B.8.</u> The permittee shall maintain this list as part of the facility operating record and make it available for inspection upon request.
	Compliance Monitoring	January 21	
12.	Corrective Action	Semiannual	An updated table and map of all monitoring and corrective action system wells. The wells to be sampled shall be those wells proposed in the Compliance Plan Application referenced in <u>Provision XI.A.7.</u> and any changes subsequently approved by the Executive Director pursuant to <u>Provision XI.B.3.</u> Provide in chronological order, a list of those wells which have been added to, or deleted from, the groundwater monitoring and remediation systems since original issuance of the Compliance Plan. Include the date of the Commission's approval for each entry;
	Compliance Monitoring	January 21	
13.	Corrective Action	Semiannual	The results of the chemical analyses, submitted in a tabulated format acceptable to the Executive Director which clearly indicates each parameter that exceeds the Groundwater Protection Standard (GWPS). Copies of the original laboratory report for chemical analyses showing detection limits and quality control and quality assurance data shall be provided if requested by the Executive Director;
	Compliance Monitoring	January 21	
14.	Corrective Action	Semiannual	Tabulation of all water level elevations required in <u>Provision XI.F.3.d.(1).</u> depth to water

CP Table VII – Reporting Requirements

ITEM	PROGRAM	REPORTING FREQUENCY	REQUIREMENTS
	Compliance Monitoring	January 21	measurements, and total depth of well measurements collected since the data that was submitted in the previous monitoring report;
15.	Corrective Action Compliance Monitoring	Semiannual January 21	Potentiometric surface maps showing the elevation of the water table at the time of sampling, delineation of the radius of influence of the Corrective Action System, and the direction of groundwater flow gradients outside any radius of influence;
16.	Corrective Action Compliance Monitoring	Semiannual January 21	Tabulation of all data evaluation results pursuant to <u>Provision XI.F.4.</u> and status of each well with regard to compliance with the Corrective Action objectives and compliance with the GWPS;
17.	Corrective Action Compliance Monitoring	Semiannual January 21	An updated summary as required by <u>CP Table VIII</u> ;
18.	Corrective Action Compliance Monitoring	Semiannual January 21	Summary of any changes made to the monitoring/corrective action program and a summary of well inspections, repairs, and any operational difficulties;
19.	Corrective Action Compliance Monitoring	Semiannual January 21	A notation of the presence or absence of non-aqueous phase liquids (NAPLs), both light and dense phases, in each well during each sampling event since the last event covered in the previous monitoring report and tabulation of depth and thickness of NAPLs, if detected;
20.	Corrective Action only	Semiannual	Quarterly tabulations of quantities of recovered groundwater and NAPLs, and graphs of monthly recorded flow rates versus time for the Recovery Wells during each reporting period. A narrative summary describing and evaluating the NAPL recovery program shall also be submitted;
21.	Corrective Action only	Semiannual	Tabulation of the total contaminant mass recovered from each recovery system for each reporting period;
22.	Corrective Action only	Semiannual	Maps of the contaminated area where GWPSs are exceeded depicting concentrations of <u>CP Table IIIA</u> constituents and any newly detected <u>CP Table III</u> constituents as isopleth contours or discrete concentrations if isopleth contours cannot be inferred. Areas where concentrations of constituents exceed the GWPS should be clearly delineated. Depict the boundary of the plume management zone (PMZ), if applicable;

CP Table VII - Reporting Requirements

ITEM	PROGRAM	REPORTING FREQUENCY	REQUIREMENTS
23.	Corrective Action only	Semiannual	Maps and tables indicating the extent and thickness of the NAPLs both light and dense phases, if detected;
24.	Corrective Action only	Semiannual	Corrective Measures Implementation (CMI) Progress Report or Response Action Effectiveness Report or Response Action Completion Report to be submitted as a section of the Compliance Plan report in accordance with <u>Provision XI.H.6.</u> , if necessary. The permittee will include a narrative summary of the status of the approved final corrective measures conducted in accordance with the approved CMI Workplan or RAP, and that the requirements of <u>Provision XI.H.7.</u> are being met. The report shall include the following information: a. TCEQ will provide list when the need arises
25.	Corrective Action only	Semiannual	The permittee will include a narrative summary of the status of each Solid Waste Management Unit (SWMU) and/or Area of Concern (AOC) subject to the requirements of <u>Provision XI.H.</u> and ICM Program for a SWMU and/or AOC which documents that the objectives of <u>Provision XI.H.8.b.</u> are being achieved. This summary shall be included as a section of the Compliance Plan semiannual report.
26.	PMZ	Semiannual	A summary evaluating the effectiveness of the corrective action system in controlling migration beyond the downgradient boundary and vertical limit of the PMZ to achieve the GWPS. The summary shall include an evaluation of whether the attenuation action levels are not exceeded at their respective attenuation monitoring points pursuant to 30 TAC §350.33(f)(4)(A) and §350.33(f)(4)(D)(ii), if applicable;
27.	PMZ	Semiannual	An estimate of the percentage of the response action which has been completed within the PMZ, if applicable;
28.	PMZ	Semiannual	An estimate in years of the additional time necessary to complete the response actions for the PMZ, if applicable;
29.	PMZ	Semiannual	A determination whether sufficient progress is being made to achieve the selected remedy standard within a reasonable time frame given the circumstance of the affected property in the PMZ, if applicable.

CP Table VIII - Compliance Schedule

COMPLIANCE SCHEDULE (from the date of issuance of the Compliance Plan unless otherwise specified)	REGULATORY CITATION	REQUIREMENTS
60	Compliance Plan	Submit to the Executive Director a schedule summarizing all activities required by the Compliance Plan. The schedule shall list the starting dates of all routine activities. The permittee shall include an updated schedule in the groundwater monitoring report required by <u>Provision XI.G.3</u> . The schedule shall list the activity or report, the Compliance Plan Section which requires the activity or report and the calendar date the activity or report is to be completed or submitted (if this date can be determined.)
Notify within 30 days	30 TAC §350.33(k)	After an unexpected event occurs, or a condition is detected, during post-response action care period which indicates that additional response actions will be required at an affected property.

CP Cost Estimates

TABLE XI.E.2. – GROUNDWATER MONITORING COST ESTIMATE

1. Annual Sampling and Analysis Cost:

A. Background Wells

(1) Number of wells	17	
(2) Sample analysis cost per well	300	\$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	10,200	\$

B. Point of Compliance Wells

(1) Number of wells	16	
(2) Sample analysis cost per well	300	\$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	9,600	\$

C. Recovery Wells

(1) Number of wells	18	
(2) Sample analysis cost per well	300	\$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	10,800	\$

D. Corrective Action Observation Wells

(1) Number of wells	12	
(2) Sample analysis cost per well	300	\$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	7,200	\$

E. Point of Exposure Wells

(1) Number of wells	0	
(2) Sample analysis cost per well	0	\$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	\$

F. Supplemental Wells

(1) Number of wells	0	
(2) Sample analysis cost per well	0	\$/well
(3) Number of sampling events per year	0	/yr
(4) Sampling cost (1 x 2 x 3)	0	\$

G. Field Quality Control Sampling

(1) Number of wells	7	
(2) Sample analysis cost per well	300	\$/well
(3) Number of sampling events per year	2	/yr
(4) Sampling cost (1 x 2 x 3)	4,200	\$

2. Sampling Labor Cost:

A. Hours of sampling per well	2	hrs/well
B. Number of sampling technicians per well	1	
C. Charge per hour	60	\$/hr
D. Total number of wells to be sampled annually	0	Wells
E. Total number of wells sampled semi-annually	70	Wells
F. Total number of wells sampled quarterly	0	Wells
G. Total number of wells sampled monthly	0	Wells

CP Cost Estimates

H. Total number of wells sampled per year (2D) + (2E x 2) + (2F x 4) + (2G x 12)	140	total wells sampled/yr
I. Sampling Labor Cost (2A x 2B x 2C x 2H)	16,800	\$
*ANNUAL GROUNDWATER MONITORING COST	58,800	\$
3. Well Installation (typical cost):		
A. Monitor well installation cost per well	0	\$/well
B. Number of monitor wells to be installed	0	Wells
C. Cost of monitor well system (A x B)	0	\$
D. Recovery well installation cost per well	0	\$/well
E. Number of Recovery Wells to be installed	0	Wells
F. Cost of Recovery well system (D x E)	0	
*TOTAL WELL INSTALLATION COST (3C + 3F)	0	\$
4. Administrative Cost:		
A. Annual cost for record-keeping and report preparation	15,000	\$
*ANNUAL ADMINISTRATIVE COST (4A)	15,000	\$
5. Inspection and Maintenance Cost for the Monitoring Program:		
A. Operator's time (hours) on-site for inspections and maintenance per year	208	hour/yr
B. Charge or salary per hour	60	\$/hr
C. Annual cost of labor (4A x 4B)	12,480	\$/yr
D. Replacement of parts and equipment per year	2,000	\$/yr
*ANNUAL INSPECTIONS / MAINTENANCE COST FOR THE GROUNDWATER MONITORING PROGRAM (5C + 5D)	14,480	\$

Note: The groundwater monitoring cost estimate is based on the number of wells sampled for analysis.

CP Cost Estimates

TABLE XI.E.3. – FINANCIAL ASSURANCE SUMMARY

ANNUAL OFF-SITE LIQUID TREATMENT / DISPOSAL COST	\$ 0	
ANNUAL ON-SITE TREATMENT / DISPOSAL COST	\$ 111,065	
ANNUAL INSPECTION / MAINTENACE / OPERATION COST FOR THE CORRECTIVE ACTION PROGRAM	\$ 31,560	
ANNUAL GROUNDWATER MONITORING COST	\$ 58,800	
ANNUAL ADMINISTRATIVE COST	\$ 15,000	
ANNUAL INSPECTION AND MAINTENANCE COST FOR THE GROUNDWATER MONITORING PROGRAM	\$ 14,480	
<u>ANNUAL SUB TOTAL</u>	\$ 230,905	
TOTAL YEARS USED FOR CALCULATING FINANCIAL ASSURANCE	30	Yrs
REMEDIATION COST (Annual Sub Total x Total Years Used)	\$ 6,927,150	
ON-SITE WASTE WATER TREATMENT SYSTEM CAPITAL COST	\$ 0	
TOTAL WELL COST	\$ 0	
10% Contingency	\$ 692,715	
GRAND TOTAL COST (nearest \$1000)	\$ 7,620,000	

Total Costs \$8,317,330 (pAdjusted to 2015 Dollars)

Attachment A - Legal Description of the Facility

LEGAL DESCRIPTION

Being all of the Southeast 1/4 and East 1/2 of the Southwest 1/4 of Section No. 20, George H. Paul Subdivision of the Driscoll Ranch, containing 240 acres of land, more or less, as shown by map thereof recorded in Volume "A", Page 82, Map Records of Nueces County, Texas.

Attachment A - Legal Description of the Facility

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DEED RECORDS

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THE STATE OF TEXAS :
COUNTY OF NUECES :

KNOW ALL MEN BY THESE PRESENTS:

THAT WE, NORA SCHULZE, a widow, of the County of Wharton and State of Texas, SHALLE SCHULZE COZAC, a feme sole, of the County of Wharton and State of Texas, and SANE SCHULZE RENKEN and husband, EDESEL A RENKEN, of the County of Jim Wells and State of Texas, for and in consideration of the sum of One Hundred Twenty Thousand (\$120,000.00) Dollars paid and secured to be paid by Texas Ecologists, Inc., as follows:

1. Fifty Thousand (\$50,000.00) Dollars cash to us in hand paid by Texas Ecologists, Inc., the receipt of which is hereby acknowledged and confessed; and
2. The assumption and payment by Texas Ecologists, Inc. of the balance due in the sum of Thirty-eight Thousand Fifty-one and 20/100 (\$38,051.50) Dollars of an indebtedness in the original amount of Thirty-eight Thousand Three Hundred (\$38,300.00) Dollars evidenced by a promissory note dated August 25, 1970, due and payable to The Federal Land Bank of Houston, in accordance with the terms and interest rate as stipulated therein, with interest pro-rated to this date, and providing for the usual accelerating, maturity and attorney fee clauses, as more fully described and set out in a certain Deed of Trust, dated August 25, 1970, executed by Nora Schulze, Shalle Schulze Cozac and Sane Schulte Renken and husband, Edsel A. Renken, to Herbert H. Decker, Trustee, for the use and benefit of The Federal Land Bank of Houston, which Deed of Trust is recorded in Volume 1220, Page 181, Deed of Trust Records of Nueces County, Texas, to which reference is herein made for all purposes;
3. Thirty-One Thousand Nine Hundred Forty-eight and 50/100 (\$31,948.50) Dollars evidenced by a promissory note of even

Attachment A - Legal Description of the Facility

NOV 23 1973

date herewith executed by Texas Ecologists, Inc., payable to the order of Nora Schulze, Shalle Schulze Cozac, and Sene Schulze Renken, the principal of said note being payable in ten (10) equal annual installments of \$3,194.85 each, plus interest, the first installment being due and payable on or before the 1st. day of April, 1973, and one installment to become due and payable on or before April 1st. of each succeeding year thereafter until the whole principal sum has been paid, and bearing interest at the rate of seven (7%) per cent per annum from date, interest payable annually, and all past due principal and interest shall bear interest at the rate of ten per cent per annum from maturity until paid, providing for the usual accelerating, maturity and attorney's fee clauses and secured by a vendor's lien and additionally secured by a Deed of Trust on the property herein-after described, which said liens are inferior and subject to the Deed of Trust Lien mentioned hereinabove;

HAVE GRANTED, SOLD AND CONVEYED and by these presents do GRANT, SELL AND CONVEY unto the said TEXAS ECOLOGISTS, INC., a corporation, duly incorporated and doing business under the laws of the State of Texas, of the County of Harris and State of TEXAS, the following described tract or parcel of land, lying and being situated in the County of Nueces and State of Texas, to-wit:

Being all of the Southeast 1/4 and the East 1/2 of the Southwest 1/4 of Section No. 20, George H. Paul Subdivision of the Driscoll Ranch, containing 240 acres of land, more or less, as shown by map thereof recorded in Volume "A", Page 82, Map Records of Nueces County, Texas.

This conveyance includes all agricultural crop allotments relating to said 240 acres.

SAVE AND EXCEPT, that out of the grant hereby made, there is reserved and excepted unto the grantors, their heirs and assigns, an undivided one-half (1/2) interest in and to all

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Attachment A - Legal Description of the Facility

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of the oil royalty, gas royalty and royalty in casinghead gas, gasoline and royalty in other minerals in and under and that may be produced and mined from said lands hereinabove described and conveyed together with the right of ingress and egress at all times for the purpose of mining, drilling and exploring said land for oil, gas and other minerals and removing the same therefrom.

This reservation and exception shall run and the rights, titles and privileges hereby reserved shall extend to the grantors herein, their heirs, administrators, executors and assigns, for a period of twenty (20) years from the date hereof and as long thereafter as oil, gas and other minerals or either of them is produced or mined from the land described herein in paying or commercial quantities. If, at the expiration of said twenty (20) years from the date hereof, oil, gas and other minerals or either of them is not being produced or mined from said land or any part thereof in paying or commercial quantities, this contract shall be null and void and the grantors rights hereunder shall terminate. And it is further understood and agreed that the grantors do not by these presents reserve any right to participate in the making of future oil and gas leases nor of participating in the bonus or bonuses which the grantee herein shall receive for any future leases nor of participating in any rental to be paid for the privilege of deferring the commencement of a well under any lease, nor or hereafter. This reservation is intended to be one-half (1/2) of the usual landowner's royalty set out and/or received in or under the terms of any oil, gas and mineral lease executed by the grantee, its successors and assigns, during the term hereof, provided that the lease is for a minimum of at least a one-sixth (1/6) royalty.

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Attachment A - Legal Description of the Facility

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FURTHER, this conveyance is subject to the following:

1. Pipe line right of way dated September 9, 1937, from Dr. G. Schulze et ux, Nora Schulze, to Duval Pipe Line Company, recorded in Volume 235, page 11, Deed Records, Nueces County, Texas. (over and through subject property)
2. Pipe Line right of way dated December 16, 1938, from Dr. G. Schulze et ux, Nora Schulze, to The Corpus Christi Corporation, recorded in Volume 246, Page 3, Deed Records Nueces County, Texas (over and through subject property).
3. Pipe line right of way dated March 11, 1942, from Dr. G. Schulze et ux, Nora Schulze, to Stratton Pipe Line Corporation, recorded in Volume 282, page 250, Deed Records Nueces County, Texas. (over and through subject property)
4. Easement dated May 28, 1954, from Nora Schulze, Individually and as Guardian of the Estate of Shalle Schulze and Sanez Schulze, minors, to Southwestern Bell Telephone Co., recorded in Volume 643, page 158, Deed Records of Nueces County, TEXAS, together with right of ingress and egress to or from said easement upon, across, over and under subject property.
5. Aerial easement from Nora Schulze, Shalle Schulze Cozac, Sanez Schulze Renken and husband, Edsal A. Renken, to Central Power and Light Company, dated September 13, 1967, recorded in Volume 1244, page 26, Deed Records of Nueces County, Texas. (20 ft. wide lying adjacent to and parallel with N. boundary line of subject property.
6. Rights of the public in and to any portion of subject property lying within the boundaries of the section line roads as dedicated on map of Geo. H. Paul S/D of the Driscoll Ranch, recorded in Volume "A", page 82, Map Records of Nueces County, Texas.

TO HAVE AND TO HOLD the above described premises, together with all and singular, the rights and appurtenances thereto in anywise belonging unto the said Texas Ecologists, Inc., its successors and assigns, forever; and we do hereby bind ourselves, our heirs, executors and administrators, to WARRANT AND FOREVER DEPEND all and singular the said premises unto the said Texas Ecologists, Inc., its successors and assigns, against every person whomsoever lawfully claiming, or to claim the same or any part thereof.

But it is expressly agreed and stipulated that the secondary Vendor's Lien is retained against the above described property, premises and improvements until the above described

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Attachment A - Legal Description of the Facility

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note in the principal sum of \$31,948.50, and all interest thereon, is fully paid according to the face and tenor, effect and reading, whereupon this deed shall become absolute.

WITNESS OUR HANDS, this the 1st day of April, 1972.

DEED RETURNED
MAY 14 1972

Nora Schulze
NORA SCHULZE, a widow
Shalle Schulze Cozac
SHALLE SCHULZE COZAC, a feme sole
James Schulze Renken
JAMES SCHULZE RENKEN
Edsel A. Renken
EASEL A. RENKEN

ACCEPTED:

TEXAS ECOLOGISTS, INC.

By *James Schulze Renken*
President

ATTEST:

Max H. Hunsicker
Secretary

THE STATE OF TEXAS :
COUNTY OF WHARTON :

BEFORE ME, the undersigned authority, on this day personally appeared NORA SCHULZE, a widow, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that she executed the same for the purposes and consideration therein expressed.



GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 1st day of April, 1972.

Loretta J. Koebel
Loretta J. Koebel
NOTARY PUBLIC IN AND FOR WHARTON COUNTY, TEXAS

THE STATE OF TEXAS :
COUNTY OF WHARTON :

BEFORE ME, the undersigned authority, on this day personally appeared SHALLE SCHULZE COZAC, a feme sole, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that she executed the same for the purposes and consideration therein expressed.



GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 1st day of April, 1972.

Loretta J. Koebel
Loretta J. Koebel
NOTARY PUBLIC IN AND FOR WHARTON COUNTY, TEXAS

Attachment A - Legal Description of the Facility

THE STATE OF CALIFORNIA:
COUNTY OF CONTRA COSTA:

ROLL 234 PAGE 1213

BEFORE ME, the undersigned notary, on this day personally appeared JAMES L. HARVEY, whose name is subscribed to the foregoing instrument and acknowledged to me that the same was the act of the said Texas Ecologists, Inc., a corporation, and that he executed the same as the act of such corporation for the purposes and consideration therein expressed and in the capacity therein stated.



GIVEN UNDER MY HAND AND SEAL OF MY OFFICE, this 7th day of April, 1972.

Roberta J. Harris
Roberta J. Harris, Notary Public
My Commission Expires March 7, 1976

THE STATE OF TEXAS :
COUNTY OF JIM WELLS :

BEFORE ME, the undersigned authority, on this day personally appeared EDESEL A. RENKEN and wife, SANEEL SCHULZE RENKEN, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged to me that they executed the same for the persons and consideration therein expressed.



GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 3rd day of April, 1972.

Ronnie J. Hatton
RONNIE J. HATTON
NOTARY PUBLIC IN AND FOR JIM WELLS COUNTY, TEXAS

STATE OF TEXAS
COUNTY OF HUNT
I hereby certify that this instrument was FILED on the date and at the time specified herein by me and was duly RECORDED, in the Volume and Page of the Public Records of Hunt County, Texas, as stamped herein by me, on

MAY 9 1972



McHenry
COUNTY CLERK,
HUNT COUNTY, TEXAS

DEED RECORDS
V. 1430 P. 763

Attachment A - Legal Description of the Facility

25

STATE OF TEXAS)
)
COUNTY OF NUECES)

I, MARION UEHLINGER, County Clerk in and for Nueces County, Texas, do hereby certify that the above and foregoing is a true and correct Photographic copy of Deed from Nora Schulze, et al to Texas Ecologists, Inc. as the same appears of record in my office in Volume 1430 Pages 758-764 Deed Record of Nueces County, Texas.

WITNESS my hand and the seal of the County Court of said County at office in Corpus Christi, Texas, this the 14 day of September, A.D. 1978.

MARION UEHLINGER

County Clerk, Nueces County, Texas.

BY *Beate Koenig* Deputy.

Attachment A - Legal Description of the Facility

Notice of confidentiality rights: If you are a natural person, you may remove or strike any of the following information from this instrument before it is filed for record in the public records: your Social Security number or your driver's license number.

Special Warranty Deed

Date: August 5, 2005

Grantor: Diane Howard and Wells Fargo Bank, NA, as Co-Trustees of Trust created under the Will of Vannie Belle Mayo, deceased for benefit of Diane Howard; and

Diane Howard and Wells Fargo Bank, NA, as Co-Trustees of Trust created under the Will of Vannie Belle Mayo, deceased for benefit of James Henry Mayo

Grantor's Mailing Address: c/o Joseph Newcomb
Wells Fargo Bank, N.A.
615 N. Upper Broadway
Corpus Christi, Texas 78477

Grantee: U.S. Ecology Texas, L.P.

Grantee's Mailing Address: c/o Lakepointe Centre I
300 East Mallard Drive, Suite 300
Boise, Ada County, Idaho 83706

Consideration: TEN AND NO/100 DOLLARS (\$10.00) and other good and valuable consideration.

Property (including any improvements):

The surface only of the Northwest quarter (NW 1/4) of Section Twenty (20) and the West One-half (W 1/2) of the West One-half (W 1/2) of the Northeast quarter of Section Twenty (20), out of the George H. Paul Subdivision of Driscoll Ranch as shown by map or plat thereof recorded in Volume A, Page 82, Map Records of Nueces County, Texas.

Drill Site Area:

That portion of the surface of the Property located within 200 feet of the south boundary of Farm-to-Market Road 2826, and located within 200 feet of the east boundary of Farm-to-Market Road 892, and located within 200 feet of the west boundary of the drainage ditch located along the easterly edge of the Property, and located within 200 feet of the southerly edge of the Property, save and except any portion of such two hundred foot wide strips located within 200 feet of the northern property line of that certain approximately 240 acre RCRA Facility site currently owned by Grantee, all as shown on the diagram attached hereto as Exhibit A hereto.

Attachment A - Legal Description of the Facility

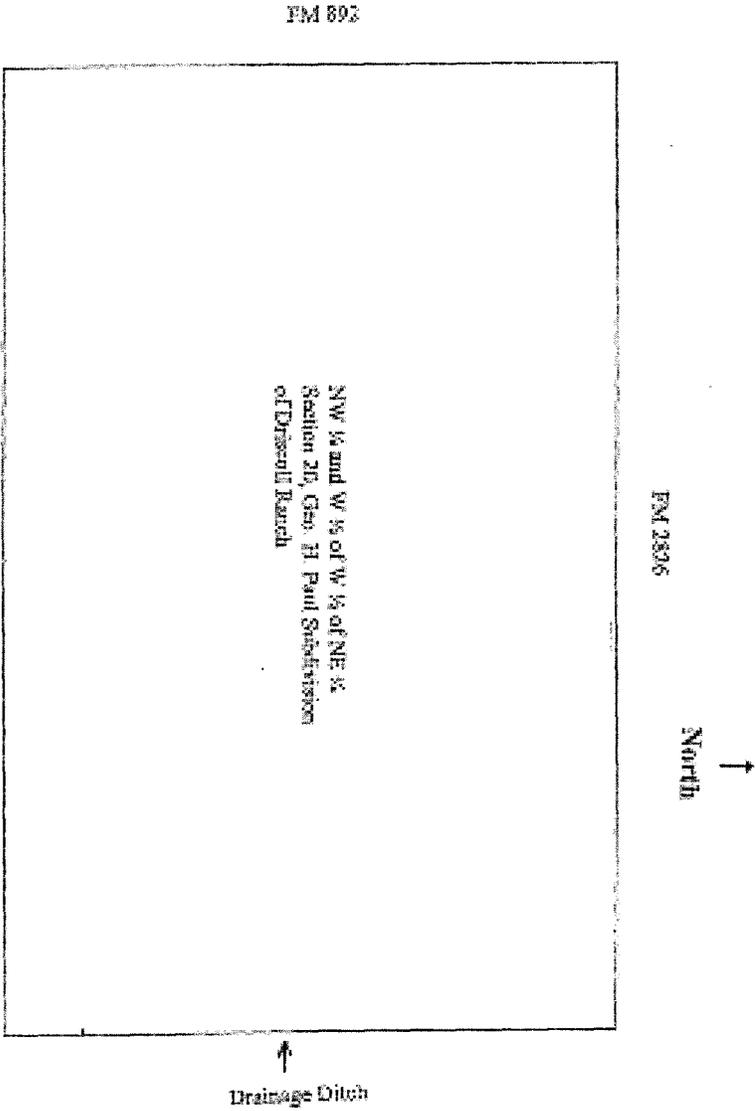


EXHIBIT A

Attachment A – Legal Description of the Facility



engineers | architects | contractors

SOLUTIONS TODAY WITH
A VISION FOR TOMORROW

METES AND BOUNDS

FOR

A 233.351 acre, or 10,164,789 square feet tract, more or less of land being comprised of that called 160 acre tract, described as the northwest $\frac{1}{4}$ of Section of 20 of the George H. Paul Subdivision of the Driscoll Ranch, recorded in Volume A, Page 82 of the Plat Records of Nueces County, Texas, that called 40 acres, described as the west $\frac{1}{4}$ of the west $\frac{1}{4}$ of the northeast $\frac{1}{4}$ said Section 20, said tracts conveyed to US Ecology Texas Inc. by instrument recorded as Document ID 2005042147 of the Official Public Records of Nueces County, Texas, and that called 40 acre tract, described as the northwest $\frac{1}{4}$ of the southwest $\frac{1}{4}$ of said Section 20, conveyed to US Ecology Texas Inc. by instrument recorded as Document ID 2013001587 of the Official Public Records of Nueces County Texas, save and except those areas lying within the right-of-way of Farm to Market 892, an 80-foot right-of-way, and Farm to Market 2826, a 100-foot right-of-way, all out of the Mariano Lopez de Herrera Survey, Abstract 606, Nueces County, Texas. Said 233.351 acre tract being more fully described as follows with bearings based on the North American Datum of 1983 (CORS 1996) from the Texas State Plane Coordinate System, Texas South Central Zone:

- BEGINNING:** At a found Type III Texas Department of Transportation monument, at the intersection of the south right-of-way line of Farm to Market Road 2826, a 100-foot public right-of-way and the east right-of-way line of Farm to Market 892, an 80-foot public right-of-way, the northwest corner of the herein described tract;
- THENCE:** N 89°32'23" E, along and with the south right-of-way line of said Farm to Market 2826, a distance of 3261.22 feet to a set $\frac{1}{2}$ " iron rod with cap marked "LNV" on the east line of the said 40 acre tract out of the northeast $\frac{1}{4}$ of Section 20, the northeast corner of the herein described tract, from which a found 1" iron pipe bears N 89°32'53" E, a distance of 1950.73 feet for the intersection of the west right-of-way line of County Road 69, a 60-foot right-of-way, and the south right-of-way line of said Farm to Market 2826;
- THENCE:** S 00°27'54" E, along and with the east line of said 40 acre tract out of the northeast $\frac{1}{4}$ of Section 20, a distance of 2591.02 feet to a set $\frac{5}{8}$ " iron rod with cap marked "LNV-SA", on the north line of a called 218.65 acre tract described in Volume 1571, Pages 227-228 of the Deed records of Nueces County, Texas, the southeast corner of said 40 acre tract out of the northeast $\frac{1}{4}$ of said Section 20, a southeast corner of the herein described tract, from which a found 1" iron pipe bears N 89°32'53" E, a distance of 1950.73 feet for the northeast corner of said 218.65 acre tract;

Attachment A - Legal Description of the Facility



engineers | architects | contractors

SOLUTIONS TODAY WITH
A VISION FOR TOMORROW

- THENCE: S 89°32'53" W, along and with the north line of said 218.65 acre tract, the south line of said 40 acre tract out of the northeast ¼ of said Section 20 and the south line of said 160 acre tract, a distance of 1979.70 feet to a found trailer axle at the northeast corner of said 40 acre tract out of the southwest ¼ of said Section 20, a reentrant corner of the herein described tract;
- THENCE: S 00°27'08" E, departing the south line of said 160 acre tract, along and with the west line of said 218.65 acre tract, the east line of said 40 acre tract out of the southwest ¼ of said Section 20, a distance of 1331.19 feet to a set 5/8" iron rod with cap marked "LNV" at the southeast corner of said 40 acre tract out of the southwest ¼ of said Section 20, a southeast corner of the herein described tract, from which a found 5/8" iron rod on the south line of said Section 20, the north right-of-way line of County Road 30, a 40-foot right-of-way, bears S 00°27'08" E, a distance of 1289.68 feet;
- THENCE: S 89°32'23" W, departing the west line of said 218.65 acre tract, along and with the south line of said 40 acre tract out of the southwest ¼ of said Section 20, a distance of 1286.23 feet to a set ½" iron rod with cap marked "LNV" on the east right-of-way line of aforementioned Farm to Market 892;
- THENCE: N 00°23'30" W, along and with the east right-of-way line of said Farm to Market 892, passing at a distance of 1331.37 feet, the north line of said the 40 acre tract out of the southwest ¼ of said Section 20, the south line of said 160 acre tract, and continuing for a distance of 2590.55 feet for a total distance of 3921.92 feet to the POINT OF BEGINNING and containing 233.351 acres in Nueces County, Texas. Said tract being described in accordance with a survey made on the ground and a survey map prepared by LNV, Inc.;

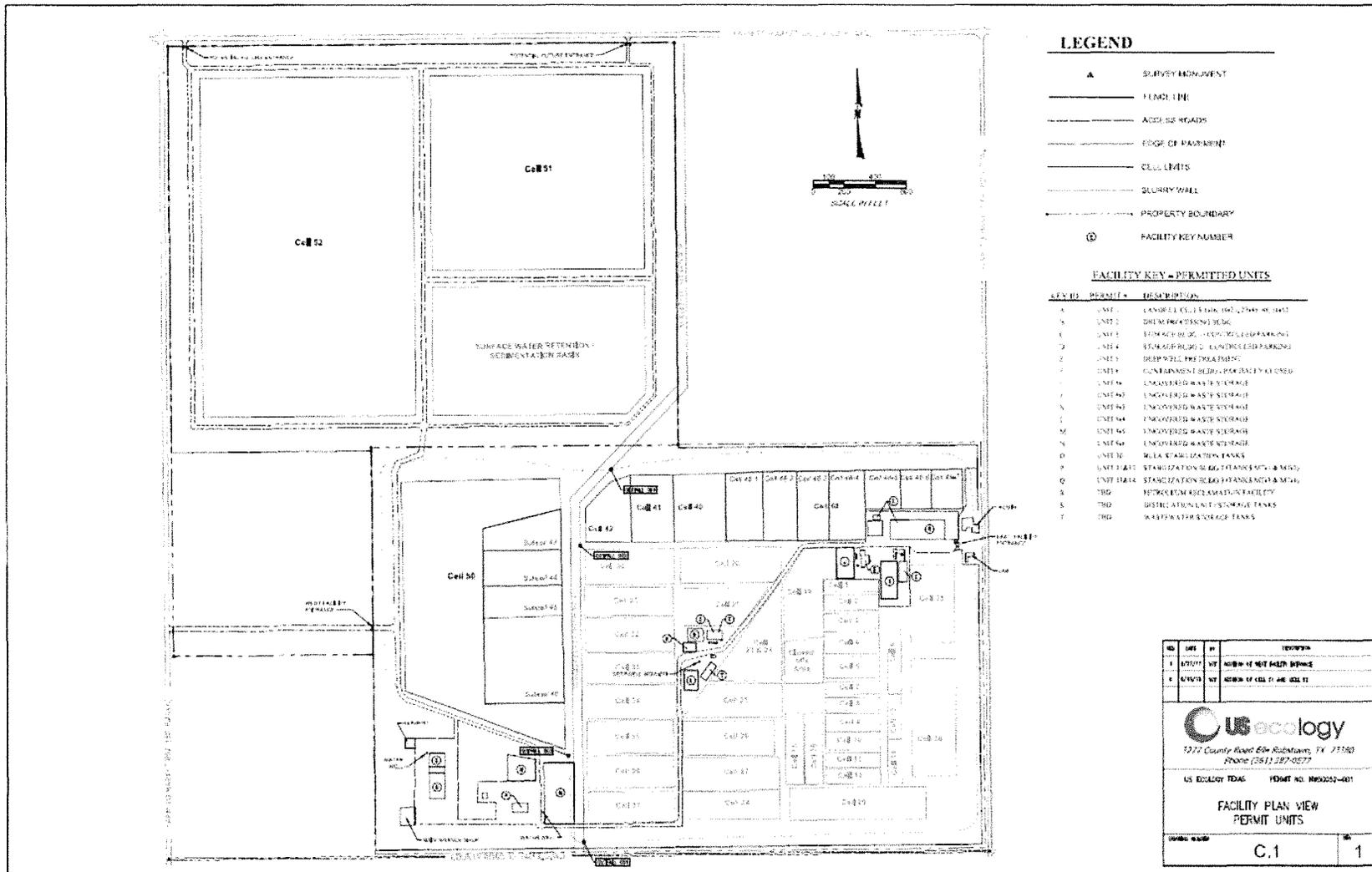
Job No.: 130295
File: S:\SURVEY\TEMP\US Ecology\MB130295.docx
Date: July 24, 2013
TBPLS Firm No.: 10126502



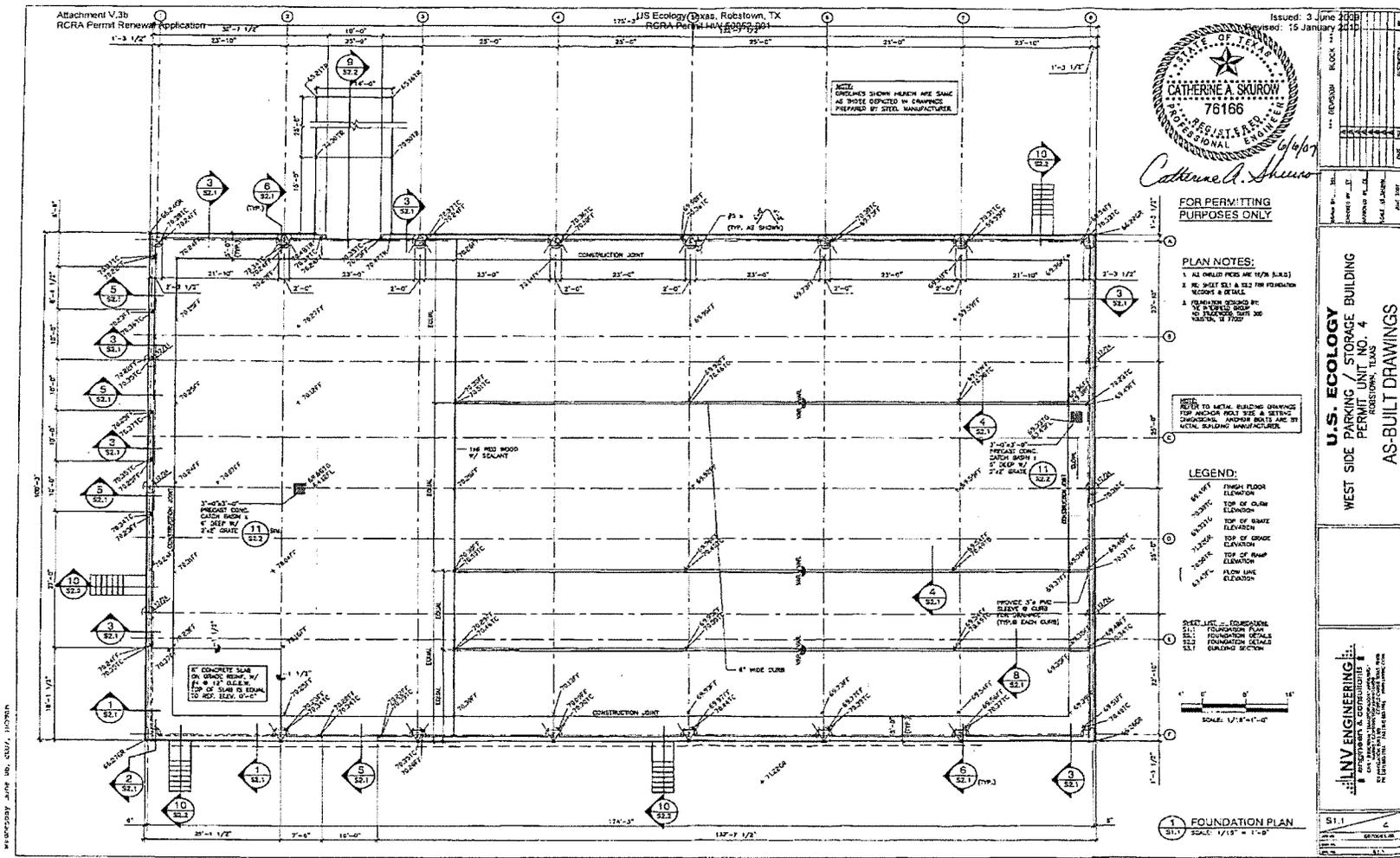
7/24/13
Brett Walker

Attachment B - Facility Map and Drawings

Facility Plan

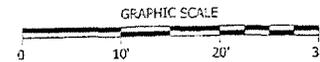
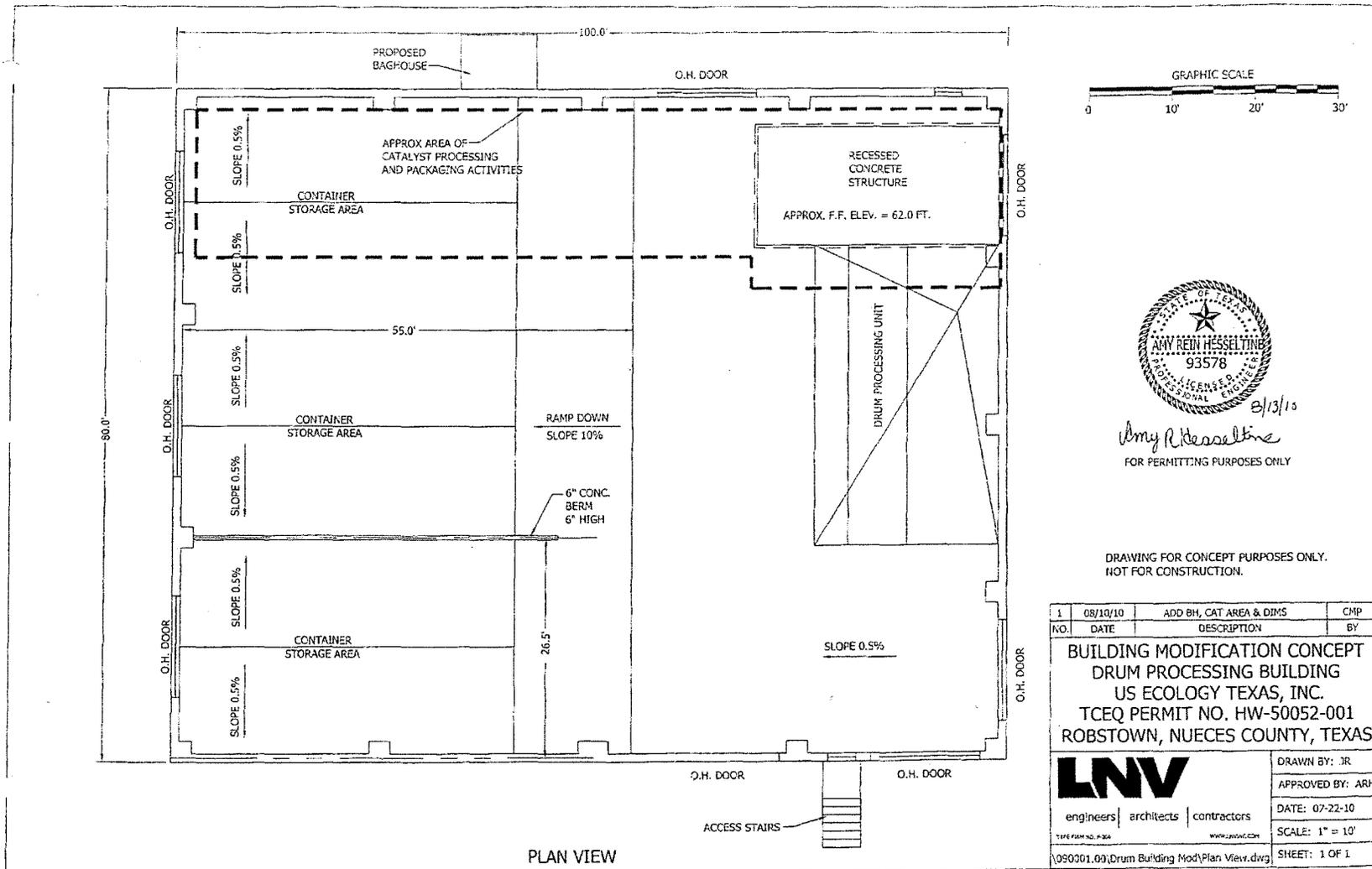


Attachment B - Facility Map and Drawings
 Controlled Parking/Storage Building II (West Side)



Attachment B - Facility Map and Drawings

Drum Processing Building



Amy R. Hesselbine
 FOR PERMITTING PURPOSES ONLY

DRAWING FOR CONCEPT PURPOSES ONLY.
 NOT FOR CONSTRUCTION.

NO.	DATE	DESCRIPTION	CMP BY
1	08/10/10	ADD BH, CAT AREA & DIM'S	CMP

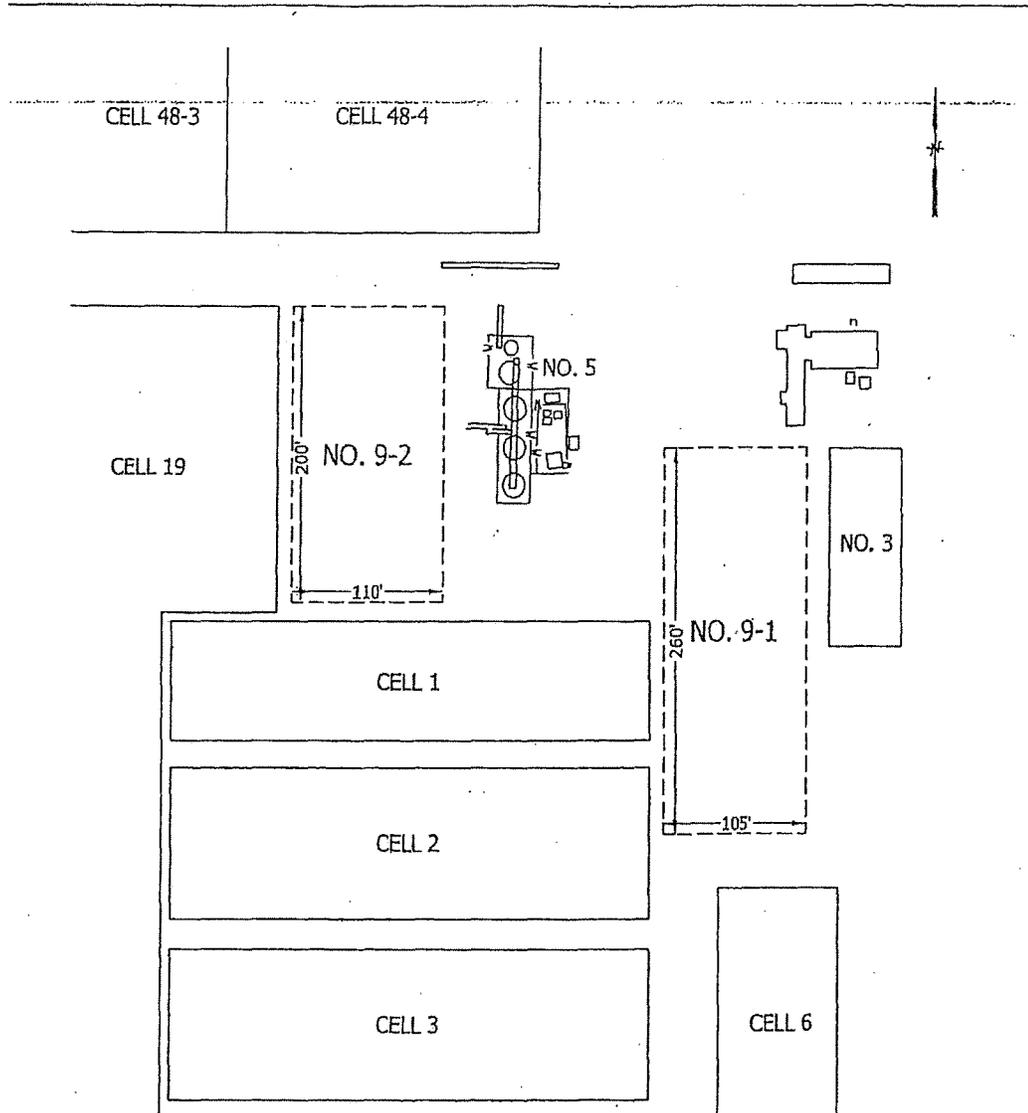
**BUILDING MODIFICATION CONCEPT
 DRUM PROCESSING BUILDING
 US ECOLOGY TEXAS, INC.
 TCEQ PERMIT NO. HW-50052-001
 ROBSTOWN, NUECES COUNTY, TEXAS**

LNV engineers architects contractors <small>TYPE FORM NO. 4-204 WWW.LNVINC.COM</small>	DRAWN BY: JR
	APPROVED BY: ARH
	DATE: 07-22-10
	SCALE: 1" = 10'

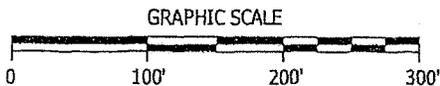
050001.09\Drum Building Mod\Plan View.dwg SHEET: 1 OF 1

Attachment B - Facility Map and Drawings

Uncovered Waste Storage Areas



Amy R. Hesseltnine



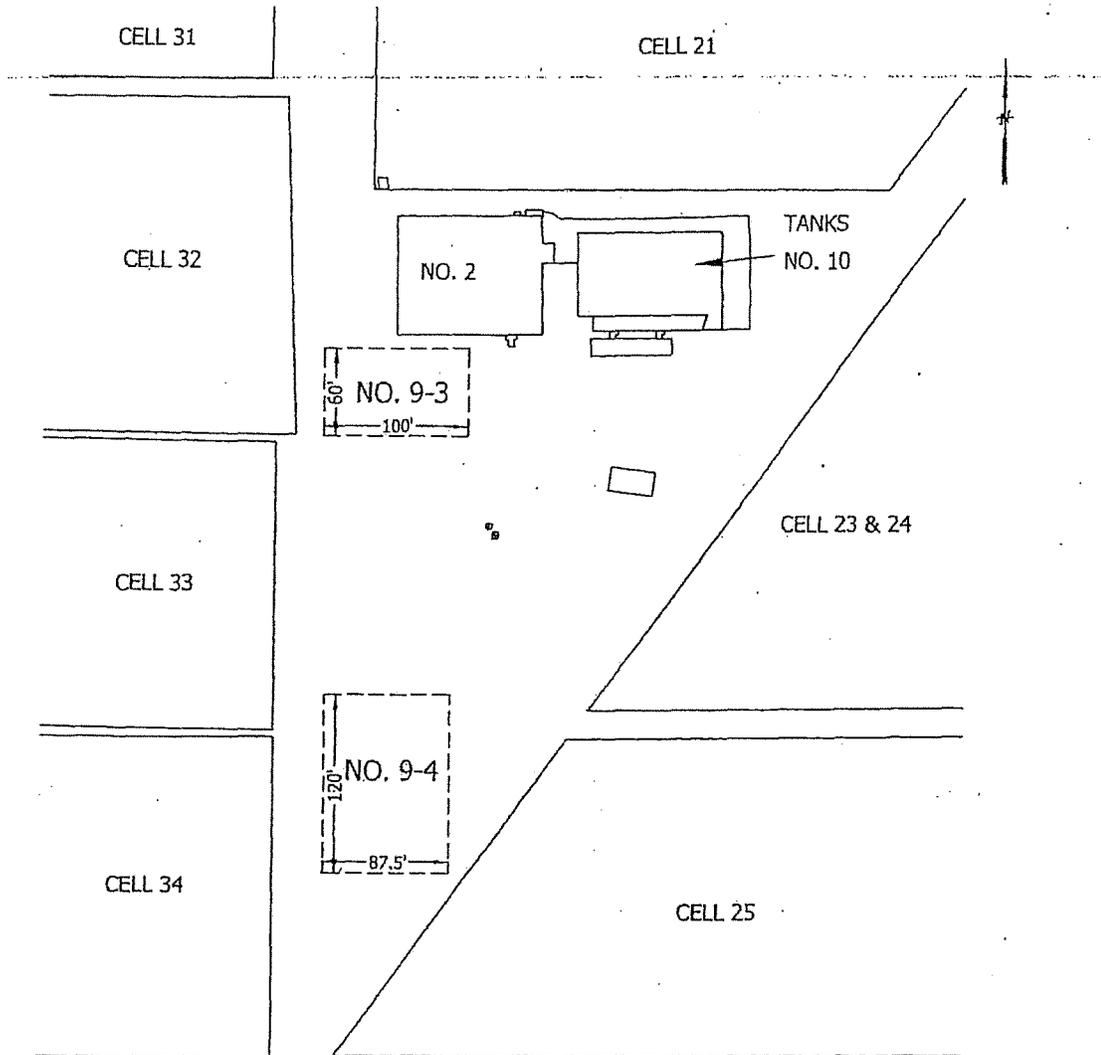
UNCOVERED STORAGE AREAS 9-1 & 9-2
 US ECOLOGY TEXAS
 TCEQ PERMIT NO. HW-50052-01
 NUECES COUNTY, TEXAS

LNV
 engineers | architects | contractors
TYPE FIRM NO. F-346 WWW.LNVINC.COM

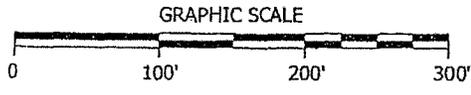
DRAWN BY: JR
APPROVED BY: ARH
DATE: 01-15-10
SCALE: AS SHOWN

Attachment B - Facility Map and Drawings

Uncovered Waste Storage Areas



Amy Rein Hesseltnine

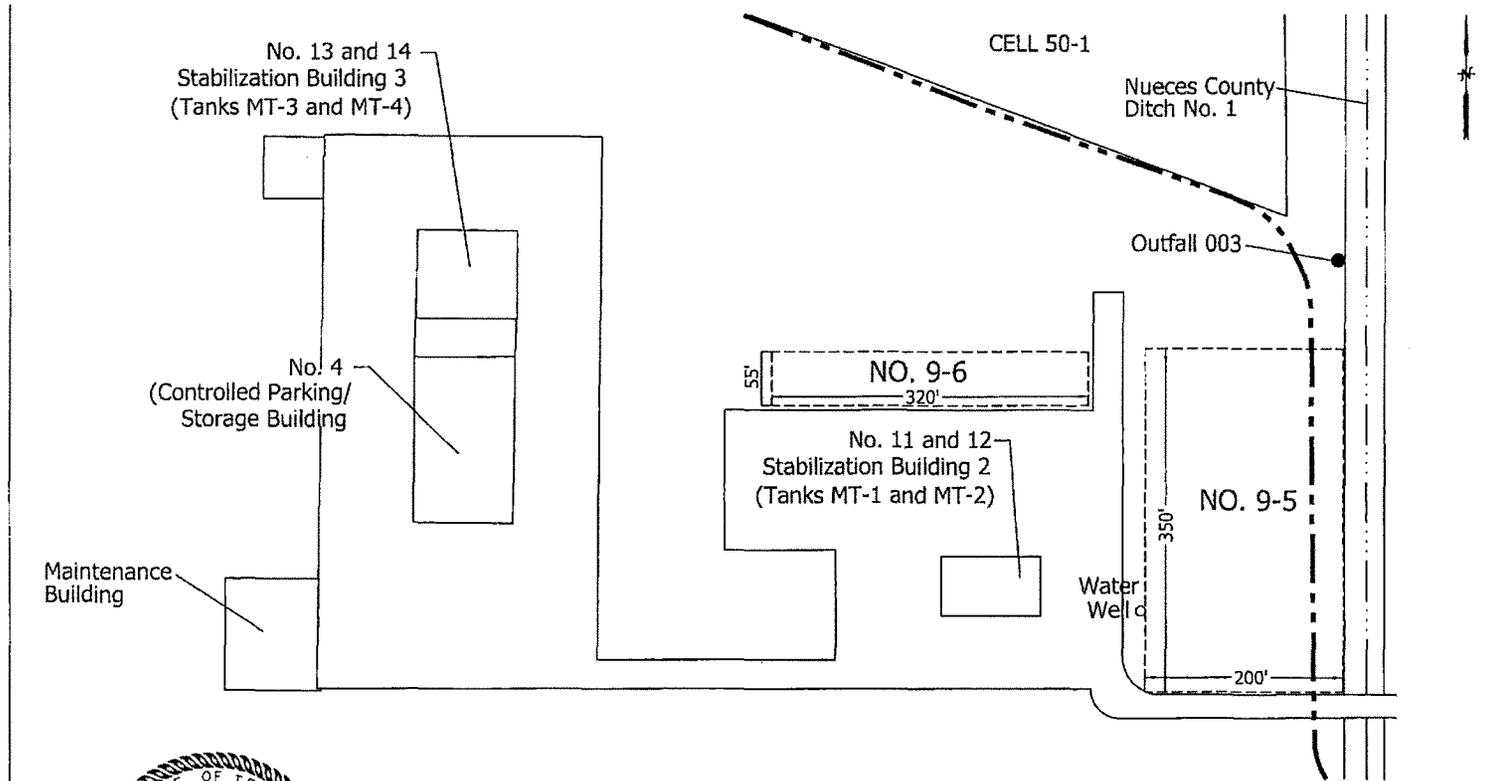


UNCOVERED STORAGE AREAS 9-3 & 9-4
 US ECOLOGY TEXAS
 TCEQ PERMIT NO. HW-50052-01
 NUECES COUNTY, TEXAS

 engineers architects contractors <small>TYPE FORM NO. F-046 WWW.LNVINC.COM</small>	DRAWN BY: JR
	APPROVED BY: ARH
	DATE: 01-15-10
	SCALE: AS SHOWN
090021.00\Uncovered Storage.dwg	
FIGURE 2	

Attachment B - Facility Map and Drawings

Uncovered Waste Storage Areas

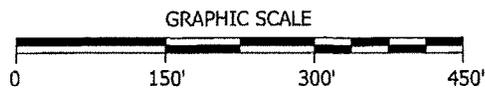


8/25/14

Amy R Hesseltnie

FOR PERMITTING PURPOSES ONLY

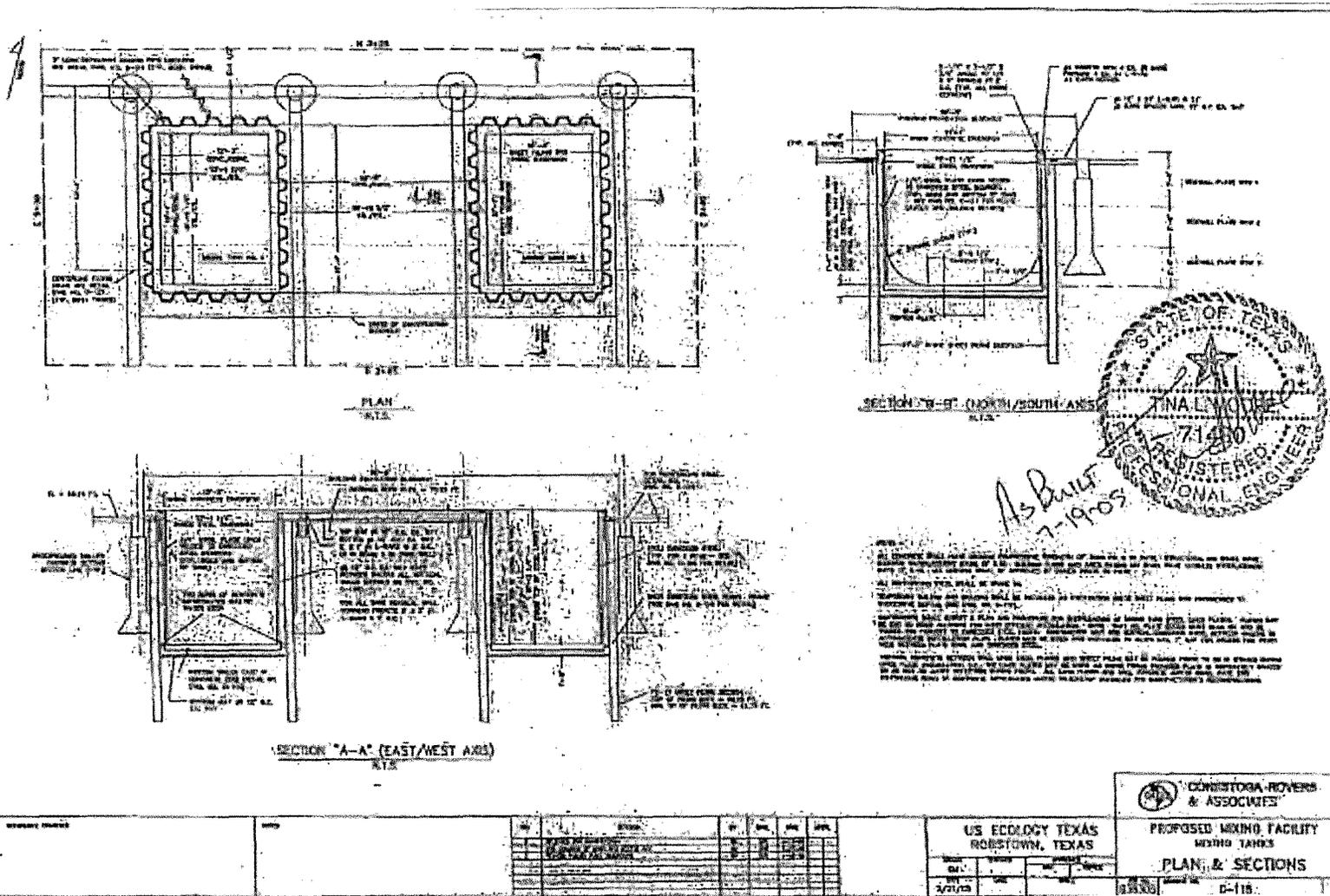
----- APPROX. LOCATION OF SLURRY WALL



UNCOVERED STORAGE AREAS 9-5 & 9-6 US ECOLOGY TEXAS TCEQ PERMIT NO. HW-50052-01 NUECES COUNTY, TEXAS	
 engineers architects contractors <small>TYPE FORM NO. F-506 WWW.LNVINC.COM</small>	DRAWN BY: CMP
	APPROVED BY: ARH
	DATE: 08-25-14
	SCALE: AS SHOWN
\\140148\p001\Figs\Uncovered Storage Details	
FIGURE 3	

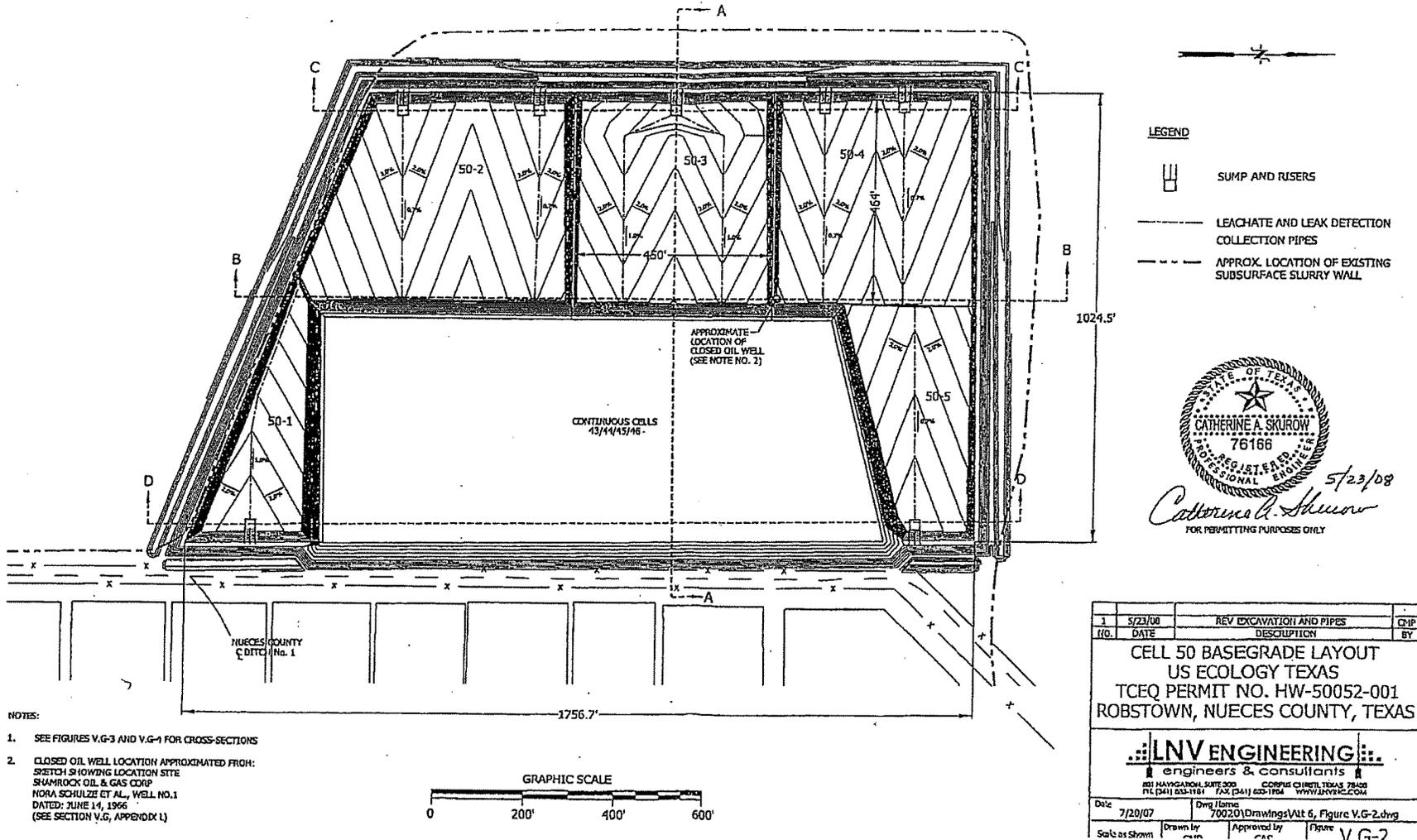
Attachment B - Facility Map and Drawings

Stabilization Building 2 (Mixing Tank 1 and Mixing Tank 2)



Attachment B - Facility Map and Drawings

Landfill Cell 43-46/Cell 50



- NOTES:
- SEE FIGURES V.G-3 AND V.G-4 FOR CROSS-SECTIONS
 - CLOSED OIL WELL LOCATION APPROXIMATED FROM:
 SKETCH SHOWING LOCATION SITE
 SHAMROCK OIL & GAS CORP
 NORA SCHULZE ET AL., WELL NO.1
 DATED: JUNE 14, 1956
 (SEE SECTION V.G, APPENDIX I)



REV. NO.	DATE	DESCRIPTION	BY
1	5/23/08	REV EXCAVATION AND PIPES	CRP

CELL 50 BASEGRADE LAYOUT
 US ECOLOGY TEXAS
 TCEQ PERMIT NO. HW-50052-001
 ROBSTOWN, NUECES COUNTY, TEXAS

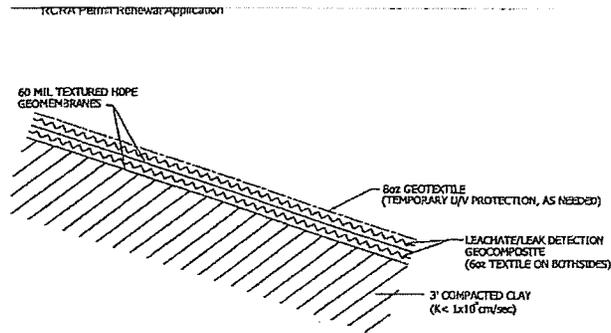
LNV ENGINEERING
 engineers & consultants

201 HAVANCAH SUITE 300 CORPUS CHRISTI, TEXAS 78401
 TEL (361) 653-1100 FAX (361) 653-1104 WWW.LNVE.COM

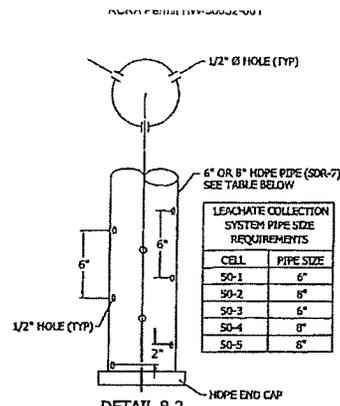
Date: 7/20/07 Dwg Name: 700201DrawingsVat 6, Figure V.G-2.dwg
 Scale as Shown Drawn by: [unclear] Approved by: [unclear] Figure: V.G-2

Attachment B - Facility Map and Drawings

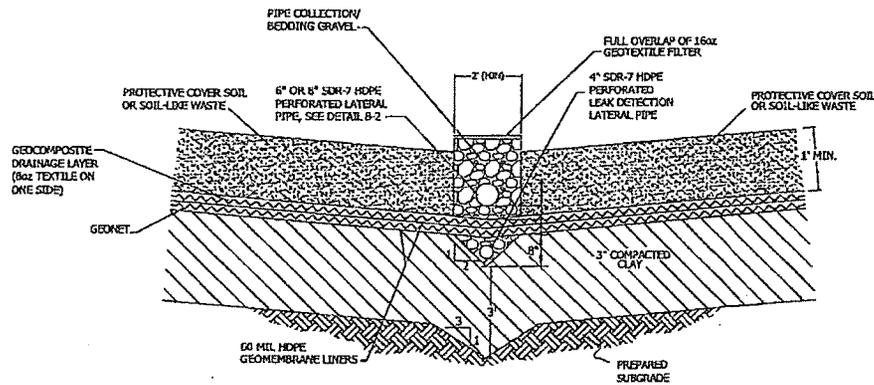
Cell 50 -Liner Details



DETAIL 8-1
SIDEWALL LINER CROSS-SECTION
 NOT TO SCALE
 NOTE: SEE FIGURE V.G-6 FOR DETAIL LOCATION



DETAIL 8-2
LEACHATE COLLECTION PIPE PERFORATIONS
 NOT TO SCALE
 NOTE: SIMILAR PATTERN FOR 4" LEAK DETECTION PIPE

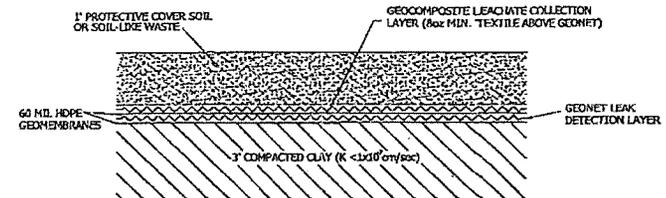


DETAIL 8-3
COLLECTION PIPES ON CELL FLOOR
 NOT TO SCALE
 NOTE: SEE FIGURE V.G-6 FOR DETAIL LOCATION

TRANSMISSIVITY REQUIREMENTS

GEOSYNTHETIC DRAINAGE LAYER ¹	TRANSMISSIVITY REQUIRED (m ² /sec)	PERFORMANCE CONDITIONS		
		LOADING (psf)	GRADIENT	BOUNDARY CONDITIONS
Leachate Collection: Landfill Bottom	6.76E-03	1,000	0.0212	Soil/geocomposite/geomembrane
Leachate Collection: Landfill Sidewalls	6.01E-06	10,500	0.0200	Soil/geocomposite/geomembrane
Leachate Collection: Landfill Sidewalls	3.49E-05	1,000	0.50	Soil/geocomposite/geomembrane
Leachate Collection: Landfill Sidewalls	2.96E-08	3,500	0.50	Soil/geocomposite/geomembrane
Leak Detection Landfill Bottom	1.95E-04	10,500	0.0200	Geomembrane/geonet/geomembrane
Leak Detection Landfill Sidewalls	1.95E-04	3,500	0.50	Geomembrane/geocomposite/geomembrane
Final Cover 25% Slope	2.05E-04	1,000	0.25	Soil/geocomposite/geomembrane
Final Cover 5% Slope	8.29E-04	1,000	0.05	Soil/geocomposite/geomembrane

Note: 1. Geosynthetic drainage at each location must meet all transmissivity conditions listed.



DETAIL 8-4
FLOOR LINER SYSTEM CROSS-SECTION
 NOT TO SCALE
 NOTE: SEE FIGURE V.G-6 FOR DETAIL LOCATION

NOTE: PROTECTIVE COVER MUST BE 1" (MIN.) ABOVE GEOSYNTHETIC LINER SYSTEM. SURVEY OF TOP OF GEOSYNTHETIC LINER ELEVATIONS WILL BE PERFORMED PRIOR TO PROTECTIVE COVER INSTALLATION.



Catherine A. Skurrow
 5/23/08
 FOR PERMITTING PURPOSES ONLY

1	5/23/08	REV TRANS, ADD TABLE, REV LABELS	CMP
NO.	DATE	DESCRIPTION	BY

CELL 50 TYPICAL LINER DETAILS 1
 US ECOLOGY TEXAS
 TCEQ PERMIT NO. HW-50052-001
 ROBSTOWN, NUECES COUNTY, TEXAS

LNV ENGINEERING
 engineers & consultants
 801 NAVIGATION, SUITE 202 COLLEGE CIRCLE, TEXAS 78408
 PH. (817) 983-1784 FAX (817) 983-1784 WWW.LNVINC.COM

Date: 7/20/07 Dwg Name: 70020 Drawings/Att 6, Figure V.G-8.dwg
 Not to Scale Drawn by: CMP Approved by: CAS Figure: V.G-8

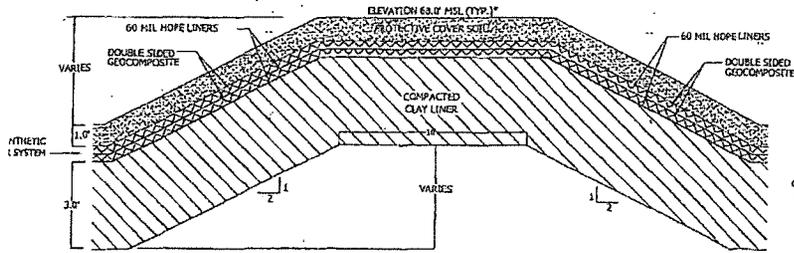
Attachment B - Facility Map and Drawings

Cell 50 -Liner Details

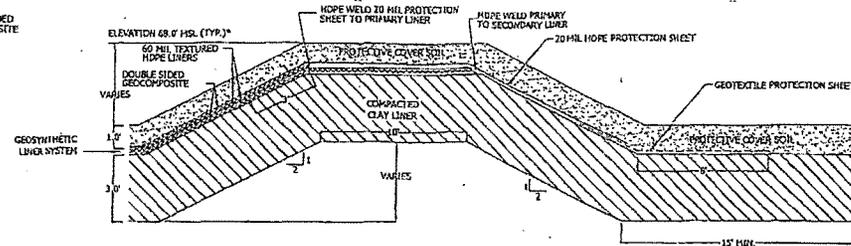
RCRA Permit Renewal Application

US Ecology Texas, Robstown, TX
 RCRA Permit HW-50052-001

Issued: 3 June 2009

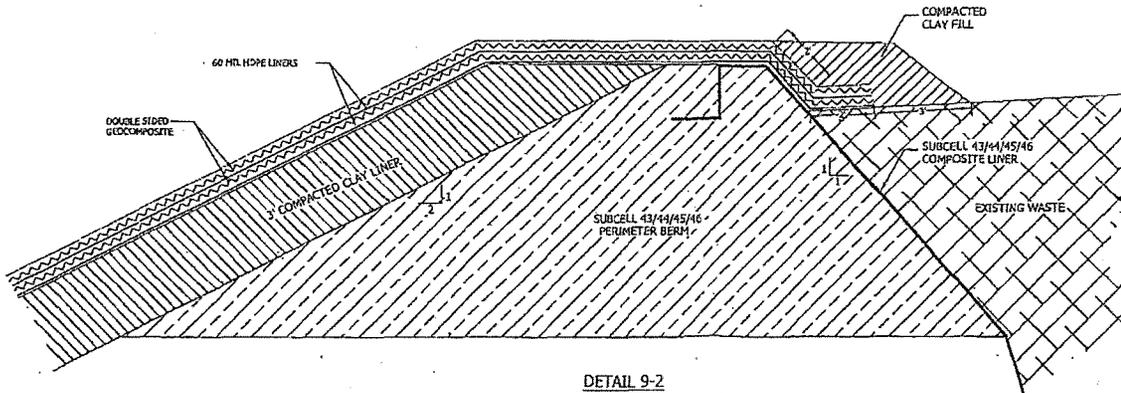


DETAIL 9-1
INTERCELL BERM FOR MULTIPLE
CELL CONSTRUCTION
 NOT TO SCALE



DETAIL 9-3
INTERCELL BERM FOR SINGLE
CELL CONSTRUCTION
 NOT TO SCALE

* NOTE:
 TOP OF INTERCELL BERM
 ELEVATION DEPENDENT UPON
 CELL FLOOR ELEVATION



DETAIL 9-2
TIE-IN WITH CONTINUOUS
SUBCELLS 43/44/45/46
 NOT TO SCALE



Catherine A. Skurrow
 3/24/08
 FOR PERMITTING PURPOSES ONLY

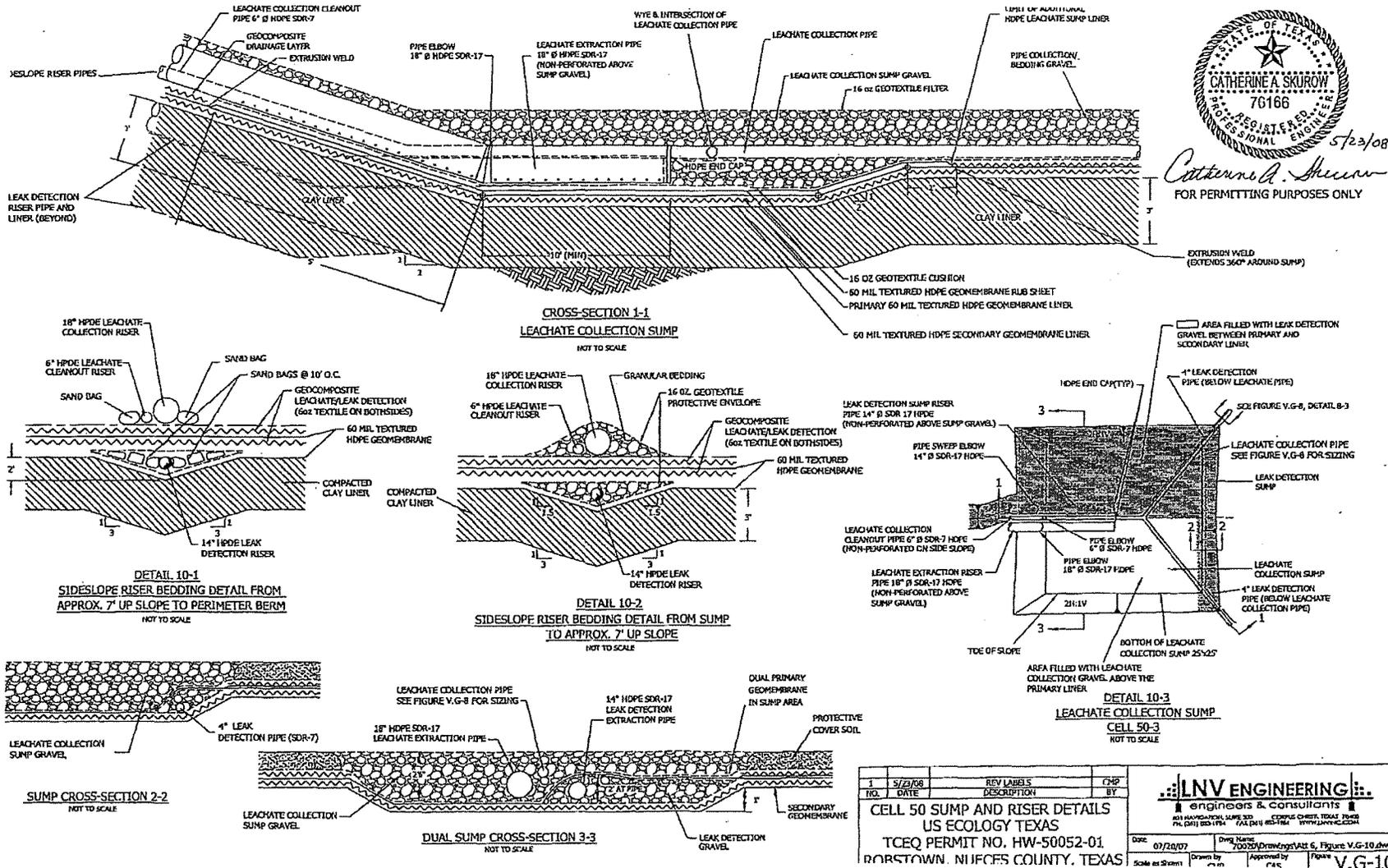
NO.	DATE	REVISION DESCRIPTION	MCS	BY
1	3/19/08	RAISED ELEV OF CELL FLOOR & INTERIOR BERMS	MCS	

CELL 50 TYPICAL LINER DETAILS 2
 US ECOLOGY TEXAS
 TCEQ PERMIT NO. HW-50052-001
 ROBSTOWN, NUECES COUNTY, TEXAS

LNV ENGINEERING
 engineers & consultants

801 NAVIGATION, SUITE 300 CORPUS CHRISTI, TEXAS 78406
 PH (361) 863-1184 FAX (361) 863-1184 WWW.LNVE.COM
 Date: 7/20/07 Drawn: 7/20/07

Attachment B - Facility Map and Drawings
 Cell 50- Leachate Collection and Leak Detection System



NO.	DATE	REV LABELS DESCRIPTION	CHK BY
1	5/23/08		

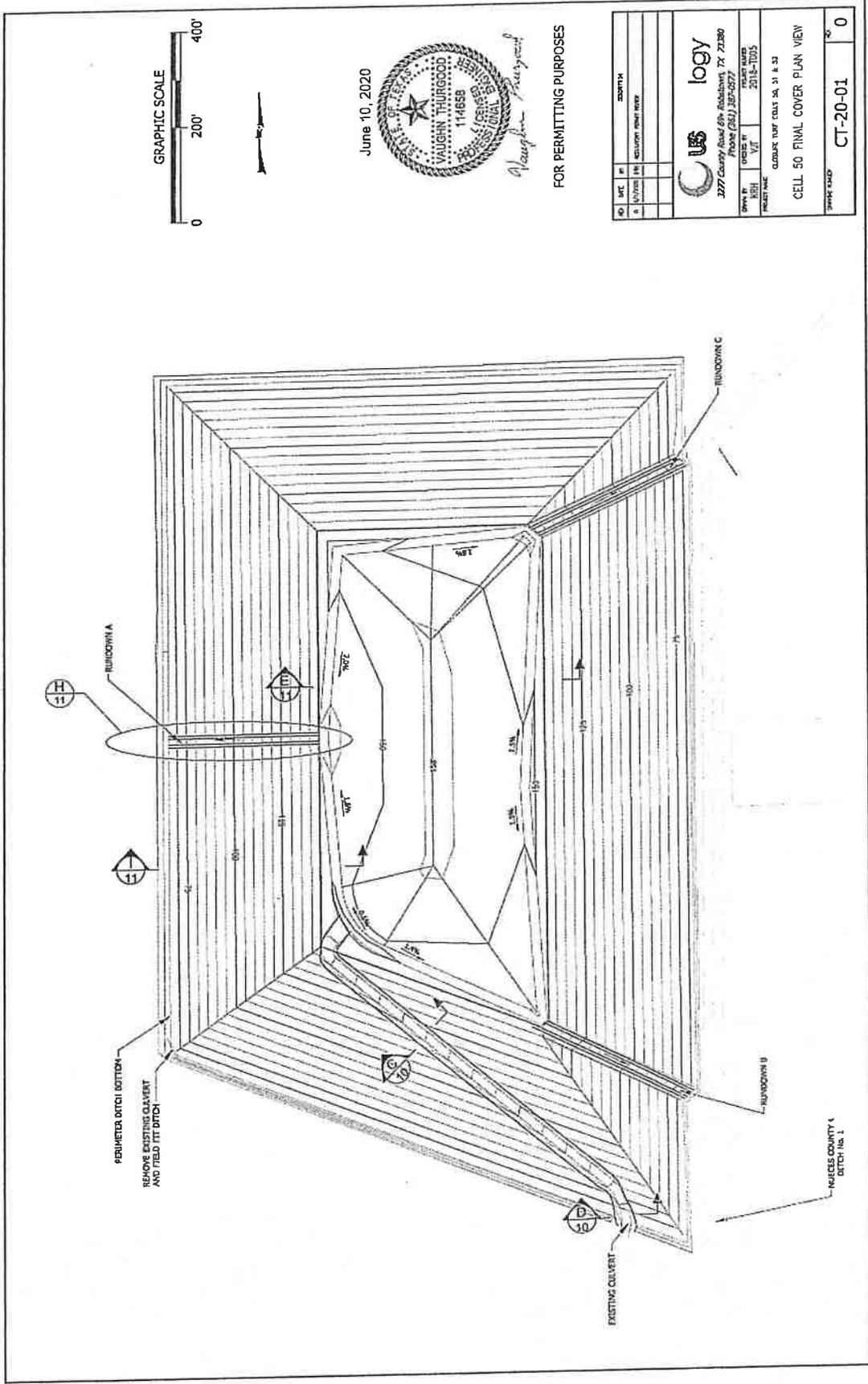
CELL 50 SUMP AND RISER DETAILS
 US ECOLOGY TEXAS
 TCEQ PERMIT NO. HW-50052-01
 BOSTOWN, NICHOLS COUNTY, TEXAS

LN ENGINEERING
 engineers & consultants

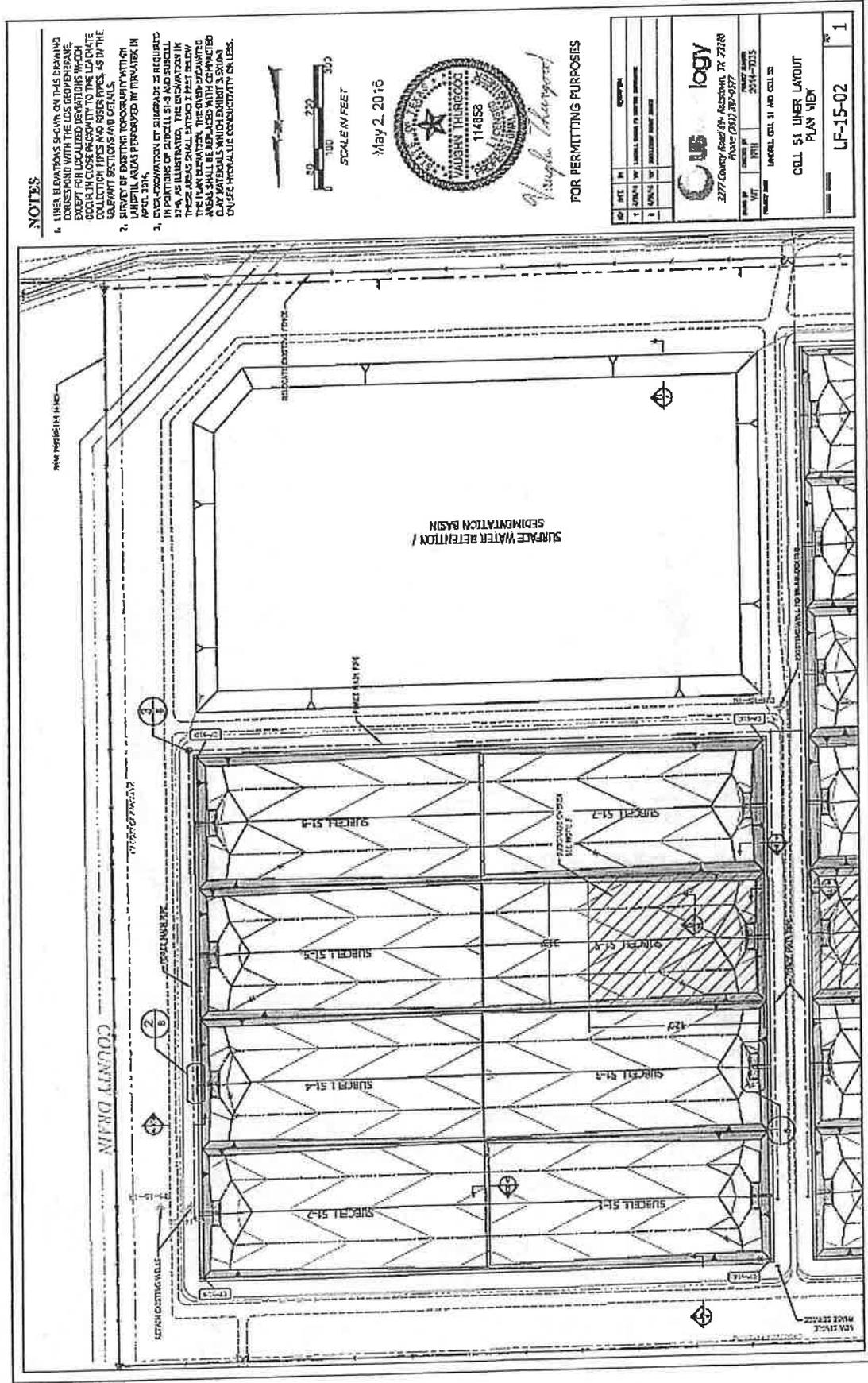
201 HAYWARD CIRCLE, SUITE 300, CORPUS CHRISTI, TEXAS 78408
 P.O. BOX 883194, F.A. (248) 883-1944 WWW.LNENGINEERING.COM

DATE: 07/26/07
 Scale as Shown
 Drawn by: [Signature]
 Checked by: [Signature]
 Approved by: [Signature]
 Title: V.G-10

Attachment B - Facility Map and Drawings

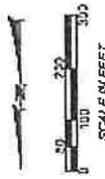


Attachment B - Facility Map and Drawings



NOTES

1. LINE ELEVATIONS SHOWN ON THIS DRAWING CORRESPOND WITH THE LOS GEOPHYSIC EXCEPT FOR LOCATED DEVIATIONS WHICH OCCUR AT THE POINTS OF INTERSECTION OF CONTIGUOUS PLOTS AND ARE NOT TO BE CONSIDERED AS PART OF THE SURVEY. SURVEY OF EXISTING TOPOGRAPHY WITHIN LAKEPILL AREAS PERFORMED BY THE STATE OF TEXAS, APRIL 2016.
2. ELEVATION OF SURFACE IS REQUIRED IN PORTIONS OF SUBCELL S1-3 AND SUBCELL S1-4, AS SHOWN ON THIS DRAWING. THE ELEVATION IN THE LAKEPILL AREAS, THE OPEN EXCAVATED AREAS SHALL BE REPLACED WITH COMPACTED CLAY MATERIALS WHICH SHALL BE 3' THICK ON SUBCELL CONDUCTIVITY ON LBS.



May 2, 2016



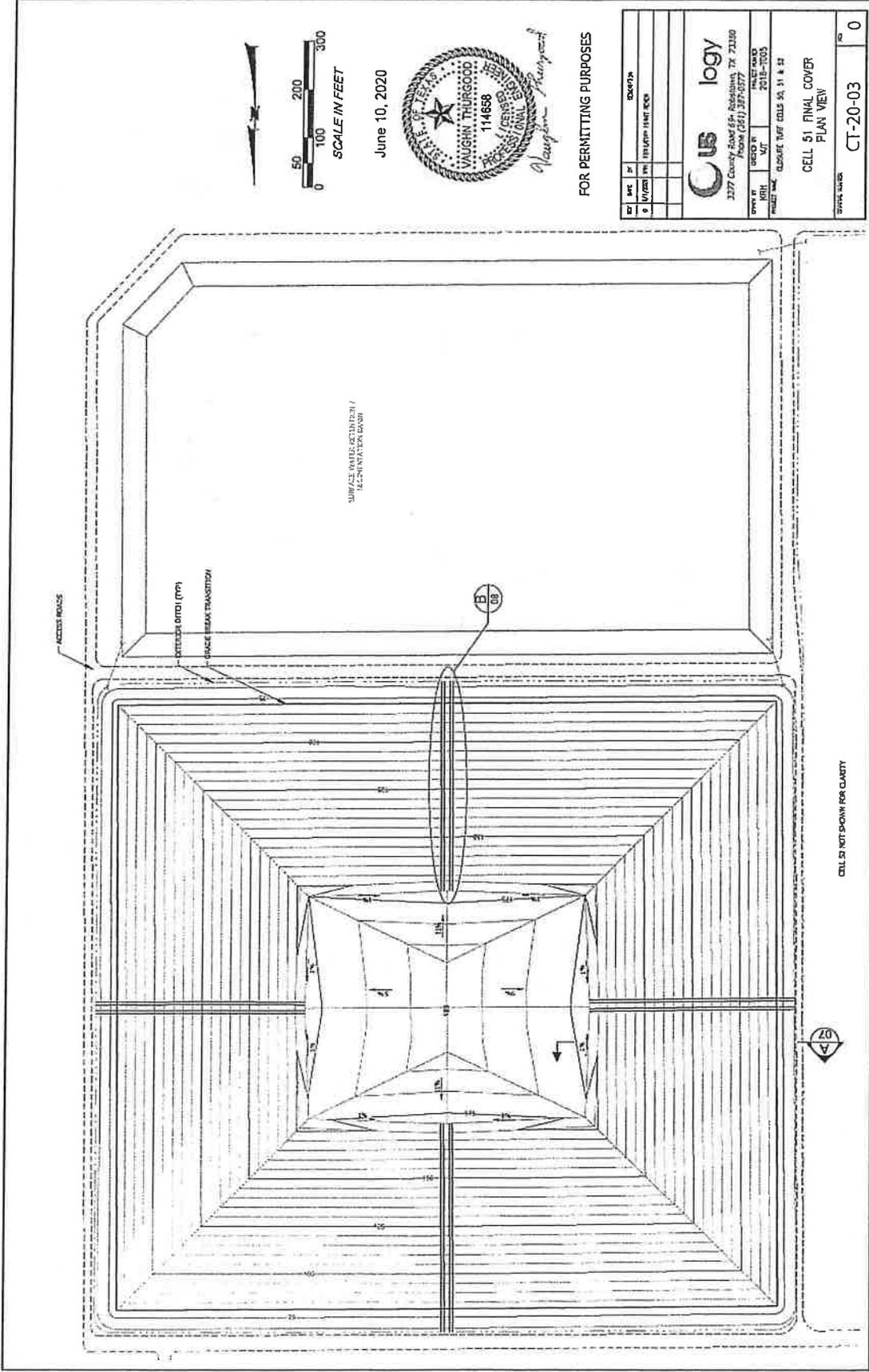
Valush Thiergoos

FOR PERMITTING PURPOSES

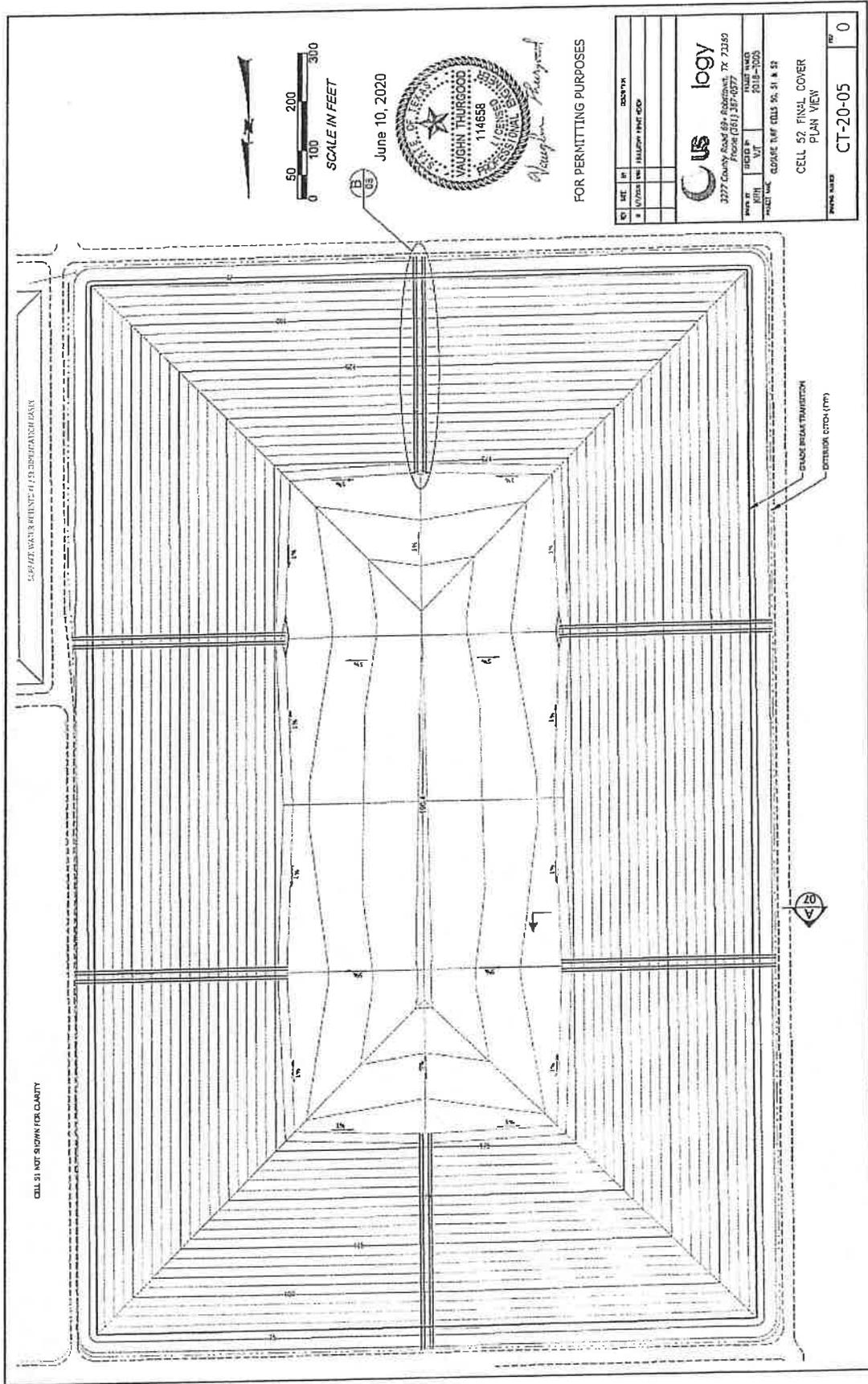
DATE	BY	DESCRIPTION
1	LOGV	ISSUE FOR PERMITTING PURPOSES
2	LOGV	ISSUE FOR PERMITTING PURPOSES

3277 County Road 89, Rockwall, TX 75088
 PHONE: (972) 274-9277
 FAX: (972) 274-9277
 WWW: www.us-ecology.com
 PROJECT NO: 2014-2015
 SHEET NO: 15 OF 23
 SHEET TITLE: COLLECTOR LAYOUT PLAN VIEW
 PROJECT: LF-15-02
 DRAWING NO: 1

Attachment B - Facility Map and Drawings

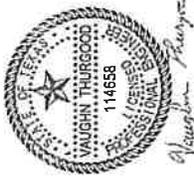


Attachment B - Facility Map and Drawings



50 100 200 300
 SCALE IN FEET

June 10, 2020



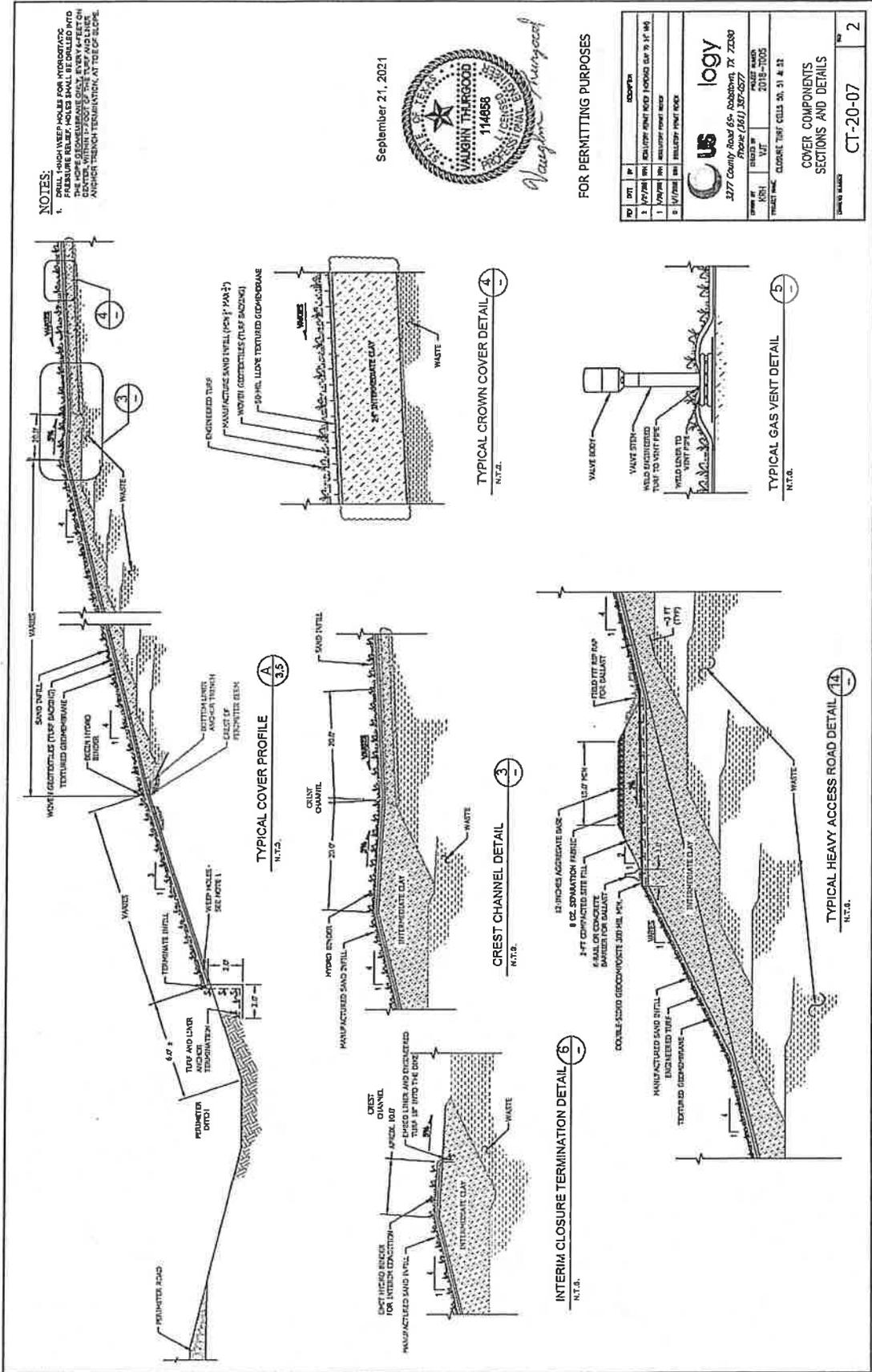
FOR PERMITTING PURPOSES

NO.	DATE	DESCRIPTION
1	07/20/20	ISSUE FOR PERMIT

3777 County Road 68 • Rockwall, TX 75085 Phone (972) 357-0277	
NAME TITLE PROJECT NO.	NAME TITLE PROJECT NO.
NAME TITLE PROJECT NO.	NAME TITLE PROJECT NO.

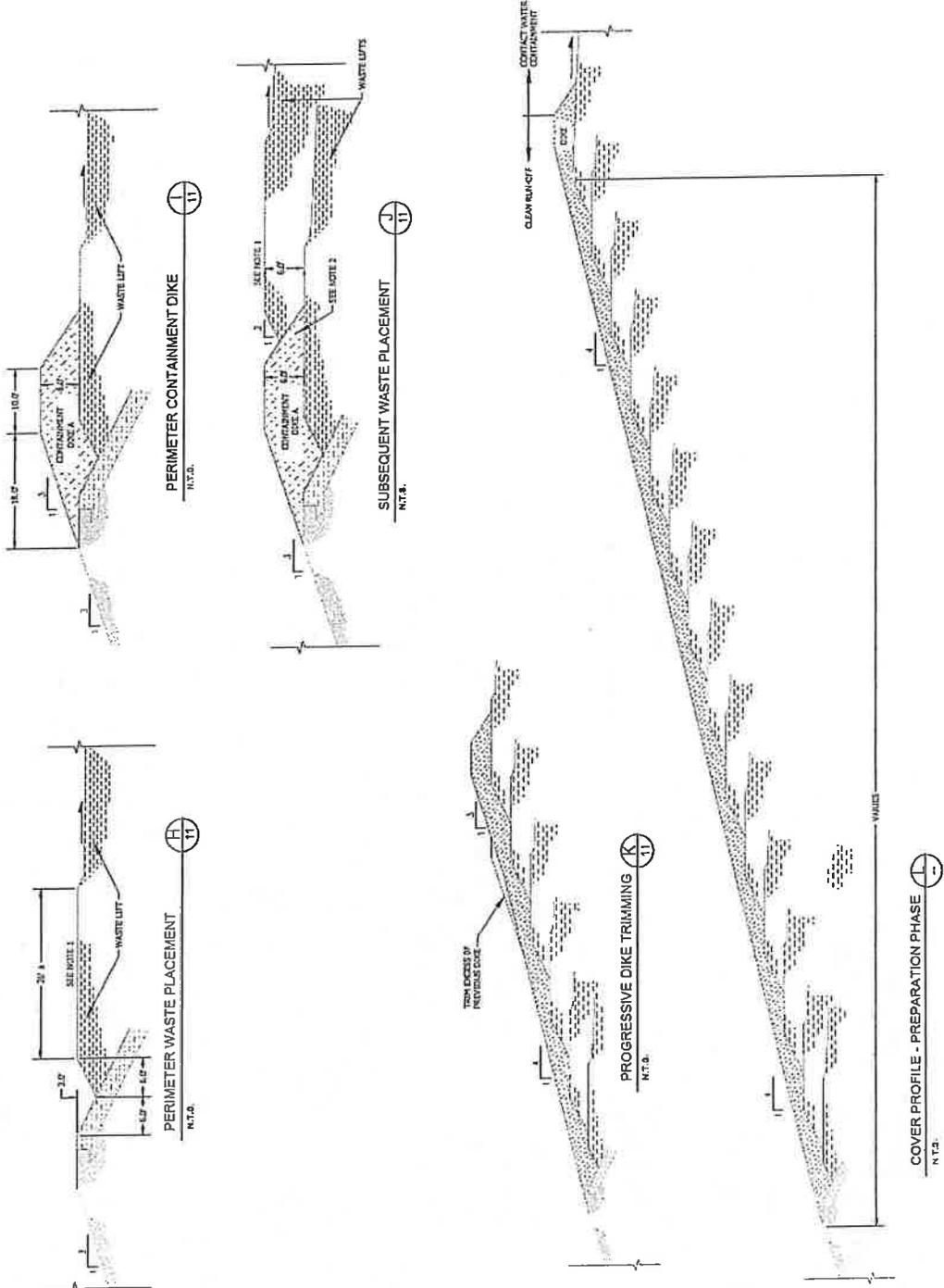
PERMITS CELL S2 FINAL COVER PLAN VIEW	PERMITS NO. CT-20-05	REV. 0
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Attachment B - Facility Map and Drawings



Attachment B - Facility Map and Drawings

- NOTES:**
1. WASTE ELEVATION SHALL NOT EXCEED CONTAINMENT ELEVATION PROVIDED BY AN ACQUICENT UNDER SYSTEM OR CONTAINMENT DOME BEFORE WASTE PLACEMENT BEGINS IN THE LOCATION.
 2. MAINTAIN POSITIVE DRAINAGE BETWEEN ALL TANKS AND WASTE PLACEMENT AREAS AT ALL TIMES. MAINTAIN DITCH DEPTH OF AT LEAST 3 FEET.
 3. TRANSITIONER, ANCHORS OR DRAINAGE POINTS SHALL BE INSTALLED AT ALL TRANSITION POINTS AND DRAINAGE POINTS. TRANSITIONERS MAY BE BOUNDED OR GRADUAL BASED ON FIELD EQUIPMENT CONSULTER.



June 10, 2020



FOR PERMITTING PURPOSES

NO.	DATE	DESCRIPTION
1	6/10/20	ISSUED FOR PERMITTING PURPOSES
2		
3		
4		
5		
6		
7		
8		
9		
10		

US Ecology
 3277 County Road 53 • Richardson, TX 75080
 Phone (972) 387-6277
 FAX (972) 387-6277
 PROJECT NO. 2018-1005
 SHEET NO. COVER FOR CELLS 9A, 9I & 9J

SECTION: CONTAINMENT DIKES
 DETAILS: SECTIONS AND DETAILS
 DRAWING NO. CT-20-13
 NO. 0

Attachment C - List of Incorporated Application Materials

The following is a list of Part A and Part B Industrial & Hazardous Waste Application elements which are incorporated into all Industrial & Hazardous Waste permits by reference as per Provision I.B.

TCEQ Part A Application Form

- I. General Information
- II. Facility Background Information
- III. Wastes and Waste Management
- IV. Index of Attachments

TCEQ Part B Application Form

- I. General Information
 - A. Applicant Name
 - B. Facility Owner
 - C. Facility Contact
 - D. Application Type and Facility Status
 - E. Facility Siting Summary
 - F. Wastewater and Stormwater Disposition
 - G. Information Required to Provide Notice
 - H. TCEQ Core Data Form Requirements
 - I. Signature on Application
- II. Facility Siting Criteria
 - A. Requirements for Storage or Processing Facilities, Land Treatment Facilities, Waste Piles, Storage Surface Impoundments, and Landfills
 - B. Additional Requirements for Land Treatment Facilities
 - C. Additional Requirements for Waste Piles
 - D. Additional Requirements for Storage Surface Impoundments
 - E. Additional Requirements for Landfills (and Surface Impoundments Closed as Landfills with Wastes in Place)
 - F. Flooding
 - G. Additional Information Requirements
- III. Facility Management
 - A. Compliance History and Applicant Experience
 - B. Personnel Training Plan
 - C. Security
 - D. Inspection Schedule
 - E. Contingency Plan
 - F. Emergency Response Plan

- Table III.D. - Inspection Schedule
- Table III.E.1. - Arrangements with Local Authorities
- Table III.E.2. - Emergency Coordinators
- Table III.E.3. - Emergency Equipment

IV. Wastes And Waste Analysis

- A. Waste Management Information
- B. Wastes Managed In Permitted Units
- C. Sampling and Analytical Methods
- D. Waste Analysis Plan

- Table IV.A. - Waste Management Information
- Table IV.B. - Wastes Managed in Permitted Units
- Table IV.C. - Sampling and Analytical Methods

V. Engineering Reports

- A. General Engineering Reports
- B. Container Storage Areas
- C. Tanks and Tank Systems
- D. Surface Impoundments - Reserved
- E. Waste Piles - Reserved
- F. Land Treatment Units - Reserved
- G. Landfills
- H. Incinerators -Reserved
- I. Boilers and Industrial Furnaces - Reserved
- J. Drip Pads- Reserved
- K. Miscellaneous Units
- L. Containment Buildings- Reserved

- Table V.A. Facility Waste Management Handling Units
- Table V.B. - Container Storage Areas
- Table V.C. - Tanks and Tank Systems
- Table V.G.1. - Landfills
- Table V.G.3. - Landfill Liner System
- Table V.G.4. - Landfill Leachate Collection System
- Table V.K.1. - Miscellaneous Unit Permit
- Table V.K.2. - Miscellaneous Unit Permit Conditions, Monitoring, and Automatic Waste Feed Cutoff Systems
- Table V.K.3. - Miscellaneous Unit Permit Maximum Constituent Feed Rates to Thermal Desorber Unit
- Table V.K.4. - Miscellaneous Unit Permit Maximum Allowable Emission Rates

VI. Geology Report

- A. Geology and Topography
- B. Facility Groundwater

- Table VI.A.1. - Major Geologic Formations

Table VI.A.4. - Waste Management Area Subsurface Conditions
Table VI.B.3.b. - Unit Groundwater Detection Monitoring System
Table VI.B.3.c. - Groundwater Sample Analysis

VII. Closure And Post-Closure Plans

- A. Closure
- B. Closure Cost Estimate
- C. Post-closure
- D. Post-closure Cost Estimate
- E. Closure and Post-Closure Cost Summary

Table VII.A. - Unit Closure
Table VII.B. - Unit Closure Cost Estimate
Table VII.C.5. - Land-based Units Closed under Interim Status
Table VII.D. - Unit Post-Closure Cost Estimate
Table VII.E.1. - Permitted Unit Closure Cost Summary
Table VII.E.2. - Permitted Unit Post-Closure Cost Summary

VIII. Financial Assurance

- A. Financial Assurance Information Requirements for all Applicants
- B. Applicant Financial Disclosure Statements for a new permit, permit amendment, or permit modification, or permit renewal
- C. Applicants Requesting Facility Expansion, Capacity Expansion, or New Construction

Information for Applicants Subject to Financial Capability Requirements

Table VIII. B. - Estimated Capital Costs

IX. Releases From Solid Waste Units And Corrective Action

- A. Preliminary Review Checklists
- B. Preliminary Review Facility Checklist
- C. Preliminary Review Unit Checklist

X. Air Emission Standards

- A. Process Vents
- B. Equipment Leaks
- C. Tanks, Surface Impoundments, and Containers

Table X.A. - Process Vents

Table X.B. - Equipment Leaks

XI. Compliance Plan

- A. Site Specific Information
- B. Groundwater Protection Standard
- C. Compliance Monitoring Program
- D. Corrective Action Program

E. Cost Estimates for Financial Assurance

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

Table XI.E.1. - Corrective Action Program Cost Estimate

Table XI.E.2. - Groundwater Monitoring Cost Estimate

Table XI.E.3. - Financial Assurance Summary

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

CP Table II - Solid Waste Management Units and Areas of Concern for which Corrective
Action applies pursuant to 30 TAC 335.167

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

CP Table IIIA - Corrective Action Program Table of Indicator Parameters and t
Groundwater Protection Standard

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

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

CP Table V - Designation of Wells by Function

CP Table VI - Compliance Period for RCRA-Regulated Units

CP Table VIII - Compliance Schedule

XII. Hazardous Waste Permit Application Fee

Table XII.A. - Hazardous Waste Units (For Application Fee Calculations)

Table XII.B. - Hazardous Waste Permit Application Fee Worksheet

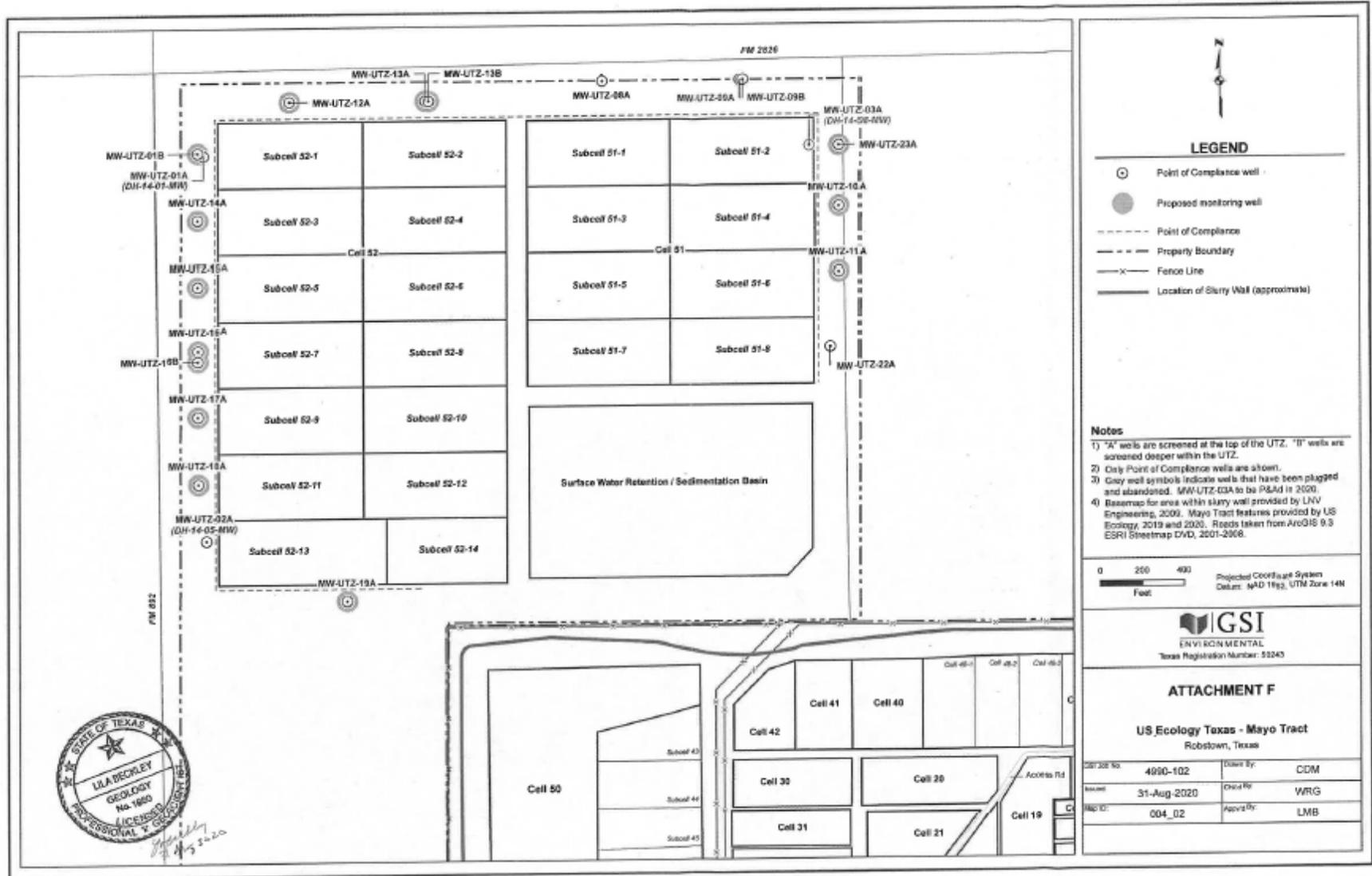
XIII. Confidential Material

Attachment E
Air Monitoring, Texas Ecologists, Inc. Robstown, Texas

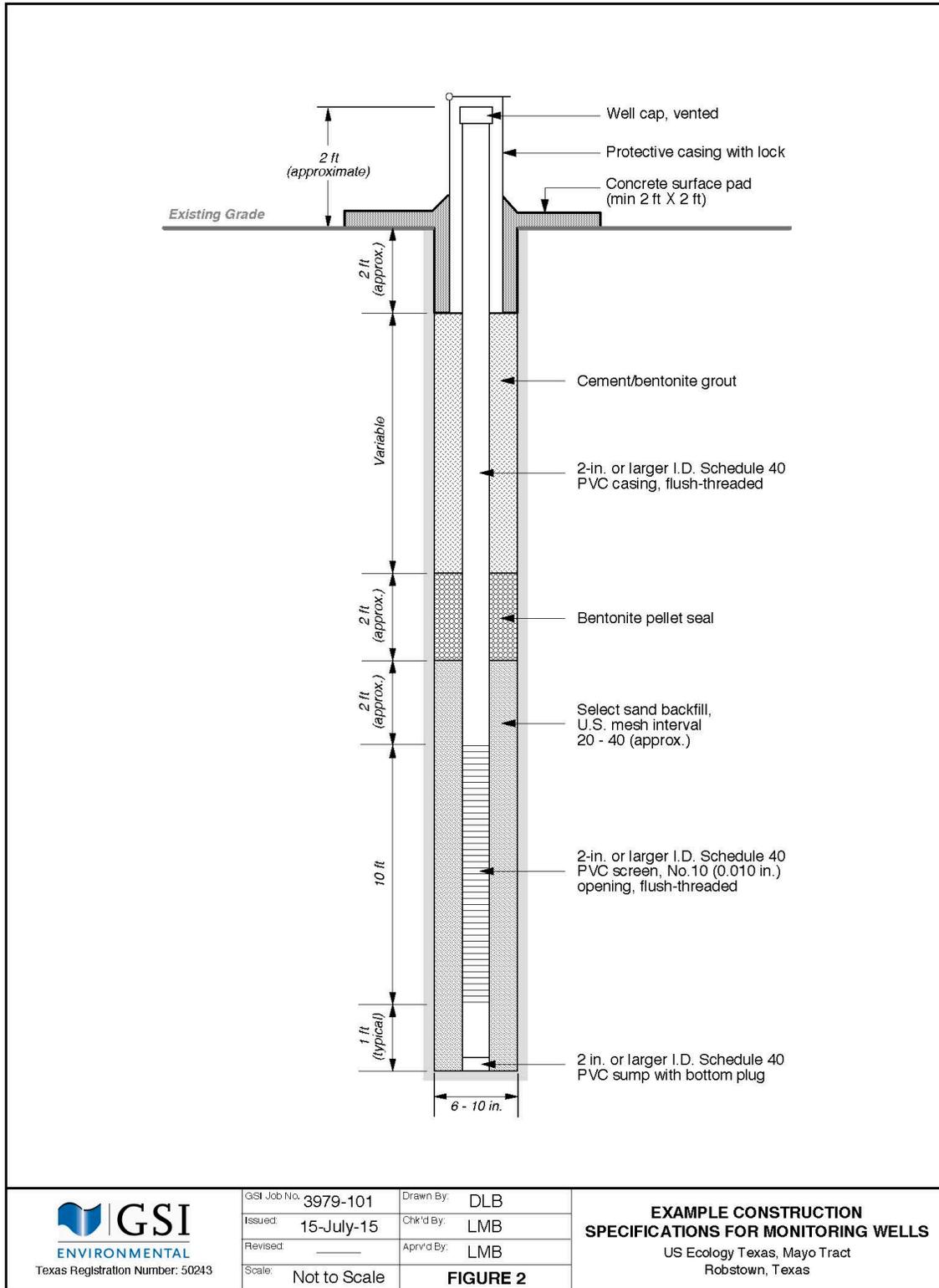
Sample Collection/Reporting:

- Four (4) Sampling points will be selected on each boundary of the active portion of the TECO facility.
- An eight (8) hour air sample will be collected through a charcoal filter and analyzed for a positive/negative indication of VOC's for each sampling point.
- Samples will be collected over a normal 8/hour shift of operations for three days (Monday, Wednesday, and Friday) to ensure a representative week of operations.
- Results within 5-10 working days
- If VOC's are positive, Individual Compounds can be analyzed within 6-10 days of sample collection on the samples collected during the sampling event.
- A report will be prepared stating methodology and summarizing data in "Simple English".
- Wind direction/speed and temperature will be recorded during the time the samples are being collected.

Attachment F - Groundwater Detection Monitoring System



Attachment F - Groundwater Detection Monitoring System



GSI
 ENVIRONMENTAL
 Texas Registration Number: 50243

GSI Job No.	3979-101	Drawn By:	DLB
Issued:	15-July-15	Chk'd By:	LMB
Revised:	—	Apr'd By:	LMB
Scale:	Not to Scale	FIGURE 2	

EXAMPLE CONSTRUCTION SPECIFICATIONS FOR MONITORING WELLS
 US Ecology Texas, Mayo Tract
 Robstown, Texas

Attachment G - Well Design and Construction Specifications

1. The Permittee shall use well drilling methods that minimize potential adverse effects on the quality of water samples withdrawn from the well, and that minimize or eliminate the introduction of foreign fluids into the borehole.
2. All wells constructed to meet the terms of this Permit shall be constructed such that the wells can be routinely sampled with a pump, bailer, or alternate sampling device. Piping associated with recovery wells should be fitted with sample ports or an acceptable alternative sampling method to facilitate sampling of the recovered groundwater on a well by well basis.
3. Above the saturated zone the well casing may be two (2)-inch diameter or larger schedule 40 or 80 polyvinyl chloride (PVC) rigid pipe or stainless steel or polytetrafluoroethylene (PTFE or "teflon") or an approved alternate material. The PVC casing must bear the National Sanitation Foundation logo for potable water applications (NSF-pw). Solvent cementing compounds shall not be used to bond joints and all connections shall be flush-threaded. In and below the saturated zone, the well casing shall be stainless steel or PTFE.

The Permittee may use PVC or fiberglass reinforced resin as an alternate well casing material below the saturated zone provided that it yields samples for groundwater quality analysis that are unaffected by the well casing material.

4. The Permittee shall replace any well that has deteriorated due to incompatibility of the casing material with the groundwater contaminants or due to any other factors. Replacement of the damaged well shall be completed within ninety (90) days of the date of the inspection that identified the deterioration.
5. Well casings and screens shall be steam cleaned prior to installation to remove all oils, greases, and waxes. Well casings and screens made of fluorocarbon resins shall be cleaned by detergent washing.
6. For wells constructed after the date of issuance of this Permit, the screen length shall not exceed ten (10) feet within a given transmissive zone unless otherwise approved by the Executive Director. Screen lengths exceeding ten (10) feet may be installed in groundwater recovery or injection wells to optimize the groundwater remediation process in accordance with standard engineering practice.
7. The Permittee shall design and construct the intake portion of a well so as to allow sufficient water flow into the well for sampling purposes and to minimize the passage of formation materials into the well during pumping. The intake portion of a well shall consist of commercially manufactured stainless steel or PTFE screen or approved alternate material. The annular space between the screen and the borehole shall be filled with clean siliceous granular material (i.e., filter pack) that has a proper size gradation to provide mechanical retention of the formation sand and silt. The well screen slot size shall be compatible with the filter pack size as determined by sieve analysis data. The filter pack should extend no more than three (3) feet above the well screen. A silt trap, no greater than one (1) foot in length, may be added to the bottom of the well screen to collect any silt that may enter the well. The bottom of the well casing shall be capped with PTFE or stainless steel or approved alternate material.

Attachment D.1. - Authorized Permitted Units

TCEQ Permit Unit No.¹	Unit Name	NOR No.¹	Unit Description³	Capacity	Unit Status²
01e	Cells 43/44/45/46	040	Landfill / Part of Cell 50	412,000 cubic yards	Active
01g	Cell #50	072	Landfill Cells (50-1,50-2,50-3,50-4, 50-5)	2,436,602 cubic yards	Active
002	Drum Processing Building	024	Storage and Processing	972 55-gallon containers for a total of 53,460 gallons	Active
003	Controlled Parking/Storage Building I (East Side)	017	Storage and Processing	Twenty (20) roll-off boxes or trailers, 20 cubic yards each for a total of 400 cubic yards.	Active
004	Controlled Parking/Storage Building II (West Side)	070	Storage and Processing	55-gallon containers, roll-off boxes or trailers for a total of not more than 500 cubic yards or 101,000 gallons.	Active
005	Tank M-6	012	Storage and Processing	22,530 gallons	Active
006	Tank S-1	042	Processing	20,235 gallons	Active
007	Tank S-2	043	Processing	20,235 gallons	Active
008	Tank M-7	045	Storage	8,800 gallons	Active
009	Uncovered Waste Storage Areas (Permit Units 9-1, 9-2, 9-3, 9-4, 9-5, 9-6, 9-7, 9-8, 9-9)	062	Storage in Nine Areas totaling 246,725 ft ²	Maximum combined capacity is 5,285 cubic yards.	Active
010	Tank M-3	041	Storage and Processing	21,000 gallons	Active
011	Mixing Tank MT-1 (East)	065	Processing	26,798 gallons (132 cubic yards)	Active
012	Mixing Tank MT-2 (West)	068	Processing	26,798 gallons (132 cubic yards)	Active
013	Mixing Tank MT-3	073	Processing	24,563 gallons (122 cubic yards)	Active
014	Mixing Tank MT-4	074	Processing	24,563 gallons (122 cubic yards)	Active
020	Wastewater Tank WT-1	089	Processing/ Storage	20,000 gallons	Active
021	Wastewater Tank WT-2	090	Processing/ Storage	20,000 gallons	Active
022	Wastewater Tank WT-3	091	Processing/ Storage	20,000 gallons	Active

Attachment D.1. - Authorized Permitted Units

TCEQ Permit Unit No.¹	Unit Name	NOR No.¹	Unit Description	Capacity	Unit Status²
023	Wastewater Tank WT-4	092	Processing/ Storage	20,000 gallons	Active
024	T-5	093	Processing	15,000 gallons	Active
025	T-6	094	Processing	17,700 gallons	Active
026	T-6A	095	Processing	200 gallons	Active
027	T-10	096	Processing/ Storage	11,000 gallons	Active
028	T-11	097	Processing/ Storage	11,000 gallons	Active
029	T-12	098	Processing/ Storage	11,000 gallons	Active
030	T-13	099	Processing/ Storage	11,000 gallons	Active
031	T-16	100	Processing/ Storage	39,500 gallons	Active
032	T-17	101	Processing/ Storage	39,500 gallons	Active
033	T-30	102	Processing/ Storage	20,500 gallons	Active
034	T-31	103	Processing/ Storage	13,900 gallons	Active
035	T-32	104	Processing/ Storage	13,900 gallons	Active
036	T-33	105	Processing/ Storage	13,900 gallons	Active
037	T-34	106	Processing/ Storage	20,350 gallons	Active
038	T-35	107	Processing/ Storage	20,000 gallons	Active
039	T-36	108	Processing/ Storage	20,000 gallons	Active
040	T-37	109	Processing/ Storage	20,000 gallons	Active
041	T-3A	110	Processing	20,000 gallons	Active
042	T-40	111	Processing/ Storage	20,000 gallons	Active
043	T-41	112	Processing/ Storage	20,000 gallons	Active
044	T-42	113	Processing/ Storage	20,000 gallons	Active
045	T-43	114	Processing/ Storage	20,000 gallons	Active
046	Thermal Desorber Unit	085	Processing	60,000 Tons	Active
01h	Cell 51	128	Landfill Cell	3,463,000 cubic yards	Active
01i	Cell 52	129	Landfill Cell	7,355,000 cubic yards	Proposed

¹Permitted 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.

²Unit Status options: Active, Closed, Inactive (built but not managing waste), Proposed (not yet built), Never Built, Transferred, Post Close Care, Closure Request.

Attachment D.2. - Closed Permitted Units

TCEQ Permit Unit No.¹	Unit Name	NOR No.¹	Unit Description	Capacity	Unit Status²
01a	Landfill Cell 38	001	Landfill Cell	76,332 cubic yards	Post Closure Care
01b	Landfill Cell 39	037	Landfill Cell	96,077 cubic yards	Post Closure Care
01c	Landfill Cell 40	038	321 feet x 419 feet	80,800 cubic yards	Closed
01d	Landfill Cell 41-42	039	Cell 41: 413 ft x 283 ft Cell 42: (Polygon-shape Dimensions) 413 ft x 287 ft 210 ft x 231 ft x 130 ft	(Cell 41) 83,500 cubic yards (Cell 42) 76,000 cubic yards	Closed
01f	Landfill Cell 48 (Vertical Expansion of Cells 40/41/42)	054	1466 ft x 410 ft	847,000 cubic yards	Closed
011	Landfill Cell 26	052	Landfill Cell	93,000 cubic yards	Post Closure Care
-	Containment Building	025	Bulk material processing/containment building	-	Closed
015	Tank SL-1	026	Processing/Storage	8,000 gallons	Never built
016	Bulk Stabilization Tank	047	Mixing Tank in Bulk material processing/containment building	7,358 gallons	Closed
017	Bulk Stabilization Tank	049	Mixing Tank in Bulk material processing/containment building	7,358 gallons	Closed
018	Oil/Water Separator	044	Processing	1,525 gallons	Closed
019	Clarifier	046	Processing	4,200 gallons	Closed

¹Permitted 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.

²Unit Status options: Active, Closed, Inactive (built but not managing waste), Proposed (not yet built), Never Built, Transferred, Post Close Care.

Attachment G - Well Design and Construction Specifications

Groundwater recovery and injection wells shall be designed in accordance with standard engineering practice to ensure adequate well production and to accommodate ancillary equipment. Silt traps exceeding one (1) foot may be utilized to accommodate ancillary equipment. Well heads shall be fitted with mechanical wellseals, or equivalent, to prevent entry of surface water or debris.

8. A minimum of two (2) feet of pellet or granular bentonite shall immediately overlie the filter pack in the annular space between the well casing and borehole. Where the saturated zone extends above the filter pack, pellet or granular bentonite shall be used to seal the annulus. The bentonite shall be allowed to settle and hydrate for a sufficient amount of time prior to placement of grout in the annular space. Above the minimum two (2)-foot thick bentonite seal, the annular space shall be sealed with a cement/bentonite grout mixture. The grout shall be placed in the annular space by means of a tremie pipe or pressure grouting methods equivalent to tremie grouting standards.

The cement/bentonite grout mixture or TCEQ approved alternative grout mixture shall fill the annular space to within two (2) feet of the surface. A suitable amount of time shall be allowed for settling to occur. The annular space shall be sealed with concrete, blending into a cement apron at the surface that extends at least two (2) feet from the outer edge of the monitor well borehole for above-ground completions. Alternative annular-space seal material may be proposed with justification and must be approved by the Executive Director prior to installation.

In cases where flush-to-ground completions are unavoidable, a protective structure such as a utility vault or meter box should be installed around the well casing and the concrete pad design should prevent infiltration of water into the vault. In addition, the Permittee must ensure that 1) the well/cap juncture is watertight; 2) the bond between the cement surface seal and the protective structure is watertight; and 3) the protective structure with a steel lid or manhole cover has a rubber seal or gasket.

9. Water added as a drilling fluid to a well shall contain no bacteriological or chemical constituents that could interfere with the formation or with the chemical constituents being monitored. For groundwater recovery and injection wells, drilling fluids containing freshwater and treatment agents may be utilized in accordance with standard engineering practice to facilitate proper well installation. In these cases, the water and agents added should be chemically analyzed to evaluate their potential impact on in-situ water quality and to assess the potential for formation damage. All such additives shall be removed to the extent practicable during well development.
10. Upon completion of installation of a well, the well must be developed to remove any fluids used during well drilling and to remove fines from the formation to provide a particulate-free discharge to the extent achievable by accepted completion methods and by commercially available well screens. Development shall be accomplished by reversing flow direction, surging the well or by air lift procedures. No fluids other than formation water shall be added during development of a well unless the aquifer to be screened is a low-yielding water-bearing aquifer. In these cases, the water to be added should be chemically analyzed to evaluate its potential impact on in-situ water quality, and to assess the potential for formation damage.

Attachment G - Well Design and Construction Specifications

For recovery and injection wells, well development methods may be utilized in accordance with standard engineering practice to remove fines and maximize well efficiency and specific capacity. Addition of freshwater and treatment agents may be utilized during well development or re-development to remove drilling fluids, inorganic scale or bacterial slime. In these cases, the water and agents added should be chemically analyzed to evaluate their potential impact on in-situ water quality and to assess the potential for formation damage. All such additives shall be removed to the extent practicable during well development.

11. Each well shall be secured and/or designed to maintain the integrity of the well borehole and groundwater.
12. The Permittee shall protect the above-ground portion of the well by bumper guards and/or metal outer casing protection.
13. Copies of drilling and construction details demonstrating compliance with the items of this provision shall be kept on site. This record shall include the following information:
 - name/number of well (well designation);
 - intended use of the well(sampling, recovery, etc.);
 - date/time of construction;
 - drilling method and drilling fluid used;
 - well location (± 0.5 ft.);
 - bore hole diameter and well casing diameter;
 - well depth (± 0.1 ft.);
 - drilling and lithologic logs;
 - depth to first saturated zone;
 - casing materials;
 - screen materials and design;
 - casing and screen joint type;
 - screen slot size/length;
 - filter pack material/size;
 - filter pack volume (how many bags, buckets, etc.);
 - filter pack placement method;
 - sealant materials;
 - sealant volume (how many bags, buckets, etc.);
 - sealant placement method;
 - surface seal design/construction;
 - well development procedure;
 - type of protective well cap;
 - ground surface elevation (± 0.01 ft. MSL);
 - top of casing elevation (± 0.01 ft. MSL); and,
 - detailed drawing of well (include dimensions).
14. The Permittee shall complete construction or abandonment and plugging of each well in accordance with the requirements of this Permit and 16 TAC 76.100 through 76.109 and shall certify such proper construction or abandonment within sixty (60) days of installation or abandonment. If the Permittee installs any additional or replacement wells, well completion logs for each well shall be submitted within sixty (60) days of well completion and development in accordance with 16 TAC Chapter 76. Certification of each well shall be submitted within sixty (60) days of installation for an individual well project or within sixty (60) days from the date of completion of a multiple well installation project. The

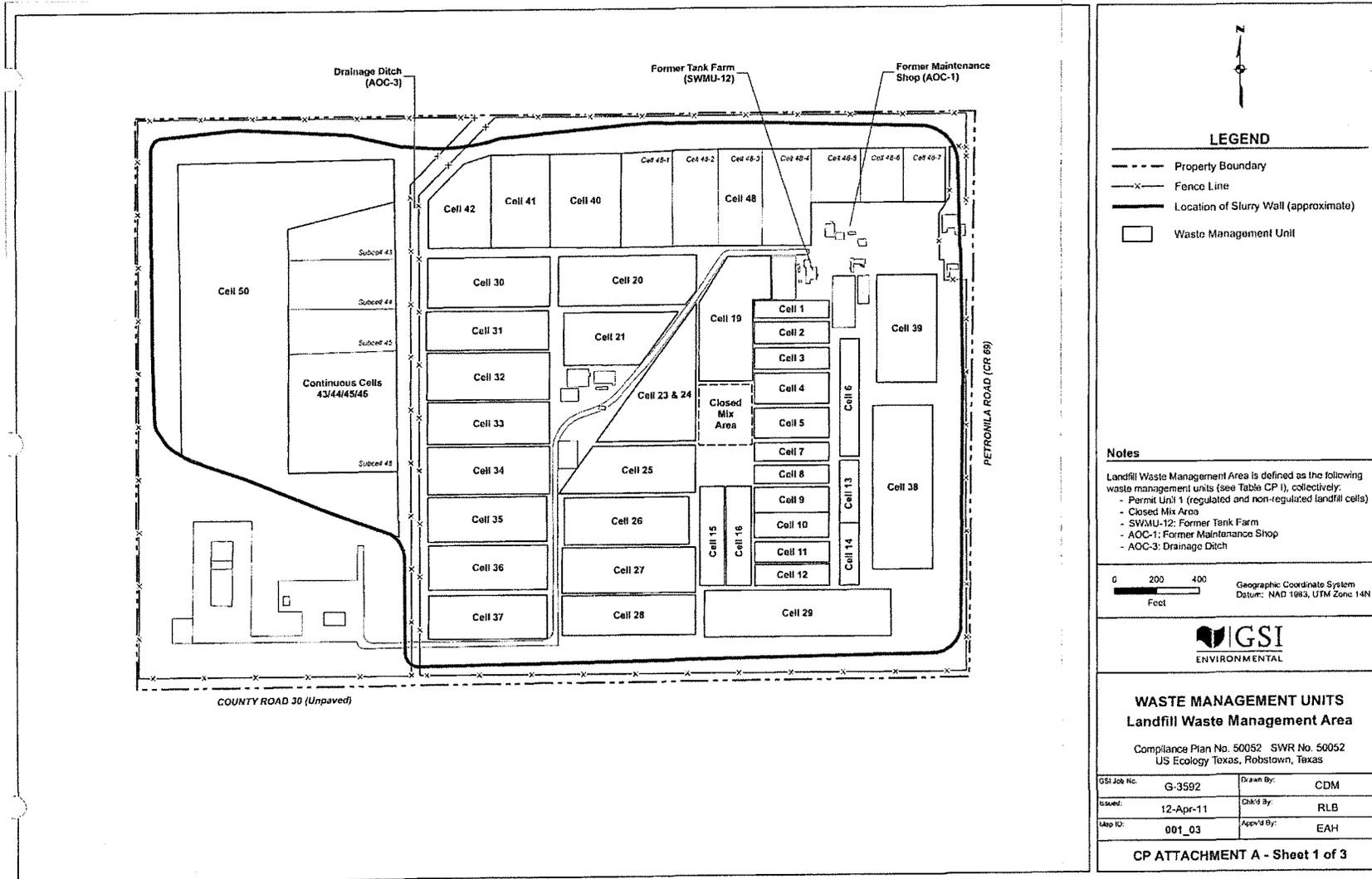
Attachment G - Well Design and Construction Specifications

certification shall be prepared by a qualified geologist or geotechnical engineer. For each well drilled, deepened, or altered submit a copy of the State of Texas Well Report in accordance with 16 TAC 76.70. Each well certification shall be accompanied by a certification report, including an accurate log of the soil boring, which thoroughly describes and depicts the location, elevations, material specifications, construction details, and soil conditions encountered in the boring for the well. A copy of the certification and certification report shall be kept on-site, and a second copy shall be submitted to the Executive Director. Required certification shall be in the following form:

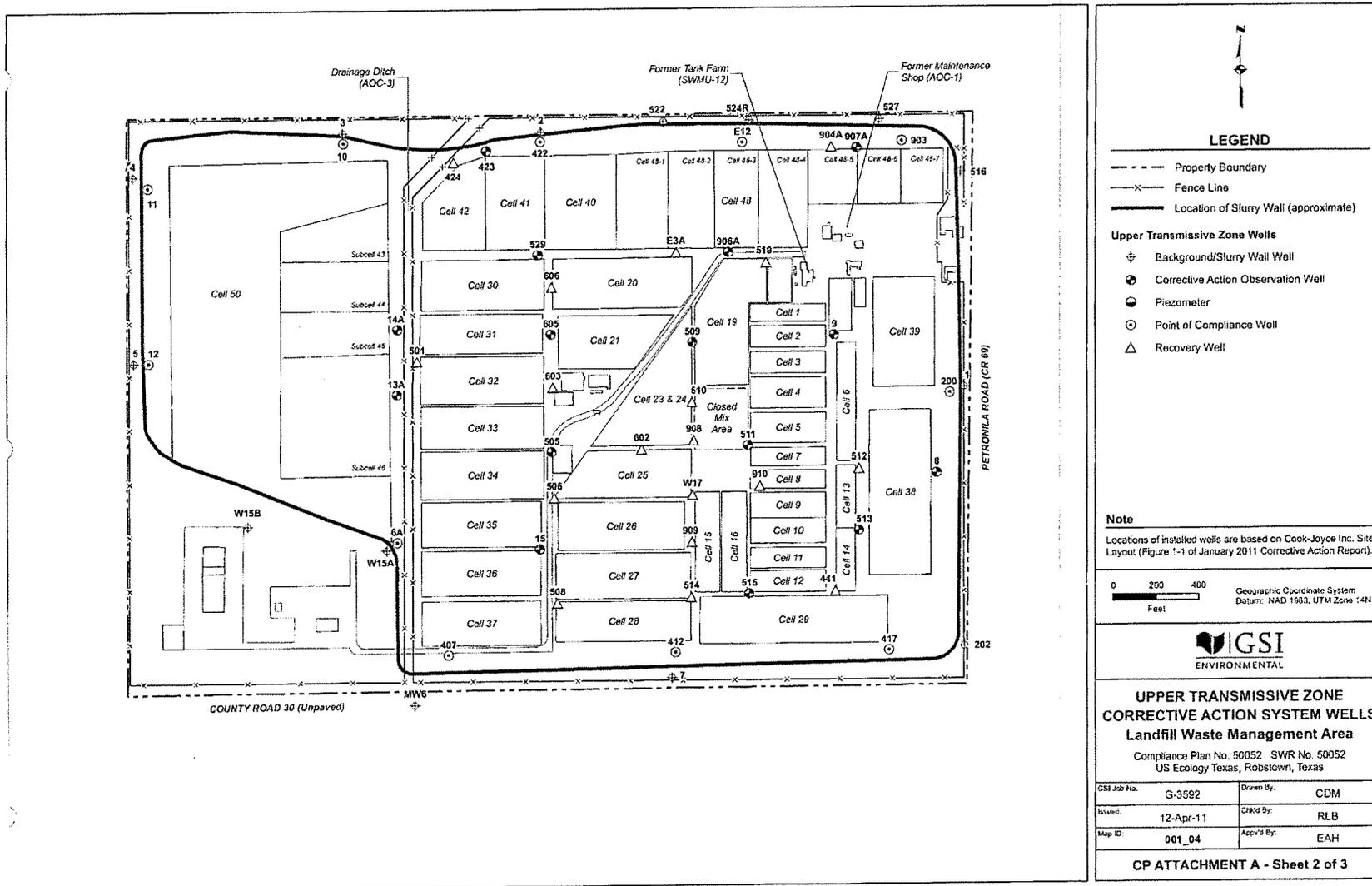
This is to certify that installation (or abandonment and plugging) of the following facility components authorized or required by TCEQ Permit No. 50052 has been completed, and that construction (or plugging) of said components has been performed in accordance with and in compliance with the design and construction specifications of Permit No. 50052.” (Description of facility components with reference to applicable permit provisions).

15. The Permittee shall clearly mark and maintain the well number on each well at the site.
16. The Permittee shall measure and keep a record of the elevation of the top of each well casing in feet above mean sea level to the nearest 0.01 foot and permanently mark the measuring point on the well. The Permittee shall compare old and new elevations from previously surveyed wells and determine a frequency of surveying not to exceed five (5) year intervals.
17. Wells may be replaced at any time the Permittee or Executive Director determines that the well integrity or materials of construction or well placement no longer enable the well to yield samples representative of groundwater quality.
18. The Permittee shall plug soil test borings and wells removed from service after issuance of the Compliance Plan with a cement/bentonite grout mixture so as to prevent the preferential migration of fluids in the area of the borehole. Certification of each plugging shall be reported in accordance with Provision 14 of this attachment to this permit. The plugging of wells shall be in accordance with 16 TAC § 76.100 through § 76.109 dealing with Well Drilling, Completion, Capping and Plugging.
19. A well's screened interval shall be appropriately designed and installed to meet the well's specific objective (i.e., either DNAPL, LNAPL, both, or other objective of the well). All wells designed to detect, monitor, or recover DNAPL must be drilled to intercept the bottom confining layer of the aquifer. The screened interval to detect DNAPL should extend from the top of the lower confining layer to above the portion of the aquifer saturated with DNAPL. The screened interval for all wells designed to detect, monitor, or recover LNAPL must extend high enough into the vadose zone to provide for fluctuations in the seasonal water table. In addition, the sandpacks for the recovery or monitoring well's screened interval shall be coarser than surrounding media to ensure the movement of NAPL to the well.

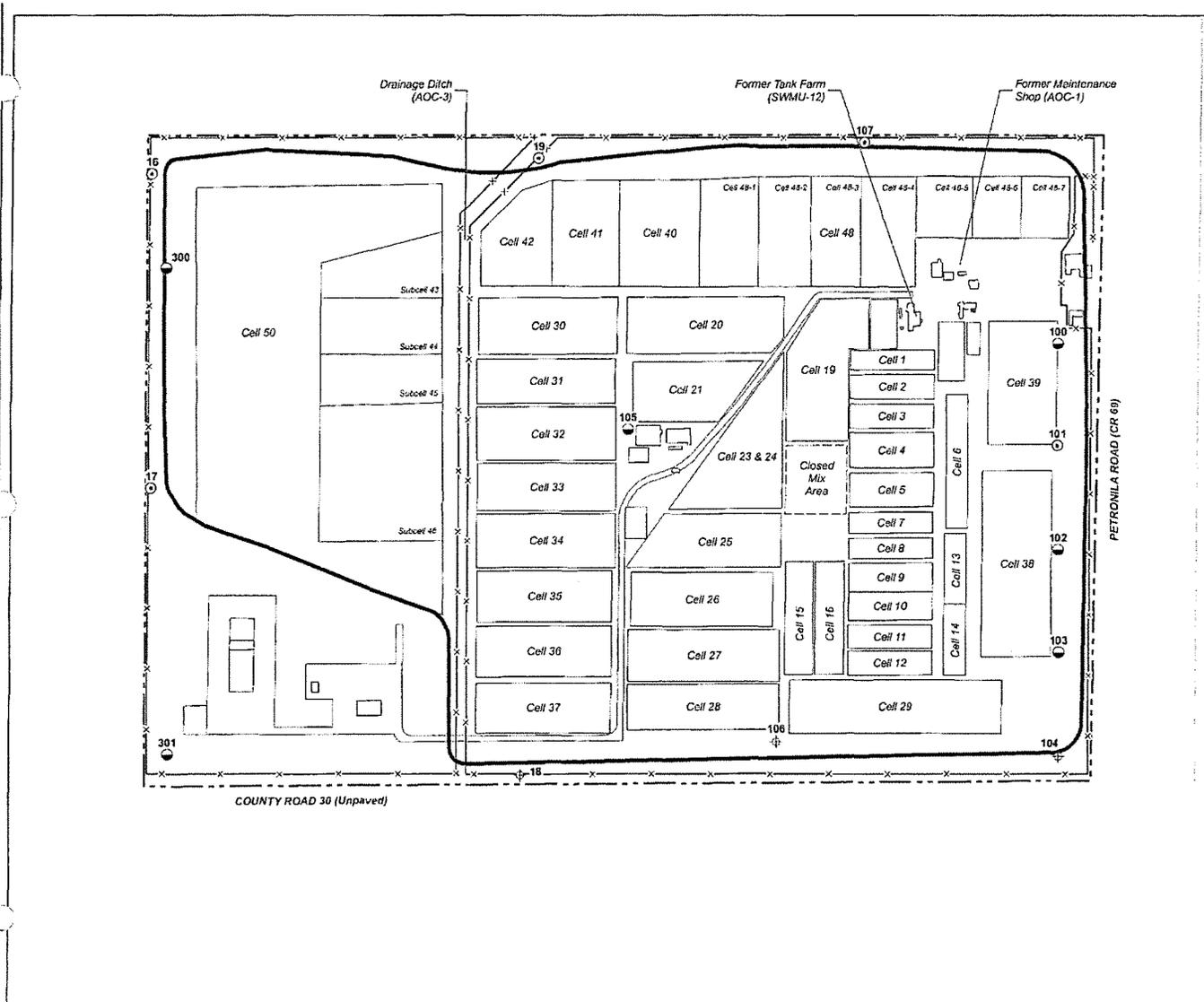
CP Attachment A



CP Attachment A



CP Attachment A



LEGEND

--- Property Boundary
 -x- Fence Line
 — Location of Slurry Wall (approximate)

Second Transmissive Zone Wells

⊕ Background/Slurry Well Well
 ● Piezometer
 ⊙ Point of Compliance Well

Notes

- Locations of installed wells are based on Cook-Joyce Inc. Site Layout (Figure 1-1 of January 2011 Corrective Action Report).
- Slurry wall, constructed through Upper Transmissive Zone, is shown for reference only.

0 200 400
 Feet

Geographic Coordinate System
 Datum: NAD 1983, UTM Zone 14N

GSI
 ENVIRONMENTAL

**SECOND TRANSMISSIVE ZONE
 MONITORING WELLS**
Landfill Waste Management Area
 Compliance Plan No. 50052 SWR No. 50052
 US Ecology Texas, Robstown, Texas

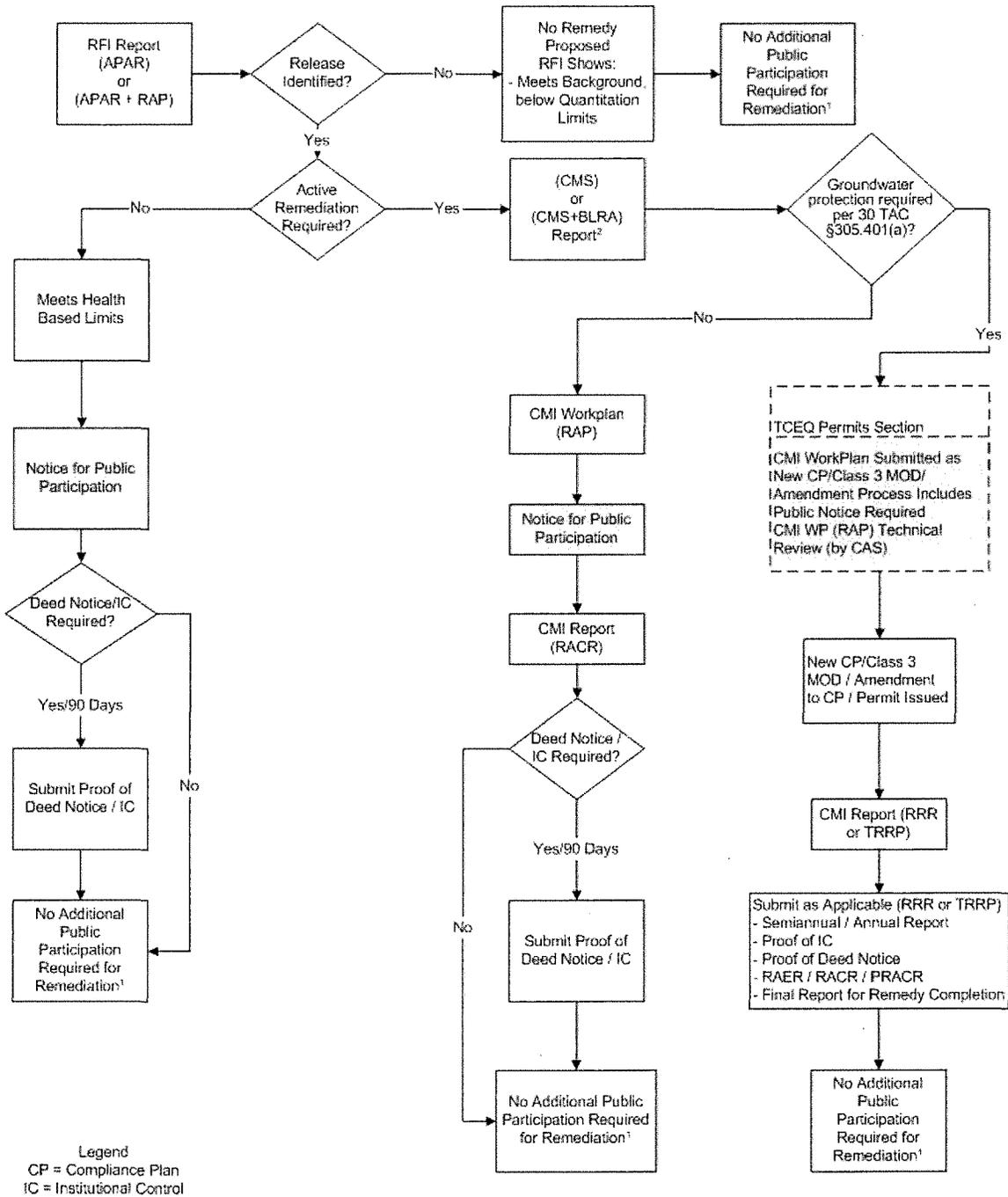
GSI Job No.	G-3592	Drawn By:	CDM
Revised:	12-Apr-11	Checked By:	RLB
Map ID:	001_05	Approved By:	EAH

CP ATTACHMENT A - Sheet 3 of 3

CP Attachment B

Public Participation in HSWA Corrective Action

6/22/2005



1 To Incorporate a Status Change to RFI unit(s) in the Permit or CP Requires Modification and Public Notice through the Permits Section
 2 As Required by Rule, Permit, or CP

CP Attachment C - Well Design, Construction, Installation, Certification, Plugging and Abandonment Procedures and Specifications

1. The Permittee shall use well drilling methods that minimize potential adverse effects on the quality of water samples withdrawn from the well, and that minimize or eliminate the introduction of foreign fluids into the borehole.
2. All wells constructed to meet the terms of this Compliance Plan shall be constructed such that the wells can be routinely sampled with a pump, bailer, or alternate sampling device. Piping associated with recovery wells should be fitted with sample ports or an acceptable alternative sampling method to facilitate sampling of the recovered groundwater on a well by well basis.
3. Above the saturated zone the well casing may be two (2)-inch diameter or larger schedule 40 or 80 polyvinyl chloride (PVC) rigid pipe or stainless steel or polytetrafluoroethylene (PTFE or "teflon") or an approved alternate material. The PVC casing must bear the National Sanitation Foundation logo for potable water applications (NSF-pw). Solvent cementing compounds shall not be used to bond joints and all connections shall be flush-threaded. In and below the saturated zone, the well casing shall be stainless steel or PTFE.

The Permittee may use PVC or fiberglass reinforced resin as an alternate well casing material in and below the saturated zone provided that it yields samples for groundwater quality analysis that are unaffected by the well casing material.

4. The Permittee shall replace any well that has deteriorated due to incompatibility of the casing material with the groundwater contaminants or due to any other factors. Replacement of the damaged well shall be completed within ninety (90) days of the date of the inspection that identified the deterioration.
5. Well casings and screens shall be steam cleaned prior to installation to remove all oils, greases, and waxes. Well casings and screens made of fluorocarbon resins shall be cleaned by detergent washing.
6. For wells constructed after the date of issuance of this Compliance Plan, the screen length shall not exceed ten (10) feet within a given transmissive zone unless otherwise approved by the Executive Director. Screen lengths exceeding ten (10) feet may be installed in groundwater recovery or injection wells to optimize the groundwater remediation process in accordance with standard engineering practice.
7. The Permittee shall design and construct the intake portion of a well so as to allow sufficient water flow into the well for sampling purposes and minimize the passage of formation materials into the well during pumping. The intake portion of a well shall consist of commercially manufactured stainless steel or PTFE screen or approved alternate material. The annular space between the screen and the borehole shall be filled with clean siliceous granular material (i.e., filter pack) that has a proper size gradation to provide mechanical retention of the formation sand and silt. The well screen slot size shall be compatible with the filter pack size as determined by sieve analysis data. The filter pack should extend no more than three (3) feet above the well screen. A silt trap, no greater than one (1) foot in length, may be added to the bottom of the well screen to collect any silt that may enter the well. The bottom of the well casing shall be capped with PTFE or stainless steel or approved alternate material.

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Groundwater recovery and injection wells shall be designed in accordance with standard engineering practice to ensure adequate well production and accommodate ancillary equipment. Silt traps exceeding one (1) foot may be utilized to accommodate ancillary equipment. Well heads shall be fitted with mechanical wellseals, or equivalent, to prevent entry of surface water or debris.

8. A minimum of two (2) feet of pellet or granular bentonite shall immediately overlie the filter pack in the annular space between the well casing and borehole. Where the saturated zone extends above the filter pack, pellet or granular bentonite shall be used to seal the annulus. The bentonite shall be allowed to settle and hydrate for a sufficient amount of time prior to placement of grout in the annular space. Above the minimum two (2)-foot thick bentonite seal, the annular space shall be sealed with a cement/bentonite grout mixture. The grout shall be placed in the annular space by means of a tremie pipe or pressure grouting methods equivalent to tremie grouting standards.

The cement/bentonite grout mixture or TCEQ approved alternative grout mixture shall fill the annular space to within two (2) feet of the surface. A suitable amount of time shall be allowed for settling to occur. The annular space shall be sealed with concrete, blending into a cement apron at the surface that extends at least two (2) feet from the outer edge of the monitor well for above-ground completions. Alternative annular-space seal material may be proposed with justification and must be approved by the Executive Director prior to installation.

In cases where flush-to-ground completions are unavoidable, a protective structure such as a utility vault or meter box should be installed around the well casing and the concrete pad design should prevent infiltration of water into the vault. In addition, the Permittee must ensure that 1) the well/cap juncture is watertight; 2) the bond between the cement surface seal and the protective structure is watertight; and 3) the protective structure with a steel lid or manhole cover has a rubber seal or gasket.

9. Water added as a drilling fluid to a well shall contain no bacteriological or chemical constituents that could interfere with the formation or with the chemical constituents being monitored. For groundwater recovery and injection wells, drilling fluids containing freshwater and treatment agents may be utilized in accordance with standard engineering practice to facilitate proper well installation. In these cases, the water and agents added should be chemically analyzed to evaluate their potential impact on in-situ water quality and to assess the potential for formation damage. All such additives shall be removed to the extent practicable during well development.
10. Upon completion of installation of a well, the well must be developed to remove any fluids used during well drilling and to remove fines from the formation to provide a particulate-free discharge to the extent achievable by accepted completion methods and by commercially available well screens. Development shall be accomplished by reversing flow direction, surging the well or by air lift procedures. No fluids other than formation water shall be added during development of a well unless the aquifer to be screened is a low-yielding water-bearing aquifer. In these cases, the water to be added should be chemically analyzed to evaluate its potential impact on in-situ water quality, and to assess the potential for formation damage.

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For recovery and injection wells, well development methods may be utilized in accordance with standard engineering practice to remove fines and maximize well efficiency and specific capacity. Addition of freshwater and treatment agents may be utilized during well development or re-development to remove drilling fluids, inorganic scale or bacterial slime. In these cases, the water and agents added should be chemically analyzed to evaluate their potential impact on in-situ water quality and to assess the potential for formation damage. All such additives shall be removed to the extent practicable during well development.

11. Each well shall be secured and/or designed to maintain the integrity of the well borehole and groundwater.
12. The Permittee shall protect the above-ground portion of the well by bumper guards and/or metal outer casing protection when wells are located in traffic areas or outside the secured plant area.
13. Copies of drilling and construction details demonstrating compliance with the items of this provision shall be kept on site. This record shall include the following information:
 - . name/number of well (well designation);
 - . intended use of the well(sampling, recovery, etc.);
 - . date/time of construction;
 - . drilling method and drilling fluid used;
 - . well location (+ 0.5 ft.);
 - . bore hole diameter and well casing diameter;
 - . well depth (+ 0.1 ft.);
 - . drilling and lithologic logs;
 - . depth to first saturated zone;
 - . casing materials;
 - . screen materials and design;
 - . casing and screen joint type;
 - . screen slot size/length;
 - . filter pack material/size;
 - . filter pack volume (how many bags, buckets, etc.);
 - . filter pack placement method;
 - . sealant materials;
 - . sealant volume (how many bags, buckets, etc.);
 - . sealant placement method;
 - . surface seal design/construction;
 - . well development procedure;
 - . type of protective well cap;
 - . ground surface elevation (+ 0.01 ft. MSL);
 - . top of casing elevation (+ 0.01 ft. MSL); and,
 - . detailed drawing of well (include dimensions).
14. The Permittee shall clearly mark and maintain the well number on each well at the site.
15. The Permittee shall measure and keep a record of the elevation of the top of each well casing in feet above mean sea level to the nearest 0.01 foot and permanently mark the measuring point on the well. The Permittee shall compare old and new elevations from previously surveyed wells and determine a frequency of surveying not to exceed five (5) year intervals.

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16. A well's screened interval shall be appropriately designed and installed to meet the well's specific objective (i.e., either DNAPL, LNAPL, both, or other objective of the well). All wells designed to detect, monitor, or recover DNAPL must be drilled to intercept the bottom confining layer of the aquifer. The screened interval to detect DNAPL should extend from the top of the lower confining layer to above the portion of the aquifer saturated with DNAPL. The screened interval for all wells designed to detect, monitor, or recover LNAPL must extend high enough into the vadose zone to provide for fluctuations in the seasonal water table. In addition, the sandpacks for the recovery or monitoring well's screened interval shall be coarser than surrounding media to ensure the movement of NAPL to the well.

Certification, Plugging and Abandonment Procedures

17. Prior to installation of a Point of Compliance (POC), FOA Boundary of Compliance (FBOC), Point of Exposure (POE), Alternate Point of Exposure (APOE) or Background replacement well listed in Table V, the Permittee shall submit to the Executive Director for approval, the replacement well specifications and an explanation of why the well is being replaced. For any such well to be considered as a replacement well and not as a new well, the well shall have no substantive design changes from the well being replaced as determined by the Executive Director. The well shall be drilled within fifteen (15) feet of the well being replaced unless an alternate location is authorized by the Executive Director. The Permittee shall submit a replacement well certification to the Executive Director in accordance with Table VII and CP Attachment C, Provision 19.
18. Plugging and abandonment of a Corrective Action System Background, POC, FBOC, POE, and/or APOE wells in Provision II.A shall be subject to the Compliance Plan modification provisions in 30 TAC '305 Subchapter D. Plugging and abandonment of Corrective Action Observation, Corrective Action System and/or Attenuation Monitoring Point wells in Provision II.B, shall commence upon written approval of the Executive Director. The well shall be plugged and abandoned in accordance with requirements of this Attachment B. The Permittee shall certify proper plugging and abandonment in accordance with Table VII and CP Attachment C, Provision 19.
19. The Permittee shall complete construction or plugging and abandonment of each well in accordance with the requirements of this Compliance Plan and 16 TAC Chapter 76 and shall certify such proper construction or plugging and abandonment. The Plugging report shall be sent to TRDL at Water Well Driller/Pump Installer Section, P.O. Box 12157, Austin, Texas 78711, within 30 days from the date the well(s) were plugged. Also mail a copy of the Plugging Report to your local Groundwater Conservation District, if applicable and to the TCEQ Remediation Division. Well completion logs for each newly installed or replaced well shall be included with the report. The certification shall be prepared by a qualified geologist or geotechnical engineer. Each well certification shall be accompanied by a certification report, including an accurate log of the soil boring, which thoroughly describes and depicts the location, elevations, material specifications, construction details, and soil conditions encountered in the boring for the well. A copy of the certification and certification report shall be kept on-site, and a second copy shall be submitted to the Executive Director. Required certification shall be in the following format, edited as appropriate, and shall specify the Compliance Plan Number as indicated:

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"This is to certify that installation (or plugging and abandonment) of the following facility components authorized or required by TCEQ Compliance Plan No. (Insert CP number) has been completed, and that construction (or plugging) of said components has been performed in accordance with and in compliance with the design and construction specifications of this Permit No. 50052.

20. Wells may be replaced at any time the Permittee or Executive Director determines that the well integrity or materials of construction or well placement no longer enable the well to yield samples representative of groundwater quality.
21. The Permittee shall plug soil test borings and wells removed from service after issuance of the Compliance Plan with a cement/bentonite grout mixture so as to prevent the preferential migration of fluids in the area of the borehole. Certification of each plugging shall be reported in accordance with Provision 19 of CP Attachment C of this Compliance Plan. The plugging of wells shall be in accordance with 16 TAC Chapter 76 dealing with Well Drilling, Completion, Capping and Plugging.