TCEQ DOCKET NO. 2014-1189-IHW

ASCEND PERFORMANCE MATERIALS TEXAS INC. FOR A TEN-YEAR RENEWAL AND MAJOR AMENDMENT OF IHW PERMIT & COMPLIANCE PLAN NO. 50189	§ § § § §	BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Executive Director's Response to Hearing Request

I. Introduction

The Executive Director of the Texas Commission on Environmental Quality (the TCEQ or Commission) files this Response to Hearing Request on the application of Ascend Performance Materials Texas Inc. (Applicant) for a 10-year renewal and major amendment to IHW Permit No. 50189. Dick Tyson filed a public comment that included a request for a public meeting and a request for a contested case hearing with the TCEQ Office of the Chief Clerk on April 18, 2014. This response analyzes the filing for the elements of a hearing request. The Executive Director's response to public comments provides responses to the public comments and the request to hold a public meeting.

Attached for Commission consideration are the following:

Attachment A : GIS Map, generated by the Executive Director from information contained in the Application and the Hearing Request, depicting the approximate facility boundary and the approximate location of the requestor's residence and waterbodies identified in the request

Attachment B: The Applicant's Compliance History Summary for the period ending August 31, 2013

Attachment C: Technical Summary and Executive Director's Preliminary Decision

Attachment D: Executive Director's Response to Public Comment

Attachment E: Final Draft Permit No 50189.

II. Description of Facility and Application

Ascend Performance Materials Texas Inc. operates a chemical manufacturing facility, which is authorized to manage on-site generated hazardous and non-hazardous Class 1 and Class 2 industrial solid waste on a non-commercial basis. The facility is located on approximately 2,514 acres of land near Alvin, in Brazoria County, Texas 77512. The facility is in the drainage area of Segment 1107 of the San Jacinto-Brazos Coastal Basin, North Latitude 29°15'21", West Longitude 95°12'37".

The Application requests a 10-year renewal of Permit No. 50189 which presently authorizes operation of the following existing units: two container storage areas, two tanks, one active landfill, two boilers, and one thermal desorption unit for the storage, processing, combustion, and disposal of hazardous and nonhazardous Class 1 and Class 2 industrial solid waste, and post closure care of one closed landfill and one closed surface impoundment. Additionally, the Application requests a major amendment to the permit including: authorization to construct and operate one proposed new landfill, and one proposed new container storage area for the storage, processing and disposal of hazardous and nonhazardous Class 1 and Class 2 industrial solid waste; a change in the status of the thermal desorption unit to "closure pending"; and updates and corrections in the permit and application. Specifically, the Application requests changes to: the Personnel Training Plan; the Inspection Plan and Schedule; the Contingency Plan; the Waste Analysis Plan and Tables; Engineering Reports; the Geology Report; the Groundwater Detection Monitoring Program Sampling and Analysis Plan; Closure and Post-closure Care Plans; and the Compliance Plan

Additionally, the Application requests a 10-year renewal of Compliance Plan No. 50189 which, requires and authorizes the Applicant to monitor the concentration of hazardous constituents in groundwater and remediate groundwater quality to specified standards. Permit No. 50189 and Compliance Plan No. 50189 were previously issued as two documents. The Compliance Plan, if issued, Permit No. 501899 and and Compliance Plan No. 50189 will be contained in one document.

III. Procedural Background

The Application was received on July 13, 2010, and declared administratively complete on July 30, 2010. The Notice of Receipt of Application and Intent to Obtain Permit/Compliance Plan Renewal and a Major Amendment was published in *The Houston Chronicle* in Houston, Texas, on August 22, 2010. The executive director completed the technical review of the Application and issued a preliminary decision and a draft permit on March 10, 2014. The Notice of Application and Preliminary Decision was published in the *Houston Chronicle* on April 3, 2014. The public comment period for the Application closed on May 19, 2014. The executive director filed a response to public comment on July 17, 2014. The Executive Director's final decision letter was mailed on July 22, 2014. The period for filing a Request for Reconsideration or Contested Case Hearing ended on August 21, 2014. The applicatuion was submitted by then owner/operator, Ascend Performance Materials LLC. On March 6, 2013, Permit No. 50189 was modified to change the name of the owner/operator from Ascend Performance Materials LLC to Ascend Performance Materials Operations LLC. On December 4, 2013, the permit was modified to transfer the permit from Ascend Performance Materials Operations LLC to the current owner operator Ascend Performance Materials Texas Inc.

IV. The Evaluation Process for Hearing Requests

House Bill 801 established statutory procedures for public participation in certain environmental permitting proceedings. For those applications declared administratively complete on or after September 1, 1999. House Bill 801 established new procedures for providing public notice and public comment, and for the Commission's consideration of hearing requests. The Commission implemented House Bill 801 by adopting procedural rules in 30 Tex. Admin. Code, Chapters 39, 50, and 55. The Application was declared administratively complete on July 29, 2009; therefore it is subject to the procedural requirement of HB 801.

A. Response to Request

The Executive Director, the Public Interest Counsel, and the Applicant may each submit written responses to a hearing request [30 TAC § 55.209(d)].

Responses to hearing requests must specifically address:

a) whether the requestor is an affected person;
b) whether issues raised in the hearing request are disputed;
c) whether the dispute involves questions of fact or of law;
d) whether the issues were raised during the public comment period;
e) whether the hearing request is based on issues raised solely in a public comment withdrawn by the commenter in writing by filing a withdrawal letter with the chief clerk prior to the filing of the Executive Director's Response to Comment;
f) whether the issues are relevant and material to the decision on the application; and
g) a maximum expected duration for the contested case hearing. [30 TAC § 55.209(e)].

B. Hearing Request Requirements

In order for the Commission to consider a hearing request, the Commission must first determine whether the request meets certain requirements.

A request for a contested case hearing by an affected person must be in writing, must be filed with the chief clerk within the time provided and may not be based on an issue that was raised solely in a public comment withdrawn by the commenter in writing by filing a withdrawal letter with the chief clerk prior to the filing of the Executive Director's Response to Comment. [30 TAC § 55.201(c)].

A hearing request must substantially comply with the following:

a) give the name, address, daytime telephone number, and, where possible, fax number of the person who files the request. If the request is made by a group or association, the request must identify one person by name, address, daytime telephone number, and, where possible fax number, who shall be

responsible for receiving all official communications and documents for the group;

b) identify the person's personal justiciable interest affected by the application, including a brief, but specific, written statement explaining in plain language the requestor's location and distance relative to the proposed facility or activity that is the subject of the application and how and why the requestor believes he or she will be adversely affected by the proposed facility or activity in a manner not common to members of the general public;

c) request a contested case hearing;

d) list all relevant and material disputed issues of fact that were raised during the public comment period and that are the basis of the hearing request. To facilitate the commission's determination of the number and scope of issues to be referred to hearing, the requestor should, to the extent possible, specify any of the executive director's response to comments that the requestor disputes and the factual basis of the dispute and list any disputed issues of law or policy; and

e) provide any other information specified in the public notice of application. [30 TAC § 55.201(d)].

C. "Affected Person" Status

In order to grant a contested case hearing, the Commission must determine that a requestor is an "affected person." Section 55.203 sets out who may be considered an affected person.

a) For any application, an affected person is one who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest.

b) Except as provided by 30 TAC § 55.103, government entities, including local governments and public agencies, with authority under state law over issues raised by the application; and

c) In determining whether a person is an affected person, all factors shall be considered, including, but not limited to, the following:

1) whether the interest claimed is one protected by the law under which the application will be considered;
2) distance restrictions or other limitations imposed by law on the affected interest;
3) whether a reasonable relationship exists between the interest claimed and the activity regulated;
4) likely impact of the regulated activity on the health and safety of the person, and on the use of property of the person;
5) likely impact of the regulated activity on the use of the impacted natural resource by the person; and
6) for governmental entities, their statutory authority over or interest in the issues relevant to the application. [30 TAC § 55.203]

A group or association may also request a contested case hearing. In order for a group or association to request a contested case hearing, the group or association must show that it meets the following requirements:

a) one or more members of the group or association would otherwise have standing to request a hearing in their own right;
b) the interests the group or association seeks to protect are germane to the organization's purpose; and
c) neither the claim asserted nor the relief requested requires the participation of the individual members in the case. [30 TAC § 55.205(a)].

In addition the Executive Director, Public Interest Counsel, or the Applicant may request that a group or association provide an explanation of how the group or association meets the above requirements [30 TAC § 55.205(b)].

D. Referral to the State Office of Administrative Hearings (SOAH)

When the Commission grants a request for a contested case hearing, they are required to issue an order specifying the number and scope of the issues to be referred to SOAH for a hearing [30 TAC § 50.115(b)]. Subsection 50.115(c) sets out the test for determining whether an issue may be referred to SOAH. The commission may not refer an issue to SOAH for a contested case hearing unless the commission determines that

the issue: 1) involves a disputed question of fact; 2) was raised during the public comment period; and 3) is relevant and material to the decision on the application. [30 TAC § 50.115(c)].

V. Analysis of the Request

Analysis of the Hearing Request

The Executive Director has analyzed the hearing request to determine whether it comply with Commission rules, whether the requestor qualifies as an affected person, what issues may be referred for a contested case hearing, and what is the appropriate length of the hearing.

1. Whether the Requestor Complied with 30 TAC § 55.201(c) and (d)

The Executive Director has analyzed Dick Tyson's request and determined that the request substantially includes the requirements of requirements of 30 TAC § 55.201(c) and (d). The public comment period for this permit application ended on May 19, 2014. The period for timely filing a request for a contested case hearing on this permit application ended on August 21, 2014. The TCEQ Office of the Chief Clerk received a request for a contested case hearing from Dick Tyson on April 25, 2014. The hearing request: 1) provided the requestor's name, address, daytime phone number, 2) purported to identify a personal justiciable interest 3) requested a contested case hearing, and 4) listed relevant and material disputed issues of fact that were raised during the public comment period (i.e., impacts to surface water and impacts to groundwater).

2. Whether the Requestor is an Affected Person

The Executive Director has analyzed Dick Tyson's request and determined that it did not demonstrate that Dick Tyson is an affected person because the request did not identify a personal, justiciable interest in the Application. [30 TAC §§ 55.203 and 55.256(e)].

The location of the requestor's residence does not support a finding that the requestor is an affected person. The request does not claim the location of the requestor's residence, relative to the proposed facility and activity that is the subject of the application, as a basis for the requestor's personal justiciable interest. Additionally, the GIS Map, provided as **Attachment A**, indicates that the location of Dick Tyson's residence is approximately 10 miles from the approximate facility boundary. Such a distance between the Ascend facility and Dick Tyson's residence decreases the likelihood that operation of the proposed landfill and proposed container storage area for the storage, processing and disposal of hazardous and nonhazardous Class 1 and Class 2 industrial solid waste hazardous at the Ascend facility will adversely impact the requestor in a way that is not common to the general public.

The requestor's interest, right of use and enjoyment of natural resources, does not support a finding that the requestor has a personal justiciable interest affected by the application that is not shared by members of the general public. The request describes in plain language that the requestor frequently enjoys natural resources namely, recreational boating and fishing on named water bodies adjacent to and downstream of the Ascend facility. The GIS Map, provided as **Attachment A**, depicts water bodies identified in the request namely, Mustang Bayou, Chocolate Bayou, Halls Bayou, New Bayou, and Chocolate Bay. The GIS map indicates that Cholate Bayou is adjacent to the Ascend Facility and feeds Chocolate Bay. The request further describes that the requestor's use and enjoyment of these natural resources will be adversely affected by the Application because operation of the proposed landfill and proposed container storage area threaten impacts to groundwater quality and surface water quality if contaminated runoff from the landfill and the container storage area reach bayous or downstream water bodies.

The interest claimed, that the requestor's use and enjoyment of natural resources will be adversely impacted if Ascend facility operations result in contamination of surface water or groundwater, is protected by the law under which the Application is being considered. Additionally, there is a reasonable relationship between the interest

claimed, and the activity regulated, the storage, processing and disposal of hazardous and nonhazardous Class 1 and Class 2 industrial solid waste.

However, the request has not articulated how the interest claimed will affect the requestor in a way that is not common to the general public because the request does not explain how the requestor's use and enjoyment of the identified natural resource is different from the general public's use and enjoyment of that natural resource. The request does not claim that the requestor has a particular or an exclusive economic interest or property right interest in the recreational use and enjoyment of the identified water bodies for boating and fishing. In the absence of an alternate representation, the Executive Director assumes that the interest claimed, use and enjoyment of a natural resource, the named water bodies, for recreational boating and fishing, is one shared by general public.

The request did not identify specific adverse impacts to the health of the requestor or to the requestor's property. The Executive Director has evaluated the request to weigh the likeliness of the regulated activity adversely impacting the requestor's health, property or use of the impacted natural resource and determined that the likeliness is remote because the application and final draft permit include provisions for the storage, processing and disposal of hazardous and nonhazardous Class 1 and Class 2 industrial solid waste, that when followed, should prevent groundwater and surface water contamination and specifically, should prevent storm water from becoming contaminated and prevent the offsite migration of contaminated storm water to the bayou system and bay. Additionally, the Executive Director has evaluated the request and determined that the likely adverse impact of the regulated activity on the requestor's property is quite unlikely because the requestor's residence is approximately ten miles from the Ascend facility.

The Executive Director recommends that the Commission find that ***Dick Tyson is not an affected person*** *under 30 TAC §§ 55.203 and 55.256.*

VI. Whether the Issues Raised May be Referred to SOAH for a Contested Case Hearing

The Executive Director has analyzed the issues raised to determine whether the issues are appropriate for referral to SOAH.

a) Issue Number 1: Whether the Application and Final Draft Permit satisfy the rule requirements to prevent contamination of surface water and groundwater that could result from leakage of the proposed hazardous waste management unit (landfill) and the proposed container storage area.

b) Issue Number 2: Whether the Application and Final Draft Permit satisfy the rule requirements to prevent contamination of surface water and groundwater that could result from storm water running onto and running off of the proposed hazardous waste management unit (landfill) and the proposed container storage area.

Issues one and two were raised during the public comment period, not withdrawn and addressed in the Executive Director's Response to Public Comment, Comment Number 1. The law under which the application will be considered establishes standards for the installation and operation of the hazardous waste management unit (landfill) and the container storage area and requires information to be included in the Application regarding how the facility will comply with the requirements and prevent the occurrence of offsite migration of waste and contaminants. Issues one and two involve disputed questions of fact that are relevant and material to the decision on this application. [30 TAC §§ 55.209(e)(2) –(6) and (f)].

Therefore, the Executive Director concludes that issues one and two are appropriate for referral to SOAH.

VII. Duration of the Contested Case Hearing

Should the Commission decide to refer this case to SOAH, the Executive Director recommends a nine-month duration for a contested case hearing from the date of the preliminary hearing to the presentation of a proposal for decision. [30 TAC § 55.209(e)(7)].

VIII. Executive Director's Recommendation

The Executive Director recommends the following actions by the Commission:

a) Find that Dick Tyson is not an affected person and deny his hearing request.

b) If the Commission finds that Dick Tyson is an affected person, the following issue should be referred to SOAH for a Contested Case Hearing for a duration of nine months:

   1) Whether the Application and Final Draft Permit satisfy the rule requirements to prevent contamination of surface water and groundwater that could result from leakage of the proposed hazardous waste management unit (landfill) and the proposed container storage area.

   2) Whether the Application and Final Draft Permit satisfy the rule requirements to prevent contamination of surface water and groundwater that could result from storm water running onto and running off of the proposed hazardous waste management unit (landfill) and the proposed container storage area.

Respectfully submitted,

Texas Commission on Environmental Quality

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Executive Director

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Diane Goss

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REPRESENTING THE EXECUTIVE DIRECTOR OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CERTIFICATE OF SERVICE

I hereby certify that on December 22, 2014, the original and seven (7) copies of the "Executive Director's Response to Request for Contested Case Hearing" received on an Application By Ascend Performance Materials Texas Inc. for a 10-Year Renewal and Major Amendment of Hazardous Waste Permit and Compliance Plan No. 50189, were filed with the TCEQ's Office of the Chief Clerk and a complete copy was served to all persons listed on the attached mailing list via hand delivery, facsimile transmission, inter-agency mail, electronic submittal, or by deposit in the US Mail.

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DOCKET NO. 2014-1189-IHW; PERMIT NO. 50189

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REQUESTER:
Dick Tyson
3075 Mustang Road, Suite 2210
Alvin, Texas 77511-4855

INTERESTED PERSONS:
Rex Goodman
Insurepointe of Texas, Inc.
3107 Millbrook Lane
Missouri City, Texas 77459-4121

ATTACHMENT A

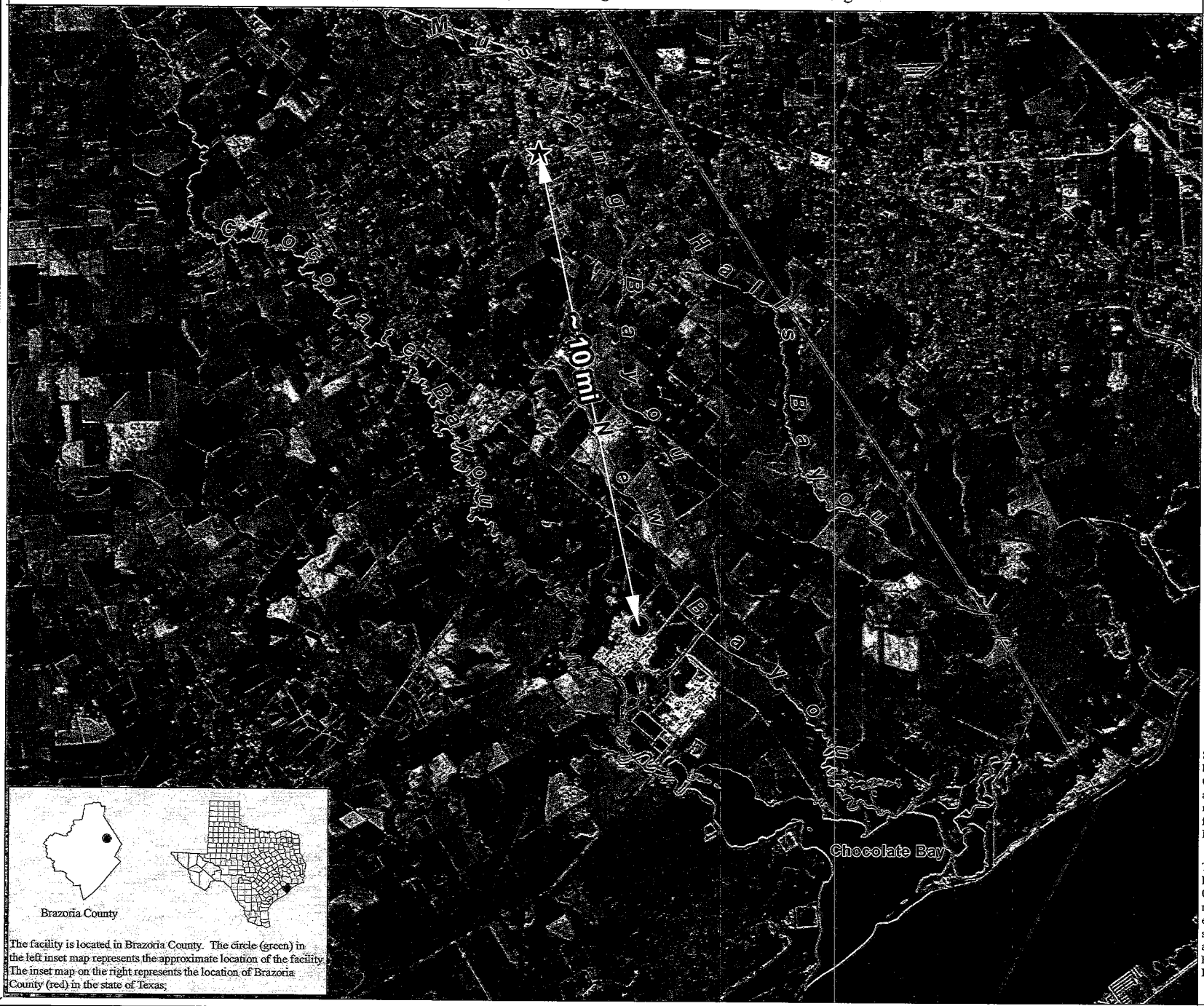
MAP

Hearing Request Agenda Ascend Performance Materials Texas Inc. IHW Permit No. 50189

TCEQ Docket Number 2014-1189-IHW

Commission Agenda, January 21, 2015

Map Requested by TCEQ Office of Legal Services for Commissioners' Agenda



The facility is located in Brazoria County. The circle (green) in the left inset map represents the approximate location of the facility. The inset map on the right represents the location of Brazoria County (red) in the state of Texas;

Protecting Texas by Reducing and Preventing Pollution

TCEQ

Texas Commission on Environmental Quality
GIS Team (Mail Code 197)
P.O. Box 13087
Austin, Texas 78711-3087

Date: 12/19/2014

N

0 2 4 Miles

- Approximate Facility Location
- Approximate Requestor's Residence Location
- Water Feature (line)
- Water Features (body)

Source: The location of the facility was provided by the TCEQ Office of Legal Services (OLS). OLS obtained the site location information from the applicant and the requestor information from the requestor. The background imagery of this map is from the current Environmental Systems Research Institute (ESRI) map service, as of the date of this map.

This map was generated by the Information Resources Division of the Texas Commission on Environmental Quality. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact the Information Resource Division at (512) 239-0800.

CRF 432307

ATTACHMENT B

COMPLIANCE HISTORY

The TCEQ is committed to accessibility.
To request a more accessible version of this report, please contact the TCEQ Help Desk at (512) 239-4357.

Compliance History Report

PUBLISHED Compliance History Report for CN604255158, RN100238682, Rating Year 2013 which includes Compliance History (CH) components from September 1, 2008, through August 31, 2013.

Customer, Respondent, or Owner/Operator:	CN604255158, Ascend Performance Materials Texas Inc.	**Classification:** SATISFACTORY	**Rating:** 15.21
Regulated Entity:	RN100238682, ASCEND PERFORMANCE MATERIALS CHOCOLATE BAYOU PLANT	**Classification:** SATISFACTORY	**Rating:** 15.21
Complexity Points:	66	**Repeat Violator:** NO	
CH Group:	05 - Chemical Manufacturing		
Location:	LOCATED ON FM 2917 APPROX 8 MI S OF INTX OF HWY 35 & FM 2917 BRAZORIA, TX, BRAZORIA COUNTY		
TCEQ Region:	REGION 12 - HOUSTON		

ID Number(s):

AIR OPERATING PERMITS ACCOUNT NUMBER BL0038U
AIR OPERATING PERMITS PERMIT 2318
AIR OPERATING PERMITS PERMIT 2322
AIR OPERATING PERMITS PERMIT 2324
INDUSTRIAL AND HAZARDOUS WASTE SOLID WASTE REGISTRATION # (SWR) 30138
INDUSTRIAL AND HAZARDOUS WASTE PERMIT 50189
PUBLIC WATER SYSTEM/SUPPLY REGISTRATION 0200049
WASTEWATER EPA ID TX0003875
AIR NEW SOURCE PERMITS PERMIT 5084
AIR NEW SOURCE PERMITS REGISTRATION 28694
AIR NEW SOURCE PERMITS REGISTRATION 34029
AIR NEW SOURCE PERMITS PERMIT 38998
AIR NEW SOURCE PERMITS PERMIT 48895
AIR NEW SOURCE PERMITS AFS NUM 4803900009
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX910
AIR NEW SOURCE PERMITS REGISTRATION 74040
AIR NEW SOURCE PERMITS REGISTRATION 74788
AIR NEW SOURCE PERMITS REGISTRATION 77079
AIR NEW SOURCE PERMITS REGISTRATION 80379
AIR NEW SOURCE PERMITS EPA PERMIT N011
AIR NEW SOURCE PERMITS REGISTRATION 93222
AIR NEW SOURCE PERMITS REGISTRATION 94736
AIR NEW SOURCE PERMITS REGISTRATION 101954
AIR NEW SOURCE PERMITS REGISTRATION 108323
AIR NEW SOURCE PERMITS PERMIT 18708
RADIOACTIVE WASTE DISPOSAL LICENSE RW0219
UNDERGROUND INJECTION CONTROL PERMIT WDW224
UNDERGROUND INJECTION CONTROL PERMIT WDW326
STORMWATER PERMIT TXR05BQ25
IHW CORRECTIVE ACTION SOLID WASTE REGISTRATION # (SWR) 30138
AIR EMISSIONS INVENTORY ACCOUNT NUMBER BL0038U
AIR OPERATING PERMITS PERMIT 1258
AIR OPERATING PERMITS PERMIT 2321
AIR OPERATING PERMITS PERMIT 2323
AIR OPERATING PERMITS PERMIT 2325
INDUSTRIAL AND HAZARDOUS WASTE EPA ID TXD001700806
POLLUTION PREVENTION PLANNING ID NUMBER P00445
WASTEWATER PERMIT WQ0000001000
AIR NEW SOURCE PERMITS PERMIT 2271
AIR NEW SOURCE PERMITS PERMIT 18251
AIR NEW SOURCE PERMITS PERMIT 32151
AIR NEW SOURCE PERMITS PERMIT 38336
AIR NEW SOURCE PERMITS PERMIT 39171
AIR NEW SOURCE PERMITS ACCOUNT NUMBER BL0038U
AIR NEW SOURCE PERMITS EPA PERMIT PSDTX307A
AIR NEW SOURCE PERMITS REGISTRATION 72689
AIR NEW SOURCE PERMITS REGISTRATION 73707
AIR NEW SOURCE PERMITS REGISTRATION 77064
AIR NEW SOURCE PERMITS REGISTRATION 78148
AIR NEW SOURCE PERMITS REGISTRATION 80616
AIR NEW SOURCE PERMITS REGISTRATION 93079
AIR NEW SOURCE PERMITS REGISTRATION 92173
AIR NEW SOURCE PERMITS REGISTRATION 96655
AIR NEW SOURCE PERMITS REGISTRATION 108105
AIR NEW SOURCE PERMITS PERMIT 4634B
AIR NEW SOURCE PERMITS PERMIT 19480
UNDERGROUND INJECTION CONTROL PERMIT WDW013
UNDERGROUND INJECTION CONTROL PERMIT WDW318
UNDERGROUND INJECTION CONTROL PERMIT WDW359
STORMWATER PERMIT TXR15ZC19
PETROLEUM STORAGE TANK REGISTRATION REGISTRATION 79885

Compliance History Period: September 01, 2008 to August 31, 2013 **Rating Year:** 2013 **Rating Date:** 09/01/2013

Date Compliance History Report Prepared: February 03, 2014

Agency Decision Requiring Compliance History: Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.

Component Period Selected: February 03, 2009 to February 03, 2014

TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.

Name: Ms. Sarah Schreier **Phone:** (512) 239-5454

Site and Owner/Operator History:

1) Has the site been in existence and/or operation for the full five year compliance period? YES
2) Has there been a (known) change in ownership/operator of the site during the compliance period? NO
3) If **YES** for #2, who is the current owner/operator? N/A
4) If **YES** for #2, who was/were the prior owner(s)/operator(s)? N/A
5) If **YES**, when did the change(s) in owner or operator occur? N/A

Components (Multimedia) for the Site Are Listed in Sections A - J

A. Final Orders, court judgments, and consent decrees:

1 Effective Date: 05/18/2009 ADMINORDER 2008-0062-AIR-E (1660 Order-Agreed Order With Denial)

Classification: Moderate

Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)
30 TAC Chapter 122, SubChapter B 122.145(2)(A)
30 TAC Chapter 122, SubChapter B 122.146(1)
5C THC Chapter 382, SubChapter D 382.085(b)

Rqmt Prov: O-02319 General Terms and Conditions OP

Description: Failed to submit the Annual Compliance Certification for the period of beginning November 29, 2004 through November 28, 2005, with the required certification language. In addition, Solutia failed to identify this deficiency in the semi-annual deviation report for the time period of November 28, 2005 through May 28, 2006.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THC Chapter 382, SubChapter D 382.085(b)

Rqmt Prov: 18251/Special Condition 4 PERMIT

Description: Failed to prevent unauthorized emissions. Specifically, 98.7 pounds ("lbs") of hydrgen cyanide, 357.4 lbs of acrylonitrile, and 5 lbs of acrolein were released when Solutia failed to open the manual block valve during crossover of Acrylonitrile Unit 3 off gas to the Acrylonitrile Unit 2 Waste Heat Boiler resulting in the over pressure of the system, causing an emissions event which began on August 5, 2007, and lasted for five minutes (Incident No. 95610)

Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)(1)(B)
5C THSC Chapter 382 382.085(b)

Description: Failed to submit the initial notification within 24 hours of discovery of an emissions event that started on August 5, 2007. Specifically, the incident started and ended on August 5, 2007, but the initial notification was not submitted until August 8, 2007.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: SPECIAL CONDITION 4 OP

Description: Failed to comply with a permit limit of 4.50 pounds per hour ("lbs/hr") for NOx emissions from the AN-7 Process Air Startup Heater ("70H101-1"). Specifically, it was determined that NOx emissions from 70H101-1 were 5.39 lbs/hr.

Classification: Minor

Citation: 30 TAC Chapter 117, SubChapter G 117.8000
5C THSC Chapter 382 382.085(b)

Description: Failed to test for compliance with the carbon monoxide ("CO") emission limits for 70H101-1 during the reference method stack test conducted on February 19, 2007.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: 18251/Special Condition 4 PERMIT

Description: Failed to prevent an unauthorized emissions event which occurred on September 26, 2007. Specifically, approximately 189 lbs of acrylonitrile ("AN"), 308 lbs of hydrogen cyanide ("HCN"), and 258 lbs of volatile organic compounds ("VOCs") were relesed from EPN 30H5 during the 36 minute event. The emission limits for AN, HCN, and VOCs are 2.09, 1.26 and 12.04 lbs/hr, respectively.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: 18251/Special Condition 4 PERMIT

Description: Failed to prevent an unauthorized emissions event which occurred on October 30, 2007. Specifically, approximately 99 lbs of acrylonitrile ("AN"), 210 lbs of hydrogen cyanide ("HCN"), and 535 lbs of volatile organic compounds ("VOCs") were released from EPN 30H5 during the one hour and nine minute event. The emission limits for AN, HCN, and VOCs are 2.09, 1.26 and 12.04 lbs/hr, respectively.
Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: 18251/Special Condition No. 4 PERMIT

Description: Failed to prevent unauthorized emissions on November 26, 2007 when the secondary pump, Pump 350P1-3 failed to start automatically when the primary boiler feed water pump, Pump 350P1-2 failed. Specifically, during the emissions event which lasted five minutes, the total unauthorized emissions were 355.59 lbs of VOCs and 50.54 lbs of hydrogen cyanide.
Classification: Major

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Permit 6534, Special Condition 1 PERMIT

Description: Failed to comply with the combined maximum allowable emission rate ("MAER") for NOx for seven Linear Alkyl Benzene ("LAB") Unit heaters during stack testing conducted on February 27-28, 2007 and March 1-2 and 14, 2007. Specifically, the combined NOx MAER for Heaters 50H1-1, 50H1-2, 50H1-3, 50H3, 51H1, 51H5 and 51H6 is 18.0 lbs/hr. During testing, the actual combined rate was 21.85 lbs/hr.
Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: TCEQ Permit 38336 Special Condition 4 PERMIT

Description: Failed to comply with permitted emissions limits. Specifically, during a reference method stack test conducted on March 28, 2008, it was determined that NOx and CO emissions from the AN-7 Process Air Startup Heater, EPN 70H101-2 were 8.62 lbs/hr and 13.47 lbs/hr respectively. The emission limits for this EPN are 4.50 lbs/hr for NOx and 6.0 lbs/hr for CO.
Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: 18251/Special Condition No.4 PERMIT

Description: Failed to prevent unauthorized emissions. Specifically, an emissions event occurred on March 2, 2008 due to a preventable electrical spike at EPN 31H4, which lasted for 37 minutes and resulted in the release of 166 lbs of propylene. The emission limits for the EPN are 4.01 lbs/hr for VOC.
Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: 18251/Special Condition No, 4 PERMIT

Description: Failed to prevent unauthorized emissions. Specifically, an emission event occurred on February 29, 2008 due to a preventable electrical spike at EPN 31H4, which lasted for one hour and 43 minutes and resulted in the release of 15.20 lbs of hydrogen cyanide ("HCN") and 526.80 lbs of propylene. The emission limits for this EPN are 1.26 lbs/hr for HCN and 4.01 lbs/hr for VOC.
Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: 18251/Special Condition No. 4 PERMIT

Description: Failed to prevent unauthorized emissions. Specifically, an emissions event occurred on March 27, 2008 due to a loss of air flow from operator error at EPN 30H5, which lasted for one hour and 51 minutes and resulted in the release of 4,057 lbs of VOC, 4,714 lbs of CO and 61 lbs of hydrogen cyanide ("HCN"). The emission limits for this EPN are 3.57 lbs/hr for VOC, 31 lbs/hr for CO and 1.28 lbs/hr for HCN.
Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter F 101.201(b)(1)
5C THSC Chapter 382 382.085(b)

Description: Failed to properly report an emissions event. Specifically, the final report for the March 27, 2008 emissions event did not contain the authorized limits for several pollutants that were involved in the event.

2 Effective Date: 07/31/2011 ADMINORDER 2009-1997-AIR-E (Findings Order-Agreed Order Without Denial)

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 115, SubChapter H 115.722(c)(2)
30 TAC Chapter 116, SubChapter B 116.115(b)(2)(F)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT

Description: Failed to prevent unauthorized emissions from Emission Point Number 70Z40.

Classification: Minor

Citation: 30 TAC Chapter 101, SubChapter F 101.201(b)(1)(H)
5C THSC Chapter 382 382.085(b)

Description: Failed to properly report the July 19, 2009 emissions event,

Classification: Moderate

Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)
30 TAC Chapter 122, SubChapter B 122.145(2)(A)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: FOP O-02325, GT&C OP

Description: Failed to submit complete and accurate semi-annual deviation reports for the June 1, 2008 through November 30, 2008 and December 1, 2008 through May 31, 2009 reporting periods.

Classification: Major

Citation: 30 TAC Chapter 116, SubChapter B 116.110(a)
30 TAC Chapter 116, SubChapter H 116.770(a)
5C THSC Chapter 382 382.0518(a)
5C THSC Chapter 382 382.085(b)

Description: Failed to obtain proper authorization to operate a previously grandfathered emissions source.

Classification: Moderate

Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)
30 TAC Chapter 122, SubChapter C 122.210(a)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: FOP O-02325 STC 19(B) OP

Description: Failed to timely incorporate New Source Review Permit No. 48895 into Federal Operating Permit No. O-02325.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT
Speical Condition 1 PERMIT

Description: failed to comply with permitted emissions limits during an emissions event from the Acrylnitrile 7 Unit and Acrylonitrile 2 Unit.

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT

Description: failed to comply with permitted emissions limits during an emissions event on the Acrylonitrile 2 Unit Product Purification Column pad area.

3 Effective Date: 08/13/2011 ADMINORDER 2010-1828-AIR-E (1660 Order-Agreed Order With Denial)

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT

Description: Failed to prevent unauthorized emissions during Incident No. 142163.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter A 101.20(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT
Special Terms & Conditions No. 8 OP

Description: Failed to comply with the combined 2.79 tons per year sulfuric acid mist emission rate for incinerator scrubbers 337H1 and 337H2.

4 Effective Date: 08/27/2011 ADMINORDER 2010-0088-AIR-E (1660 Order-Agreed Order With Denial)

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Special Condition No. 1 PERMIT
Description: Failure to prevent unauthorized emissions.
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: Special Condition No. 1 PERMIT
Description: Failure to prevent unauthorized emissions.
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: Special Condition 1 PERMIT
Speical Condition 1 PERMIT
Description: Failure to prevent unauthorized emissions.

5 Effective Date: 08/27/2011 ADMINORDER 2011-0222-AIR-E (Findings Order-Agreed Order Without Denial)
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: Special Condition 1 PERMIT
Description: Failed to prevent unauthorized emissions during Incident No. 145043. This emissions event was determined to be excessive.

6 Effective Date: 04/23/2012 ADMINORDER 2011-1808-AIR-E (1660 Order-Agreed Order With Denial)
Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: FOP O1258, ST&C 19 OP
NSR Permit No. 2271, SC 1 PERMIT
Description: Failed to prevent unauthorized emissions of 4,793.00 pounds of ammonia from pressure relief valve PSV-316 during an emissions event (Incident No. 155268) lasting 3 hours and 50 minutes on June 4, 2011.

7 Effective Date: 06/08/2012 ADMINORDER 2011-1185-AIR-E (1660 Order-Agreed Order With Denial)
Classification: Moderate
Citation: 30 TAC Chapter 113, SubChapter C 113.620
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT A 63.10(d)(5)(i)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT EEE 63.1211(a)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: FOP O2321 OP
Description: Failed to submit the Hazardous Waste Combustion MACT reports within 30 days of the end of each semiannual period. Specifically, the reports for the periods of January 1, 2009 through June 30, 2009 and July 1, 2009 through December 31, 2009 were submitted under one cover letter on August 6, 2010.
Classification: Minor
Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: FOP O2321, GT&C OP
FOP O2321, ST&C 3.B.iv.3. OP
Description: Failed to record all quarterly visible emissions observations for Heaters 30H1, 31H1-1, and 31H1-2.
Classification: Moderate
Citation: 30 TAC Chapter 115, SubChapter H 115.725(d)(3)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
Rqmt Prov: FOP O2321, ST&C 1.A. OP
FOP O2321, ST&C 18 OP
NSR Permit Nos. 18251 and N-011, SC 19.E PERMIT
Description: Failed to operate the flare flow meter for the AN2 flare, EPN 30Z7, at least 95% of the total hours of operation in 2009. The flow meter was obstructed from June 28, 2009 through November 11, 2009, resulting in a total downtime of 3,556 hours for the year, which is 59.4%.of the hours of operation in 2009.
Classification: Moderate
Citation: 30 TAC Chapter 115, SubChapter B 115.126(1)(B)

30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT A 60.18(c)(3)(ii)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT A 63.11(b)(6)(ii)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: FOP O2321, ST&C 1.A. OP
FOP O2321, TT&C 18 OP
NSR Permit Nos. 18251 and N-011, SC 3 PERMIT
NSR Permit Nos. 18251 and N-011, SC 5 PERMIT

Description: Failed to maintain the net heating value of two flares (EPNs 30Z7 and 31Z4) above 300 Btu/scf for a total of nine hours between October 7, 2009 and April 27, 2010 (see table below).
Classification: Minor

Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)
30 TAC Chapter 122, SubChapter B 122.145(2)(A)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: FOP O2321, GT&C OP
General Terms and Conditions OP

Description: Failed to report all deviations in the semiannual deviation reports. A total of 9 open-ended lines were discovered from January 12 through 15, 2009. These open-ended lines should have been reported in the deviation report due by June 30, 2009; however, they were never reported. Additionally, the Respondent failed to report the late submittal of Hazardous Waste Combustor MACT semiannual reports in the above-referenced report and in the reports due by December 30, 2009 and June 30, 2010.
Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter D 115.352(4)
30 TAC Chapter 115, SubChapter H 115.783(5)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT VV 60.482-6(a)(2)
40 CFR Chapter 63, SubChapter C, PT 63, SubPT H 63.167(a)(2)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: FOP O2321, ST&C 1.A. OP
FOP O2321, ST&C 18 PERMIT
NSR Permit Nos. 18251 and N-011, SC 13.E PERMIT
NSR Permit Nos. 18251 and N-011, SC 15.E PERMIT
NSR Permit Nos. 18251 and N-011, SC 3.A. PERMIT
NSR Permit Nos. 18251 and N-011, SC5 PERMIT

Description: Failed to plug or cap an open-ended line which was discovered on October 15, 2010. The open-ended line was in hazardous air pollutant service and in highly-reactive volatile organic compound ("HRVOC") service. The Respondent capped the open-ended line on the day they were discovered.
Classification: Moderate

Citation: 30 TAC Chapter 117, SubChapter B 117.335(e)
30 TAC Chapter 117, SubChapter H 117.9020(2)(C)(i)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: FOP O2321, ST&C 1.A. OP
FOP O2321, ST&C 21 OP

Description: Failed to conduct a stack test of the second start-up heater (EPN 31H1-2) for the AN3 unit.

Classification: Moderate

Citation: 30 TAC Chapter 115, SubChapter H 115.781(b)(3)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: FOP O2321, ST&C 1.A. OP

Description: Failed to quarterly monitor caps, plugs, and blind flanges in HRVOC service. The AN2 and AN3 units have a combined 414 potential open ends (caps, plugs, and blind flanges) in HRVOC service. These components were listed in the Plant's database as exempt from monitoring in error, and were not monitored from the second quarter of 2009 until the fourth quarter of 2010.

8 Effective Date: 06/22/2012 ADMINORDER 2011-2133-AIR-E (1660 Order-Agreed Order With Denial)

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT
Special Term & Condition 18 OP
Special Terms & Conditions No. 17 OP

Description: Failed to prevent unauthorized emissions during an event on July 24, 2011 (Incident No. 157167). Specifically, the Respondent released 1,198.19 pounds of acrylonitrile, 177.56 lbs of hydrogen cyanide, 15.20 lbs of ammonia, and 39 lbs of carbon monoxide from the Acrylonitrile Unit 2 Flare, Acrylonitrile Unit 2 Waste Heat Boiler, Acrylonitrile Unit 3 Waste Heat Boiler, Purification Flush Tank Scubber, and Waste Heat Boiler during the 10 hour 24 minute event.

9 Effective Date: 11/11/2012 ADMINORDER 2012-0707-AIR-E (Findings Order-Agreed Order Without Denial)

Classification: Moderate

Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Rqmt Prov: Special Condition 1 PERMIT
Special Terms and Conditions No. 19 OP

Description: Failed to prevent unauthorized emissions during an excessive emissions event on October 1, 2011 (Incident No. 159929). Specifically, the Respondent released 17,683.29 pounds ("lbs") of acrylonitrile, 3,495.90 lbs of hydrogen cyanide, and 1,988.98 lbs of volatile organic compounds, including 851.64 lbs of acetonitrile, 14.59 lbs of acrolein, and 1,122.75 lbs of fumaronitrile, from Cooling Tower No. 6 (Emission Point No. 70382E6) during the 20 hour 8 minute event.

Classification: Moderate

Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)(1)(B)
5C THSC Chapter 382 382.085(b)

Description: Failed to submit an initial notification for Incident No. 159929 not later than 24 hours after the discovery of an emissions event. Specifically, the initial notification was due by 5:00 a.m. on October 3, 2011 but was not submitted until 8:54 a.m., over 24 hours after the incident was discovered.

B. Criminal convictions:

N/A

C. Chronic excessive emissions events:

N/A

D. The approval dates of investigations (CCEDS Inv. Track. No.):

Item 1	February 12, 2009	(750164)
Item 2	February 16, 2009	(723984)
Item 3	February 20, 2009	(723296)
Item 4	February 24, 2009	(726852)
Item 5	March 16, 2009	(750165)
Item 6	March 20, 2009	(724849)
Item 7	April 06, 2009	(736212)
Item 8	April 16, 2009	(750166)
Item 9	May 15, 2009	(768286)
Item 10	June 10, 2009	(768287)
Item 11	August 10, 2009	(760734)
Item 12	August 11, 2009	(762921)
Item 13	August 24, 2009	(804428)
Item 14	August 31, 2009	(767513)
Item 15	September 22, 2009	(804429)
Item 16	October 14, 2009	(804430)
Item 17	November 06, 2009	(767538)
Item 18	November 17, 2009	(804431)
Item 19	December 11, 2009	(784537)
Item 20	December 13, 2009	(767543)
Item 21	December 14, 2009	(767550)
Item 22	December 17, 2009	(804432)
Item 23	January 19, 2010	(785856)
Item 24	February 10, 2010	(790032)
Item 25	March 15, 2010	(830793)
Item 26	April 13, 2010	(830794)
Item 27	April 22, 2010	(796385)
Item 28	May 17, 2010	(830795)

Item 29	June 15, 2010	(846239)
Item 30	June 21, 2010	(803247)
Item 31	July 09, 2010	(829610)
Item 32	July 13, 2010	(860835)
Item 33	July 23, 2010	(830086)
Item 34	August 16, 2010	(866799)
Item 35	August 30, 2010	(849823)
Item 36	September 09, 2010	(841766)
Item 37	September 17, 2010	(873871)
Item 38	September 20, 2010	(864461)
Item 39	September 30, 2010	(850191)
Item 40	October 08, 2010	(849826)
Item 41	October 13, 2010	(859969)
Item 42	October 18, 2010	(881473)
Item 43	October 25, 2010	(858020)
Item 44	November 11, 2010	(888004)
Item 45	November 22, 2010	(858048)
Item 46	December 13, 2010	(896206)
Item 47	January 13, 2011	(884974)
Item 48	January 17, 2011	(902277)
Item 49	January 24, 2011	(886439)
Item 50	January 25, 2011	(886526)
Item 51	February 14, 2011	(909051)
Item 52	February 22, 2011	(893337)
Item 53	February 28, 2011	(858031)
Item 54	March 17, 2011	(902104)
Item 55	March 28, 2011	(901932)
Item 56	April 07, 2011	(907947)
Item 57	April 21, 2011	(924756)
Item 58	April 28, 2011	(878118)
Item 59	May 12, 2011	(913615)
Item 60	May 19, 2011	(937995)
Item 61	May 31, 2011	(913957)
Item 62	June 09, 2011	(906472)
Item 63	June 10, 2011	(913961)
Item 64	June 20, 2011	(945319)
Item 65	June 23, 2011	(913963)
Item 66	June 27, 2011	(913966)
Item 67	July 01, 2011	(913967)
Item 68	July 14, 2011	(933988)
Item 69	July 20, 2011	(952593)
Item 70	August 10, 2011	(959275)
Item 71	August 16, 2011	(935315)
Item 72	August 31, 2011	(951773)
Item 73	September 19, 2011	(965307)
Item 74	September 22, 2011	(956739)
Item 75	October 17, 2011	(971347)
Item 76	November 10, 2011	(977507)
Item 77	November 14, 2011	(957477)
Item 78	December 08, 2011	(968932)
Item 79	December 09, 2011	(970199)
Item 80	December 13, 2011	(984273)
Item 81	December 19, 2011	(970291)
Item 82	January 16, 2012	(990575)
Item 83	February 15, 2012	(997936)
Item 84	February 16, 2012	(987709)
Item 85	February 24, 2012	(984020)
Item 86	February 28, 2012	(987443)
Item 87	March 19, 2012	(1003459)
Item 88	April 02, 2012	(994584)

Item 89	April 16, 2012	(1010023)
Item 90	May 15, 2012	(1016418)
Item 91	May 24, 2012	(996478)
Item 92	May 30, 2012	(1007707)
Item 93	May 31, 2012	(1007710)
Item 94	June 20, 2012	(1024138)
Item 95	July 19, 2012	(1020590)
Item 96	July 24, 2012	(1007991)
Item 97	August 08, 2012	(1021735)
Item 98	August 10, 2012	(1021591)
Item 99	August 13, 2012	(1037910)
Item 100	August 29, 2012	(1015387)
Item 101	September 18, 2012	(1046636)
Item 102	September 20, 2012	(1029175)
Item 103	October 23, 2012	(1060774)
Item 104	October 31, 2012	(1042245)
Item 105	November 01, 2012	(1030452)
Item 106	November 26, 2012	(1060775)
Item 107	November 27, 2012	(1030977)
Item 108	December 06, 2012	(1030959)
Item 109	December 12, 2012	(1042897)
Item 110	December 18, 2012	(1060776)
Item 111	January 18, 2013	(1078905)
Item 112	January 25, 2013	(1053391)
Item 113	January 29, 2013	(1055119)
Item 114	February 05, 2013	(1055931)
Item 115	February 08, 2013	(1050820)
Item 116	February 25, 2013	(1056184)
Item 117	February 27, 2013	(1059363)
Item 118	March 05, 2013	(1009307)
Item 119	March 19, 2013	(1089276)
Item 120	April 17, 2013	(1095670)
Item 121	May 16, 2013	(1106595)
Item 122	June 14, 2013	(1110271)
Item 123	July 01, 2013	(1095503)
Item 124	July 16, 2013	(1117154)
Item 125	July 24, 2013	(1098642)
Item 126	July 29, 2013	(1104247)
Item 127	August 14, 2013	(1124910)
Item 128	August 21, 2013	(1113411)
Item 129	August 23, 2013	(1094657)
Item 130	August 27, 2013	(1114611)
Item 131	September 18, 2013	(1129511)
Item 132	October 04, 2013	(1116396)
Item 133	October 14, 2013	(1135241)
Item 134	October 30, 2013	(1116182)
Item 135	November 14, 2013	(1128694)
Item 136	November 15, 2013	(1140641)
Item 137	November 20, 2013	(1132556)
Item 138	November 21, 2013	(1115974)
Item 139	December 02, 2013	(1093753)
Item 140	January 28, 2014	(1144088)

E. Written notices of violations (NOV) (CCEDS Inv. Track. No.):

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

1 Date: 02/05/2013 (1035113) CN604255158

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 335, SubChapter A 335.6(c)
II-C-1-h PERMIT

Description: NOR was not updated

Published *Compliance History Report for CN604255158, RN100238682, Rating Year 2013 which includes Compliance History (CH) components from February 03, 2009, through February 03, 2014.*

2 Date: 02/25/2013 (1053944) CN604255158
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
NSR 18251, Special Condition 1 PERMIT
Description: Failure to meet the demonstration criteria for an affirmative defense for unauthorized emissions during an emissions event. (CATEGORY B-14)

3 Date: 04/22/2013 (1073222) CN604255158
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 122, SubChapter B 122.146(2)
5C THSC Chapter 382 382.085(b)
General Terms & Conditions OP
Description: Failure to submit Permit Compliance Certification report within 30 days after end of compliance period.
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 122, SubChapter B 122.145(2)(C)
5C THSC Chapter 382 382.085(b)
General Terms & Conditions OP
Description: Failure to submit semi-annual Deviation Report within 30 days after end of compliance period.

4 Date: 04/23/2013 (1073695) CN604255158
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
Special Condition 1 PERMIT
Description: Failure to prevent unauthorized emissions. Category B 14.

5 Date: 04/24/2013 (1056146) CN604255158
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
E.L.&M.R., pg. 2(c), No. 3 PERMIT
Description: Failed to maintain compliance with the permitted effluent limits.
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 319, SubChapter A 319.11(b)
Description: Failed to ensure proper preservation of effluent samples.

6 Date: 07/23/2013 (1099406) CN604255158
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
5C THSC Chapter 382 382.085(b)
Special Condition 1 PERMIT
Description: Failure to prevent unauthorized emissions during an emissions event. Category B13

7 Date: 08/06/2013 (1028725) CN604255158
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
S.T.C 3(A)(iv)(1) OP
Description: Failure to conduct visible emission monitoring of the stationary firewater diesel engine pump, 333P3-5DE [Category C1 violation]

8 Date: 08/16/2013 (1094688) CN604255158
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
Special Condition 17A PERMIT
Special Term and Condition 18 OP
Special Term and Condition OP
Description: Failure to inspect the capture system for scrubber exhaust stack 83S14 (Category B1).
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 115, SubChapter B 115.143(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)

Special Term and Condition 4 PERMIT
Description: Failure to comply with alternative control requirements for industrial wastewater (Category B3).
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)
30 TAC Chapter 122, SubChapter B 122.145(2)(A)
5C THSC Chapter 382 382.085(b)
General Terms and Conditions OP
Description: Failure to report all instances of deviations. (Category B3)

9 Date: 08/16/2013 (1094692) CN604255158
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
Special Condition #25 PERMIT
Special Terms and Condition #17 OP
Description: Failure to seal one (1) open-ended line (OEL). (Category C10)
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
SC#8(B) PERMIT
ST&C #17 OP
ST&C 15 OP
Description: Failure to maintain the temperature at 1425 degrees Fahrenheit for the boiler (EPN: 70Z401). (Category C4)

10 Date: 08/29/2013 (1073503) CN604255158
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
NSR Special Condition 1 PA
Special Term & Condition 17 OP
Description: Failure to comply with the VOC pound per hour (lb/hr) permitted limit for the Acrylonitrile Product Storage Tank (EPN: 320T311-3). (Category B13)

11 Date: 08/30/2013 (1028744) CN604255158
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
FOP, ST&C 10 OP
NSR, SC 22 PERMIT
Description: Failure to maintain 69 gpm on the absorber associated with 337H2. Category C4
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
FOP, ST&C 10 OP
FOP, ST&C 1A OP
FOP, ST&C 9 OP
NSR, SC 13 PERMIT
Description: Failure to maintain incinerator (337H2) temperature at or above 933 degrees Celsius. Category C4

12 Date: 10/15/2013 (1116162) CN604255158
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 122, SubChapter B 122.143(14)
30 TAC Chapter 122, SubChapter B 122.146(2)
5C THSC Chapter 382 382.085(b)
Description: Failure to submit the PCC and DR report within 30 days of the end of certification period (catagory B-3)

13 Date: 10/22/2013 (1116261) CN604255158
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
Special Condition 1 PERMIT

ST&C 18 OP
Description: Failure to maintain hourly emissions below permitted limits.
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 115, SubChapter H 115.786(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
ST&C 1A OP
Description: Failure to submit HRVOC Fugitive Report within required timeframe.
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 122, SubChapter C 122.210(a)
5C THSC Chapter 382 382.085(b)
Description: Failure to submit minor Title V Permit revision documentation to the TCEQ.

F. Environmental audits:

Notice of Intent Date: 07/07/2009 (762800)
Disclosure Date: 08/28/2009
Viol. Classification: Minor
Citation: 30 TAC Chapter 115, SubChapter H 115.764(a)(1)
Description: Failure to calibrate implement annual calibration continous flow monitors for cooling towers E379CT3, E379CT4, and 70382E6.
Viol. Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.110
Description: Failure to authorize volatile organic compounds (VOCs) from tanks E332S1-1, E332S1-2, E332T1-1, E332T1-2, E336T1-1, E336T1-2, E336T2-1, and E3362-2 and particulate matter emissions from cooling towers E379CT3, E379CT4, and 70382E6 by permits by rule (PBRs).
Viol. Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter H 101.359(a)
Description: Failure to accurately report annual nitrogen oxide emissions from EPN E350H1-1 due to calculation errors.
Viol. Classification: Moderate
Citation: 30 TAC Chapter 106, SubChapter A 106.4(a)(1)
Description: Failure to ensure wastewater treatment VOC emissions are less than 25 tons per year.
Viol. Classification: Moderate
Citation: 30 TAC Chapter 117, SubChapter B 117.340(h)
Description: Failure to stack test EPN E334P71 and E334GEN quarterly for nitrogen oxides and carbon monoxide from April 2005 through April 2007.
Viol. Classification: Moderate
Citation: 30 TAC Chapter 117, SubChapter B 117.310(a)(9)
Description: Failure to meet emission standards for EPN E334P71 and E334GEN and failure to report in the semiannual engine report.
Viol. Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter H 101.359(a)(1)
Description: Failure to ensure E334-GEN is accounted for in the mass emission cap and trade (MECT) program.
Viol. Classification: Minor
Citation: 30 TAC Chapter 122, SubChapter B 122.145(2)
Description: Violations from this audit were not reproted in the Title V deviation reports.

Notice of Intent Date: 03/16/2011 (914912)
Disclosure Date: 04/29/2011
Viol. Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.10
Description: Failed to submit an accurate Air Emissions Inventory. A few deficiencies were noted in the 2009 Air Emission Inventory submitted to the TCEQ.
Viol. Classification: Moderate
Citation: 40 CFR Chapter 63, SubChapter C, PT 63, SubPT A 63.6(e)(3)
Description: Failed to include all process equipment in the existing Startup, Shutdown and Malfunction Plan (SSMP). The SSMP for the cyanide operations does not include the process equipment covered by the miscellaneous organic NESHAP (MON) operations (however, the SSMP currently includes the MON control equipment).
Viol. Classification: Moderate
Citation: 30 TAC Chapter 122, SubChapter B 122.146
Description: Failed to submit a complete Permit Compliance Certification report. The PCC reports submitted semiannually did not include in Part 3 of the PCC report which monitoring option has been selected by the Facility for leak detection of the incinerator capture system established in Condition 21 of Permit Nos. 8372 and PSD-TX- 307 A, and Condition 9E of the FOP.
Viol. Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115
Rqmt Prov: PERMIT NSR Permit No. 8372, Condition 12A

Description: Failed to have an adequate emergency flare. The "emergency" flare may not meet the minimum heat value required by Condition 12.A of Permit Nos. 8372 and PSD-TX-307A (reference 40 CFR 60.18). Note: emergency flare has never been used in the two plus decades of unit operation.
Viol. Classification: Moderate
Citation: 30 TAC Chapter 334, SubChapter F 334.127(b)

Description: A 2,160-gallon aboveground diesel fuel storage tank is not registered.
Viol. Classification: Moderate
Citation: 30 TAC Chapter 331, SubChapter D 331.64(g)(1)

Description: Failed to conduct monitoring. Not consistently conducting quarterly corrosion monitoring for "mass ... cracking, pitting and other signs of corrosion" for deep wells WDW 224 and WDW 326.
Additional Detail: currently quarterly ultrasonic testing and a semi-annual visual inspection of the pulled spool piece are being conducted.
Viol. Classification: Minor
Citation: 30 TAC Chapter 331, SubChapter D 331.66(b)(1)

Description: Waste disposal well WDW 326 was not labeled with the well number.

Notice of Intent Date: 04/30/2012 (1020775)
No DOV Associated

Notice of Intent Date: 05/14/2012 (1013342)
Disclosure Date: 09/19/2012
Viol. Classification: Moderate
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)
Rqmt Prov: PERMIT NSR 6534, SC 11

Description: Failed to use an approved monitoring device. The Respondent was using Beneze-specific Draeger tubes instead of an FID or Approved Method 21 monitoring device to measure Total VOC emissions on CAS system.
Viol. Classification: Minor
Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)
30 TAC Chapter 122, SubChapter B 122.145(2)

Description: Failure to report - to include the preceding two Title V deviations in a Title V deviation report.

G. Type of environmental management systems (EMSs):
N/A

H. Voluntary on-site compliance assessment dates:
N/A

I. Participation in a voluntary pollution reduction program:
N/A

J. Early compliance:
N/A

Sites Outside of Texas:
N/A

ATTACHMENT C

TECHNICAL SUMMARY AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Technical Summary and Executive Director's Preliminary Decision

February 3, 2014

Description of Application

Applicant: Ascend Performance Materials Texas Inc.
Industrial Solid Waste Registration No. 30138
Hazardous Waste Permit No. 50189
Compliance Plan No. 50189
EPA I.D. No. TXD001700806

Location: Ascend Performance Materials Texas Inc. is located on FM 2917 approximately 11 miles southeast of the city of Alvin in Brazoria County, Texas on approximately 2,514 acres of land. The site is within the drainage area of Segment 1107 of the San Jacinto-Brazos Coastal Basin (North Latitude 29°15'21", West Longitude 95°12'37").

This facility is located in an area subject to the Texas Coastal Management Program (CMP). This hazardous waste permit renewal application complies with the applicable requirements of 30 Texas Administrative Code (TAC) Chapters 335 and 305 which are consistent with and satisfy the requirements of the CMP. As a result, the TCEQ has reviewed this action for consistency with the goals and policies of the CMP in accordance with the regulations of the Coastal Coordination Council (CCC) and has determined that the permit meets all the applicable CMP goals and policies.

General: Ascend Performance Materials Texas Inc. currently operates a chemical manufacturing facility which produces chemical feedstocks and intermediates at the following manufacturing units: Acrylonitrile (AN), Diphenyl Oxide (DPO), Formalin, Iminodiacetic Acid (IDA), Methionine Hydroxy Butanoic Acid (MHBA), Nitrilotriacetic Acid (NTA), Linear Alkyl Benzene (LAB), and Sodium Cyanide (NaCN). The facility conducts storage, treatment and disposal of hazardous and nonhazardous class 1 and 2 industrial solid wastes as part of the manufacturing operations. Wastes are generated on-site at the Ascend Performance Materials Texas Inc. manufacturing plant on a noncommercial basis. The wastes managed by the facility include organic and inorganic aqueous liquids, solids, and sludges originating from the manufacture of the chemical feedstocks and intermediates identified above. Wastewaters are also generated by plant-wide support facilities, collected stormwater, landfill leachate, and decontamination rinsate. Hazardous solids include contaminated soil and debris, filter cartridges, and spent carbon. Sludges consist of chemical residues, wastewater treatment sludges, and tank bottoms.

The original permit was issued on September 30, 1987, for a term of ten years. The permit was renewed on January 5, 2001, for an additional ten year term.

Request: Ascend Performance Materials Texas Inc. has applied to the TCEQ for a permit renewal to continue operation of the following existing units: 2 container storage areas, 2 tanks, 1 active landfill, 2 boilers, and one thermal desorption unit for the storage, processing, combustion, and disposal of hazardous and Classes 1 and 2 industrial solid wastes and post closure care of 1 closed landfill and 1 closed surface impoundment. Ascend Performance Materials Texas Inc. has also applied for a major amendment to construct and operate 1 proposed landfill and 1 proposed container storage area for the storage, processing and disposal of hazardous and classes 1 and 2 industrial solid wastes. The application was submitted in accordance

with Title 30 of the Texas Administrative Code (TAC) Section 305.65, and in response to the TCEQ Part B call-in letter dated February 2, 2010. The application request dated July 8, 2010 was received on July 13, 2010.

Ascend Performance Materials Texas Inc. has applied for a compliance plan renewal which authorizes and requires Ascend Performance Materials Texas Inc. to monitor the concentration of hazardous constituents in ground water and remediate ground water quality to specified standards.

Authority: The permit is required by 30 TAC Sections 335.2 and 335.43, and Section 3005(c) of the Hazardous and Solid Waste Amendments of 1984 (HSWA). A draft permit has been prepared in accordance with applicable requirements of 30 TAC Chapters 335 and 305, which have been adopted under the authority of the Texas Health and Safety Code Ann., Chapter 361 (Vernon Supp.), and Section 5.103, Texas Water Code Ann. (Vernon Supp.). In addition, a portion of the draft permit has been prepared under both State and Federal authority which implements applicable requirements of HSWA for which the TCEQ is not authorized. The permit must be signed by the TCEQ and EPA in order for the applicant to have a fully effective Resource Conservation and Recovery Act (RCRA) permit. The TCEQ and the EPA have entered into a Joint Permitting Agreement (JPA) whereby EPA accepts the applicant's information submitted through the State as a Federal application for purposes of implementing HSWA.

Technical Information

The proposed permit renewal includes the following:

A. Establishes general provisions for construction, operation, closure and post-closure care of the subject facility units (30 TAC Chapter 335, Subchapter F and Chapter 350);

B. Requires the permittee to establish and maintain financial assurance to provide for proper facility closure and post-closure care in the total amount of $5,446,600 (30 TAC Section 335.179);

C. Requires the permittee to control access to the facility (40 CFR 264.14);

D. Specifies minimum physical conditions, training, routine inspections and emergency procedures for the facility units (30 TAC Sections 335.153 and 335.177, and 40 CFR Part 264, Subparts B, C and D);

E. Standard permit provisions and other requirements pertaining to the management of industrial solid waste, including hazardous industrial solid wastes (40 CFR Part 264, Subpart B);

F. Land Disposal Restrictions Provision II.A.7, which will implement the applicable requirements of HSWA upon issuance of the permit by EPA (40 CFR Part 268);

G. The following is a list of standard post-closure care requirements for the land based permitted units (30 TAC Sections 335.174):

1. Maintain all storm water conveyance structures in good functional condition;

2. Maintain proper cover on closed units to prevent erosion, ponding, and water infiltration, and maintain all benchmarks;

3. Maintain facility perimeter fence and ensure that all entrances are manned or locked, and ensure TCEQ access to the facility;

4. Perform groundwater monitoring and, if applicable, any necessary corrective action; and

5. Maintain proper records and controls to address action leakage rates as per 40 CFR 264.221(c) or (d), and/or 264.301(c) or (d).

H. The following is a brief description of waste management units and corresponding regulatory requirements encompassed by this permit:

Container storage area - design and operating requirements for the containment system; management, inspection and air emission requirements for the containers storing wastes; and closure requirements for the containers and containment system. (40 CFR Part 264, Subpart I)

Tank - design and installation requirements for the tank system including the tank, its associated ancillary equipment, the tank foundation and the containment system; operating, inspection and air emission requirements; requirements for response to leaks or spills; and closure and post-closure requirements. (40 CFR Part 264, Subpart J)

Surface impoundment – corrective action monitoring program requirements for monitoring the groundwater underlying the surface impoundment and post-closure requirements. (40 CFR Part 264, Subpart K)

Landfill - design, construction, installation and operating requirements for the landfills which include the foundations, the composite liner systems, the leachate collection and removal systems, and the leak detection systems; land disposal restrictions and stabilization requirements for waste placed in the landfills; monitoring and inspection requirements for the landfills; requirements for response actions if the action leakage rate is exceeded; detection monitoring program requirements for monitoring the groundwater underlying the landfills; and closure and post-closure requirements. (40 CFR Part 264, Subpart N)

Miscellaneous unit (Thermal Desorption Unit) – closure and post-closure care requirements for the thermal desorption unit, which is inactive, pending closure. (40 CFR Part 264, Subpart X)

Boiler - performance standards for operation of the boilers; operating requirements for the boilers including organic emissions standards, the particulate standard, the metals emissions standard, hydrogen chloride and chlorine standards, and measurement parameters; prevention of fugitive emissions, and automatic waste feed cut off; monitoring and inspection requirements; and closure requirements. (40 CFR Part 266, Subpart H)

I. Radioactive Materials License Requirements – Permit Provision III.F requires the permittee to comply with all applicable requirements of the Radioactive Materials License for managing mixed radioactive and hazardous waste at the facility.

The proposed compliance plan renewal includes the following:

A. Defines the point of compliance and requires Ascend Performance Materials Texas Inc. to perform groundwater monitoring in specified point of compliance wells for the duration of:

1. 33 years at the Permit Unit 03, Closed IWPF Surface Impoundments;
2. 9 years at the Unit A, Phenolic Tar Pits;
3. 7 years at the Unit C, Phthalic Anhydride Area;
4. 16 years at the Unit I, Emergency Runoff Surface Impoundment;
5. 18 years Unit J, Phenol Wet Wall; and
6. 11 years Unit 02, Vacuum Truck Pit (30 TAC Section 335.166 and 335.167);

B. Defines the Groundwater Protection Standard (GWPS) which specifies hazardous constituent concentration limits to be achieved at the point of compliance by operation of the corrective action program (30 TAC Section 335.156);

C. Specifies procedures to determine if the GWPS has been exceeded at the point of compliance (30 TAC Sections 335.158);

D. Defines the Corrective Action Program consisting of an ongoing monitored natural attenuation (MNA) groundwater remedy at Permit Unit 03 and Solid Waste Management Units A, C, I, J, and 02 consisting of semi-annual corrective action monitoring at Permit Unit 03 and annual corrective action monitoring at Units A, C, I, J, and 02 at wells designated as Plume Stability and Concentration Trend Monitoring Wells (30 TAC Section 335.166 and 335.167);

The Corrective Action Program also consists of corrective action measures involving the inspection and maintenance of soil cover at Units A, C, and I. This action involved a soil remedy for affected soil and tar seeps at Unit A and for affected soil at Units C and I. These units are to be inspected semi-annually to identify any needs for maintenance and/or repair of the covers.

E. Requires groundwater monitoring to measure the effectiveness of the Corrective Action Program;

F. Authorizes the disposal of recovered affected groundwater at the facility's on-site above ground storage tanks for pretreatment prior to disposal in an on-site permitted injection well; and

G. Requires the permittee to provide financial assurance for compliance monitoring, operation of the groundwater recovery system(s) and sampling and analysis costs for the duration of compliance period(s).

Groundwater is typically encountered from ground surface to approximately 200 feet below grade or at 15 above Mean Sea Level to approximately 185 feet below Mean Sea Level in the uppermost aquifer. The uppermost aquifer is the Upper Chicot which comprises the

Beaumont and the Upper Lissie Formations. The Beaumont and the Upper Lissie consists of clay, silt, sand, and minor amounts of gravel. The Upper Chicot aquifer averages 200 feet in thickness at the Chocolate Bayou Site. Groundwater flow is generally toward the west southwest in the upper sand stratum beneath the Chocolate Bayou facility.

Contamination has been verified in the uppermost aquifer and the draft compliance plan requires:

1. Corrective action with groundwater monitoring at Permit Unit 03 and Units A, C, I, J, and 02.

Public Notice

The public notice issued in conjunction with the final draft permit satisfies the requirements of the Resource Conservation and Recovery Act (RCRA), as amended, 42 U.S.C. 6901 et seq. and 40 CFR 124.10. The TCEQ and U.S. Environmental Protection Agency (EPA) have entered into a joint permitting agreement whereby RCRA permits or compliance plans will be issued in Texas in accordance with the Texas Solid Waste Disposal Act, Texas Health and Safety Code Ann., Chapter 361, and with RCRA, as amended. If TCEQ and EPA decide to issue a final permit to this facility, the permit will implement both the requirements of RCRA as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA) and the federally authorized State requirements. However, the State of Texas has not received full HSWA authority. Therefore, if the draft permit contains HSWA requirements for which the TCEQ is not authorized, both the TCEQ and EPA must issue the permit in order for the applicant to have a fully effective RCRA permit. Any jointly issued permit provisions will be fully enforceable under State and Federal law. Areas in which the TCEQ has not been authorized by EPA are denoted in the draft permit with an asterisk (*). Persons wishing to comment or request a hearing on a HSWA requirement denoted with an asterisk (*) in the draft permit should also notify EPA in writing as follows: Chief, RCRA Permits Branch, EPA Region 6, 1445 Ross Avenue, Dallas, Texas 75202-2733. EPA will accept hearing requests submitted to the TCEQ.

Opportunity for Hearing

Before a permit can be issued, extended, or renewed, the TCEQ will provide an opportunity for a hearing to the applicant and persons affected. If a hearing is requested, the Commission will determine whether to grant or deny the hearing requests. If the hearing requests are denied, the draft permit may be considered for issuance by the Commission or the Executive Director. If the hearing requests are granted, the hearings will be conducted by the State Office of Administrative Hearings. EPA will reach a decision on the HSWA portion of the joint permit based on the hearing record developed by the TCEQ. The EPA portion of the permit implementing non-authorized HSWA provisions will become effective thirty (30) days after the date of issuance if changes were required.

Decisions regarding the permit provisions issued under State authority may be reconsidered in response to a Motion for Rehearing or a Motion for Reconsideration and by appeal to a District Court in Travis County. Decisions regarding the permit provisions issued under Federal authority may be reconsidered in accordance with the procedures of 40 CFR 124.19.

Preliminary Decision

General: The Executive Director has made a preliminary decision that this proposed permit renewal, if issued, meets all the statutory and regulatory requirements.

Special: The proposed permit renewal does not authorize variances or alternatives to required standards.

This application has exceeded the specified processing timeframes due to TCEQ staff turnover, extended coordination with EPA staff on combustion issues, and extensive time required for applicant to respond to technical inquiries posed by TCEQ.

Additional Information

A. Technical information:

Sarah Schreier, Project Manager
Industrial & Hazardous Waste Permits Section
Waste Permits Division
Texas Commission on Environmental Quality
Mail Code MC 130
P. O. Box 13087
Austin, Texas 78711-3087
512/239-2335

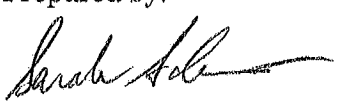
B. HSWA information:

Dr. Kishor Fruitwala, Section Chief
Facility Assessment Section
U.S. Environmental Protection Agency
Region VI-6PD-A
1445 Ross Avenue
Dallas, Texas 75202-2733
214/665-6792

C. Procedural and public hearing information:

Office of Public Interest Counsel
Texas Commission on Environmental Quality
Mail Code MC 103
P. O. Box 13087
Austin, Texas 78711-3087
512/239-6363

Prepared by:



Sarah Schreier
Project Manager
Industrial & Hazardous Waste Permits Section
Waste Permits Division

ATTACHMENT D

RTC

APPLICATION BY ASCEND PERFORMANCE MATERIALS TEXAS INC. FOR A TEN-YEAR RENEWAL AND MAJOR AMENDMENT OF IHW PERMIT & COMPLIANCE PLAN NO. 50189	§ § § § §	BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Executive Director's Response to Public Comment

The executive director of the Texas Commission on Environmental Quality (the Commission or TCEQ) files this Response to Public Comment (Response) on the application by Ascend Performance Materials Texas Inc. (Applicant), for a 10-year renewal and major amendment of Industrial Hazardous Waste (IHW) Permit No. 50189 (Application). As required by Title 30, Texas Administrative Code (30 TAC) Section (§) 55.156, before an application is approved the executive director prepares a response to all timely, relevant and material, or significant comments.

This response addresses all public comments received during the public comment period, whether or not withdrawn. If you need more information about this permit application or the industrial hazardous waste permitting process, please call the TCEQ Public Education Program at 1-800-687-4040. General information about the TCEQ can be found at our website at www.tceq.texas.gov.

Dick Tyson submitted public comments to the Office of the Chief Clerk before the close of the public comment period.

I. Background

A. Description of Facility

Ascend Performance Materials Texas Inc. operates a chemical manufacturing facility, which is authorized to manage on-site generated hazardous and non-hazardous Class 1 and Class 2 industrial solid waste on a non-commercial basis. The facility is located on approximately 2,514 acres of land near Alvin, in Brazoria County, Texas 77512. The facility is in the drainage area of Segment 1107 of the San Jacinto-Brazos Coastal Basin, North Latitude 29°15'21", West Longitude 95°12'37".

The Application requests a 10-year renewal of Permit No. 50189 which presently authorizes operation of the following existing units: two container storage areas, two tanks, one active landfill, two boilers, and one thermal desorption unit for the storage, processing, combustion, and disposal of hazardous and nonhazardous Class 1 and Class 2 industrial solid waste, and post closure care of one closed landfill and one closed surface impoundment. Additionally, the Application requests a major amendment to the permit including: authorization to construct and operate one proposed new landfill, and one proposed new container storage area for the storage, processing and disposal of hazardous and nonhazardous Class 1 and Class 2 industrial solid waste; a change in the status of the thermal desorption unit to "closure pending"; and updates and corrections in the permit and application. Specifically, the Application requests changes to: the Personnel Training Plan; the Inspection Plan and Schedule; the Contingency Plan; the Waste Analysis Plan and Tables; Engineering Reports; the Geology Report; the Groundwater Detection Monitoring Program Sampling and Analysis Plan; Closure and Post-closure Care Plans; and the Compliance Plan

Additionally, the Application requests a 10-year renewal of Compliance Plan No. 50189 which, requires and authorizes the Applicant to monitor the concentration of hazardous constituents in groundwater and remediate groundwater quality to specified standards. Compliance Plan No. 50189, if issued, would be issued in conjunction with Permit No. 50189.

B. Procedural Background

The Application was received on July 13, 2010, and declared administratively complete on July 30, 2010. The Notice of Receipt of Application and Intent to Obtain Permit/Compliance Plan Renewal and a Major Amendment was published on August 22, 2010, in the *Houston Chronicle* in Houston, Texas. The executive director completed the technical review of the Application and issued a preliminary decision and a draft permit on March 10, 2014. The Notice of Application and Preliminary Decision was published in the *Houston Chronicle* on April 3, 2014. The public comment period for the Application closed on May 19, 2014. The Application is available for review and

copying at the Alvin Community College Annex Library, Building A, 2nd Floor, located at 3110 Mustang Road, Alvin, Brazoria County, Texas, 77511.

The Application was declared administratively complete on or after September 1, 1999; therefore, the Application is subject to the procedural requirements adopted pursuant to House Bill 801, 76th Legislature, 1999.

C. Access to Rules, Laws, and Records

The following websites provide access to state and federal rules and regulations:

- Secretary of State website: www.sos.state.tx.us;
- TCEQ rules in Title 30 of the Texas Administrative Code: www.sos.state.tx.us/tac/ (select "View the current Texas Administrative Code" on the right, then "Title 30 Environmental Quality");
- Texas statutes: www.statutes.legis.state.tx.us;
- TCEQ website: www.tceq.texas.gov (for downloadable rules in Adobe PDF format, select "Rules" then "Download TCEQ Rules");
- Federal rules in Title 40 of the Code of Federal Regulations: www2.epa.gov/laws-regulations/regulations ; and
- Federal environmental laws: www2.epa.gov/laws-regulations/laws-and-executive-orders.

II. Comments and Responses

Groundwater and Surface water Quality

Comment 1:

Dick Tyson expressed concern that leakage and run-off from the hazardous waste management unit and container storage area may be transported off site resulting in contamination of water bodies downstream of the facility described as the bayou system which feeds Chocolate Bay consisting of Mustang Bayou, Chocolate Bayou, Halls Bayou, New Bayou, and others.

Dick Tyson also commented that leakage and run-off can cause contamination of groundwater, which also feeds the bayou.

Response 1:

Surface water quality

The Applicant is required to operate the facility in a manner that does not cause or contribute to environmental degradation or contaminate adjacent property in accordance with Title 40, Code of Federal Regulations (40 C. F. R.) Part 264, Subparts C and F, 30 TAC §335.4 and Final Draft Permit No. 50189, Sections III.A. and V.A.3.

The facility, proposed landfill and proposed container storage area are required to be designed, constructed, operated, and maintained so as to prevent contamination of drainage creeks and stormwater conveyances due to stormwater run-on and runoff, rainfall, storms, and washout of hazardous waste from a 100-year flood event in accordance with 40 C. F. R. §270.14(b)(11), 30 TAC §335.204(a) and (e), and Final Draft Permit No. 50189, Sections V.A.3–4, and V.G.4.a. and e. The Applicant is prohibited from discharging stormwater or leachate from landfills, contaminated stormwater from process areas, hazardous waste, or hazardous constituents into stormwater drains or creeks in accordance with 30 TAC §335.4 and Final Draft Permit No. 50189, Sections III.A. and V.A.3. Additionally, the Applicant is required to manage stormwater which drains into the active landfill cell as contaminated water and to dispose of this contaminated stormwater in an authorized manner in accordance with Final Draft Permit No. 50189, Section V.G.4.e. Further, the Applicant is required to remove spilled or leaked waste and accumulated precipitation from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system in accordance with 40 C. F. R.§§264.175(b)(5), 270.15(a)(5) and Final Draft Permit No. 50189, Provision V.B.3. Finally, if contamination or evidence of contamination is detected in stormwater drains, creeks or bayous the Applicant would be subject to reporting cleanup and corrective action requirements under the Compliance Plan and may be subject to enforcement in accordance with Final Draft Permit No. 50189, Provisions XI.A.6 and XI.E.

The Application Engineering Report includes information on the design, construction, and operation of waste management units at the facility (Application, Part B, Section V, and Attachments V.1–V.10). The Application states that perimeter dikes and drainage channels will surround the proposed landfill to prevent stormwater run-on and runoff and to prevent washout of hazardous waste from landfill cells. The Application indicates that the perimeter dikes are designed to be a minimum of 5 feet higher than the expected water levels during a 100-year flood event (Application, Part B, Section V.G, Attachment V.8). Additionally, the Application states that a temporary roof structure will prevent stormwater from entering the active area of the landfill cell. (Application, Part B, Section V.G, Attachment V.8).

The Application further states that the proposed container storage area unit will be surrounded by a 1.75 ft. high containment wall or a wall with an entry ramp, that the containment wall is designed to be 6 inches higher than the expected water levels during a 100 year flood event and that unit management practices are intended to prevent overflow of the containment system. (Application, Part B, Section V.B, Attachment V.3). Finally, the Application states that if precipitation enters the proposed container storage area containment structure during a 100 year flood event, that the weight and configuration of the tanks will prevent the tanks from floating. (Application, Part B, Section V.B, Attachment V.3).

The executive director has evaluated the Application and determined that the Application satisfies the regulatory requirements designed to protect surface water quality.

Groundwater quality

The Applicant is required to operate the facility in a manner that does not cause or contribute to environmental degradation or contaminate adjacent property in accordance with 40 C. F. R. Part 264, Subparts C and F, 30 TAC §335.4 and Final Draft Permit No. 50189, Section III.A. The facility, proposed landfill and proposed container storage area are required to be located, designed, constructed, operated and maintained

so as to prevent contamination of the groundwater in accordance with 30 TAC §335.204 (a) and (e), and Final Draft Permit No. 50189, Sections V.B.3 and V.G.3–5.

The location of the proposed container storage area is required to meet the minimum location standards in 30 TAC §335.204(a) which, among other criteria:

1) prohibit location of a storage or processing facility on the recharge zone of a sole-source aquifer unless secondary containment is provided to preclude migration to groundwater from spills, leaks or discharges;

2) prohibit location of a storage or processing facility in areas overlying regional aquifers unless

a) the regional aquifer is separated from the facility by a minimum of ten feet of material with a hydraulic conductivity toward the aquifer not greater than 10^{-7} centimeters per second (cm/sec), or

b) a thicker interval of more permeable material which provides equivalent or greater retardation to pollutant migration or secondary containment is provided to preclude migration to groundwater from spills, leaks or discharges; and

3) prohibit location of a storage or processing facility in areas where soil unit(s) within five feet of the containment structure have a Unified Soil Classification of GW, GP, GM, GC, SW, SP, or SM, or a hydraulic conductivity greater than 10^{-5} cm/sec unless

a) secondary containment is provided to preclude migration to groundwater or surface water from spills, leaks or discharges or

b) the soil unit is not sufficiently thick and laterally continuous to provide a significant pathway for waste migration.

Similarly, the proposed landfill site is required to meet the minimum location standards of 30 TAC §335.204(e), which, among other criteria:

1) prohibit locating a landfill on the recharge zone of a sole-source aquifer;

2) prohibit locating a landfill in areas overlying regional aquifers unless

a) it is in an area where the average annual evaporation exceeds average annual rainfall by more than 40 inches and the depth to the regional aquifer is greater than 100 feet from the base of the containment structure, or

b) the regional aquifer is separated from the base of the containment structure by a minimum of ten feet of material with a hydraulic conductivity toward the aquifer not greater than 10^{-7} cm/sec or a thicker interval of more permeable material which provides equivalent or greater retardation to pollutant migration; and

3) prohibit locating a landfill in areas where soil unit(s) within five feet of the containment structure have a Unified Soil Classification of GW, GP, GM, GC, SW, SP, or SM, or a hydraulic conductivity greater than 10^{-5} cm/sec unless

a) it is in an area where the average annual evaporation exceeds average annual rainfall by more than 40 inches, or

b) the soil unit is not sufficiently thick and laterally continuous to provide a significant pathway for waste migration.

Additionally, a container storage area unit that will contain free liquids is required to have a containment system free of cracks or gaps and sufficiently impervious to contain leaks, spills and accumulated precipitation until the collected material is detected and removed or that is sloped or otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids with sufficient capacity to contain 10% of the volume of containers or the volume of the largest container, whichever is greater, and to prevent run-on unless the collection system has sufficient excess capacity, in addition to that required for the volume of waste to be stored, to contain any run-on which might enter the containment system in accordance with 40 C. F. R. §264.175. The containment system is required to be constructed, operated and maintained in accordance with the Application and must

meet the requirements of 40 C. F. R. §264.175 in accordance with Final Draft Permit No. 50189, Provision V.B.3.

In the event of spills, releases or discharge of waste the Applicant is required, at a minimum, to notify the TCEQ and take any prompt response including clean up required in accordance with 30 TAC §305.145 and Final Draft Permit No. 50189, Sections II.B. 5. and III.E. Additionally, spilled or leaked waste and accumulated precipitation is required to be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system in accordance with 40 C. F. R. §264.175. If off-site contamination is detected, the Applicant is required to immediately notify the TCEQ, conduct additional sampling and/or monitoring and address any potential contamination through corrective action in accordance with Final Draft Permit No. 50189, Sections XI.D.1 and XI.E.1.b.

The Applicant is required to construct and operate the landfill in accordance with specific requirements for the design, construction, quality assurance and quality control during construction, and operation, inspection and maintenance of the landfill (Final Draft Permit No. 50189, Section V.G). The proposed landfill cells are required to be designed, constructed, installed and operated with a liner system to prevent any migration of waste out of the landfill to adjacent subsurface, soil or groundwater or surface water at any time during the active life of the landfill, which includes the closure period, in accordance with 40 C. F. R. §§264.300–317 and 30 TAC §§335.173–176. Additionally, the operator of the proposed landfill is required to prevent disposal of waste containing free liquids and waste which would be likely to damage the liner system and includes operational and monitoring requirements for the leachate collection and leak detection systems in accordance with 40 C. F. R. §§264.300–317 30 and TAC §§335.173–176.

The owner or operator of a landfill that received hazardous waste after July 26, 1982, is required to monitor groundwater at the facility for purposes of detecting, characterizing, and responding to releases to the uppermost aquifer in accordance with

30 TAC §335.156. Additionally, the Applicant is required to 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 in accordance with Final Draft Permit No. 50189, Section VI.A. Final Draft Permit No. 50189, Tables VI.B.3.b and VI.B.3.c identify specific wells and parameters to be monitored at the facility. Should analysis of groundwater monitoring results indicate that a release has occurred from the landfill, the Applicant is required by Final Draft Permit No. 50189, Provision VI.E., to submit revisions to Section XI of the Permit initiating a Compliance Monitoring Program and/or a Corrective Action Program in accordance with the requirements of 30 TAC §§335.164–166.

The siting criteria are addressed in the Application Site Selection Report. (Application, Part B, Section II, and Attachment II.1). The Application states that the facility is not in the recharge zone of the nearest sole-source aquifer. (Application, Part B, Section II and Attachment II.1). The Application also states that the facility's hazardous waste management units have been designed and/or constructed with secondary containment or liners and leachate collection systems designed to prevent the release of hazardous constituents to the groundwater and that the facility's hazardous waste management units are separated from the uppermost groundwater bearing unit by a clay layer at least ten feet thick in accordance with 30 TAC §335.204(e)(4). (Application, Part B, Section II, and Attachment II.1). The Application further states that none of the stratigraphic units underlying the facility's landfill units are classified as gravel soils (i.e. USCS designations of GW, GP, GM, or GC). (Application, Part B, Section II, and Attachment II.1). Finally, the Application states that land based units are constructed or designed with at least a 5-ft separation between the base of the waste and the shallowest unit having a USCS classification of SM or SC in accordance with 30 TAC §305.204(e)(5). (Application, Part B, Section II, and Attachment II.1).

The Application describes the design, construction, and operation of the proposed container storage area. (Application, Part B, Section V.B, Attachment V.3). The Application states that the proposed container storage area unit will be used for the

storage of containerized waste containing free liquids. (Application, Part B, Section V.B, Attachment V.3). The Application states that containers will be placed on a reinforced concrete base which: will be free of cracks or gaps and sufficiently impervious to contain leaks, spills, and accumulated precipitation until the fluids are removed; will be sloped to drain to a sump, facilitating the removal of precipitation and other fluids; and will be surrounded by a dike wall to prevent run-on. (Application, Part B, Section V.B, Attachment V.3). The Application also states that the containment area will have a capacity of 34,650 cubic feet and indicates that this is sufficient capacity to contain the volume of 10% of the waste containers present plus the volume of a 25-year, 24-hr rainfall event. (Application, Part B, Section V.B, Attachment V.3). The Application includes drawings and details depicting construction and maintenance of the containment systems for the container storage area units. (Application, Part B, Section V.B, Attachment V.3).

The Engineering Report describes the design, construction, and operation of the proposed new landfill. (Application, Part B, Section V.G, and Attachment V.8). The Application states that the proposed new landfill has been designed and will be constructed and operated in accordance with the Minimum Technological Requirements of 40 C. F. R. §§264.300–317 and 30 TAC §§335.173–176. (Application, Part B, Section V.G, Attachment V.8). The Application landfill specifications depict six landfill cells. (Application, Part B, Section V.G, Attachment V.8). The Application describes the major components of each landfill cell to include a double liner, primary and secondary leachate collection systems and a protective surface cover installed at the time of cell completion. (Application, Part B, Section V.G, Attachment V.8). The Application Construction Quality Assurance Plan details the tests and inspections to be performed during installation of the liner and leachate collection systems. (Application, Part B, Section V.G, Attachment V.8, Appendix V.8.1).

The Application states that the Waste Analysis Plan has been prepared to document how the Applicant will analyze waste and debris to be managed in the permitted hazardous waste management units. (Application, Waste Analysis Plan, Part

B, Section IV.D, and Attachment IV.1). The Application further states that all of the information required by state and federal regulations and guidance, concerning waste management, is addressed in the Waste Analysis Plan. (Application, Waste Analysis Plan, Part B, Section IV.D, and Attachment IV.1).

The Application Engineering Report describes landfill operating procedures including inspection and monitoring of the leachate collection and leak detection systems on a weekly basis in accordance with 40 C. F. R. §264.303. (Application, Part B, Section V.G, Attachment V.8). The Application states that accumulated fluids will be removed by vacuum truck, that the fluid operating level will be maintained below a level that would exert 1 ft. of hydrostatic head on the liner and that fluid production levels within the leak detection system will be monitored and compared to the Action Leakage Rate as defined in 40 C. F. R. §264.302. (Application, Part B, Section V.G, Attachment V.8). The Application also states that if the Action Leakage Rate is exceeded, that the facility will implement the Response Action Plan in accordance with 40 C. F. R. §264.304. (Application, Part B, Section, Attachment V.8).

The Application contains monitoring well construction and location details for the proposed new landfill's monitoring well network. (Application, Part B, Section VI.B.3, and Attachments VI.5 and VI.6). The Application identifies the wells and parameters to be monitored, and describes the statistical procedure to be used in determining whether there is evidence of a release from the landfill. (Application, Part B, Section VI.B.3, and Attachments VI.5 and VI.6).

The executive director has evaluated the Application and determined that the Application satisfies the regulatory requirements designed to protect groundwater quality.

Public Meeting

Comment 2:

Dick Tyson requested that a public meeting be held for the Application.

Response 2:

Public meeting requests are processed in accordance with 30 TAC §55.154. The executive director has determined that a public meeting will not be held because the enumerated factors requiring a public meeting to be held have not been met in accordance with 30 TAC §55.154(c).

Recommend Denial of Major Amendment

Comment 3:

Dick Tyson recommended denial of the major amendment to the permit.

Response 3:

The TCEQ's decision to approve or deny an application is made in accordance with state and federal administrative and technical requirements including consideration of the Applicant's compliance history. An application may be denied if the application fails to meet the administrative or technical requirements or if the applicant has a poor compliance history in accordance with Texas Water Code §5.754(i) and 30 TAC, Chapter 60. The executive director has made a preliminary decision that the Application complies with TCEQ rules.

Request for Contested Case Hearing

Comment 4:

Dick Tyson requested that a contested case hearing be held to consider the Application.

Response 4: The commission will consider all timely filed requests for a contested case hearing in accordance with 30 TAC §§55.200–211. Dick Tyson's request for a contested case hearing was filed prior to the filing deadline and therefore, is considered to be a timely filed request. The TCEQ promulgated rules regarding public participation in the environmental permitting process in accordance with Texas Water Code §§5.551–557. The State Office of Administrative Hearings conducts contested case hearings on TCEQ environmental permit applications in accordance with TCEQ rules, SOAH rules, the Texas Rules of Civil Procedure and state law.

III. Changes Made to the Final Draft Permit in Response to Comments

No changes were made to the Final Draft Permit in response to public comments received.

Respectfully submitted,

Texas Commission on Environmental Quality

Richard Hyde P.E.
Executive Director

Robert Martinez, Director
Environmental Law Division

Diane Goss

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REPRESENTING THE EXECUTIVE
DIRECTOR OF THE TEXAS COMMISSION
ON ENVIRONMENTAL QUALITY

Certificate of Service

I certify that on July 17, 2014 the Executive Director's Response to Public Comments for Permit No. 50189 was filed with the Texas Commission on Environmental Quality Office of the Chief Clerk.

Diane Goss

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ATTACHMENT E

FINAL DRAFT PERMIT
PART 1

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 361and Chapter 26 of the Texas Water Code

Hazardous Waste Permit No. 50189
EPA ID. No. TX001700806
ISWR No. 30138

This permit supersedes and replaces Hazardous Waste Permit No. 50189-000 and Compliance Plan No. 50189-000 Issued January 05, 2001

Name of Permittee:	Ascend Performance Materials Texas Inc. FM 2917 Alvin, Texas 77512
Site Owner:	Ascend Performance Materials Texas Inc. FM 2917, P.O. Box 711 Alvin, Texas 77512-0711
Registered Agent for Service:	Corporation Service Company dba CSC-Lawyers Incorporating Service Co. 701 Brazos Street, Suite 1050 Austin, Texas 78701
Classification of Site:	Noncommercial Hazardous and Nonhazardous Class 1 and Class 2 industrial solid waste on-site storage, processing, and disposal 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. This permit was originally issued on September 30, 1987. This permit was renewed on January 5, 2001.

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:

For the Commission

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CP B Public Participation in HSWA Corrective Action

CP 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
AOG – Absorber Overhead Gas
APA – Affected Property Assessment
APAR – Affected Property Assessment Report
APCD - Air Pollution Control Device
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
AWFCO - Automatic Waste Feed Cutoff
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
CO - Carbon Monoxide
COC – Constituent(s) of Concern; Chemical(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
HCN - Hydrogen Cyanide
HSWA – Hazardous and Solid Waste Amendments of 1984
ICM – Interim Corrective Measures
IWPF – Injection Well Pretreatment Facility
LDR – Land Disposal Restrictions
MDL – Method Detection Limit
MQL – 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
RCRA – Resource Conservation and Recovery Act
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

I. Facility Description

A. Size and Location of Site

A permit is issued to Ascend Performance Materials Texas Inc., to operate a hazardous waste processing, storage, and disposal facility located on FM 2917 approximately 11 miles southeast of the city of Alvin on approximately 2,514 acres of land, in Brazoria County, Texas, and within the drainage area of Segment 1107 of the San Jacinto-Brazos Coastal Basin (North Latitude 29°15'21", West Longitude 95°12'37"). The legal description of the facility submitted in Permit No. 50189 Application dated July 8, 2010, and revised on January 10, 2012, February 16, 2012, March 30, 2012, February 21, 2013, March 22, 2013, May 24, 2013 and November 5, 2013 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 July 8, 2010, and revised on January 10, 2012, February 16, 2012, March 30, 2012, February 21, 2013, March 22, 2013, May 24, 2013 and November 5, 2013, the Application Elements listed in "Attachment C", which are hereby approved subject to the terms of this permit and any other orders of the Texas Commission on Environmental Quality (TCEQ).

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 Permit 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.

Instantaneous (as used in Permit Section V and related tables) – Value at any time or one-minute average value.

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]:

a. 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. 50189 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. 50189."

b. 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.

c. 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 (Reserved)

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

    If the Executive Director determines that there is a significant change at the facility that poses a significant risk to public health or the environment, he will initiate a site specific risk assessment and may initiate an amendment to the permit to adjust limits based on that assessment. 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.

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)]

    e. 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)]

f. 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 1 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 those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, 1987 (EPA SW-846), as revised; Standard Methods for the Examination of Water and Wastewater, Eighteenth Edition, 1992, and 18th Edition supplement, 1994, or current adopted edition; RCRA Groundwater Monitoring: Draft Technical Guidance, 1992, OSWER Directive 9950.1, or an equivalent method;, as specified in the Waste Analysis Plan, Section IV.D 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.

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 Small Business and 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 (Reserved)
12. Unmanifested Waste Report (Reserved)
13. Monthly Summary (Reserved)

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: Additional Conditions for Hazardous and Industrial Solid Waste Storage, Processing and Disposal Permits;

h. 30 TAC Chapter 305, Subchapter Q: Permits for Boilers and Industrial Furnaces Burning Hazardous Waste;

i. 30 TAC Chapter 335, Subchapter A, Industrial Solid Waste and Municipal Hazardous Waste in General;

j. 30 TAC Chapter 335, Subchapter B, Hazardous Waste Management General Provisions;

k. 30 TAC Section 335.152, Standards;

l. 30 TAC Sections 335.153 - 335.155 (regarding reporting of emergency situations and additional reports required);

m. 30 TAC Sections 335.156 - 335.167 (regarding applicability of groundwater monitoring programs and corrective action requirements);

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 Section 335.221 (regarding hazardous waste burned for energy recovery);

r. 30 TAC Sections 335.325, 335.328 and 335.329 (regarding waste management fee assessment, fee payment, and records and reports);

s. 30 TAC Chapter 335, Subchapter Q, Pollution Prevention: Source Reduction and Waste Minimization; and

t. 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, 266 Subpart H, and Part 268, adopted by reference by 30 TAC Section 335.152, 30 TAC Section 335.221(a), 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;

n. 40 CFR Part 266 Subpart H -- Hazardous Waste Burned in Boilers and Industrial Furnaces; and

o. 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 a twenty-four (24) hour surveillance system which continuously monitors and controls entry onto the active portion of the facility; or the permittee shall provide and maintain an artificial or natural barrier which completely surrounds the active waste management portions 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 portions of the facility and along the natural and/or artificial barriers in sufficient numbers to be seen from any approach to those portions 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".

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.

4. 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. If wash water is generated, it shall be collected and disposed of in accordance with Provision III.E.3. Solid waste residues generated by decontamination shall be managed as industrial or hazardous wastes.

5. 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 their 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 numbers 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

Radioactive Materials License Requirements

The permittee shall comply with all applicable requirements of Texas Commission on Environmental Quality license(s) for managing mixed radioactive and hazardous wastes at the facility.

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.

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

   The permittee may not receive hazardous or non-hazardous waste from off-site sources.

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 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 CFR Part 173;

   d. Dioxin-containing wastes, identified by EPA as F020, F021, F022, F023, F026, and F027 wastes in 40 CFR 261.31;

   e. Ignitable compressed gases;

   f. Garbage as defined in 30 TAC Section 330.3(56);

   g. Municipal Solid Waste as defined in 30 TAC Section 330.3(88);

   h. Putrescible Waste as defined in 30 TAC Section 330.3(119); or

   i. Special Waste from Health-Care Related Facilities subject to 25 TAC Part 1 or 30 TAC Chapter 330.

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;

   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.

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.

3. The permittee shall test a sufficient number of representative waste samples 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 - or the most current version) as described in EPA SW-846.

4. If the sampling required in Provision IV.C.3. indicates that a waste contains free liquids, the waste shall be treated (i.e., stabilized) prior to landfilling using a treatment technology that is based on chemical stabilization and 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, the permittee shall demonstrate, based on the procedures described in the Waste Analysis Plan (Permit Section IV.A.), that the stabilized waste will not release liquid after having been subjected to expected overburden loads.

5. Waste treated to meet the LDR standards shall be sampled and analyzed in accordance with 40 CFR Part 268 and the procedures described in the Waste Analysis Plan (Permit Section IV.A.) to ensure compliance with this permit. In addition, based on the procedures described in Provisions IV.C.3. and 4., the permittee shall demonstrate that the stabilization technology is based on chemical reaction acquired through the stabilization agent and it does not solely involve the use of a material that functions primarily as a sorbent.

   For chemical stabilization processes based solely on a pozzolanic reaction between the waste and an appropriate stabilization agent ratio, an unconfined compressive strength test shall be used to verify successful stabilization. Each sample taken in accordance with Provision IV.C.5 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 seven (7) days, the unconfined compressive strength of the specimen shall be determined using ASTM Test Method D-2166-66. Successful stabilization shall be considered to be achieved if the unconfined compressive strength is measured to be at least 50 pounds per square inch (psi).

   If the stabilization process used to achieve the LDR treatment standards is based on a chemical reaction other than pozzolanic reaction between the waste and stabilization agent, in lieu of the 50 psi unconfined compressive strength, other appropriate equivalent tests described in the Waste Analysis Plan (Permit Section IV.A.) may be used to demonstrate that successful stabilization has taken place.

V. Authorized Units and Operations

A. Authorized Units

1. The permittee is authorized to operate the facility units listed in "Attachment D" for storage, 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 listed in "Attachment D". References hereinafter in this permit to "TCEQ Permit Unit No.____" shall be to the facility units listed in "Attachment D". All authorized units must be clearly

identified as numbered in "Attachment D". 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) and as specified below:

   In the event of a 100-year flood, the permittee shall remove all hazardous waste, before flood waters can reach the facility, to a location where the wastes will not be vulnerable to the flood waters, as required by 40 CFR 264.18(b)(1)(i) and in accordance with the 100-year flood response procedures. The 100-year flood response procedures for hazardous waste management units are described in the approved Part B Permit Application, more specifically in the unit specific engineering reports contained in Section V and in Attachment II.1, incorporated into this permit through Permit Section I.B.

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 Engineering Reports referenced in Section V.B of the Part B Application identified in Permit Section I.B. At a minimum, the containment system must meet the requirements of 40 CFR 264.175.

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 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)]

3. The permittee shall prevent spills and overflows from the tank or containment system as per the requirements of 40 CFR 264.194(b).
4. 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.
5. 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.
6. 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.
7. 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

The surface impoundment unit and the wastes historically managed in it are shown in Table V.D.1 – Surface Impoundments. The permittee is authorized to conduct post closure care for the closed surface impoundment unit subject to the limitations contained herein.

E. Waste Piles (Reserved)

F. Land Treatment Units (Reserved)

G. Landfills

1. The permittee may dispose of a total volume fo 54,000 cubic yards of hazardous waste in permitted landfill unit No. 2 (Active Landfill) and 60,000 cubic yards of hazardous waste in permitted landfill unit No. 16 (New Landfill). The landfills shall meet the specifications listed in Table V.G.1 – Landfills. The permittee is authorized to operate permitted landfills No. 2 and No. 16 for waste disposal and permitted

landfill No. 1 (Closed Landfill) for post-closure care, 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 "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, respectively.

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 inches nor greater than 9 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 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 5,000 cubic yards of soil;

(5) Field density tests performed in accordance with ASTM D-1556, ASTM D-2167, ASTM D-2922, or an equivalent method, and moisture control tests performed in accordance with ASTM D-3017, ASTM D-4643, ASTM D-2216, ASTM D-4959, or an equivalent method, shall be performed on constructed soil liners 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 1,000 cubic yards of soil 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 1,000 cubic yards of soil 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 each 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 liners 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 nondestructively 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 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) determinations 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 20 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 Permit 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.

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 18 inches and compacted sufficiently to minimize settlement of the landfilled waste. All exposed hazardous waste subject to wind dispersal shall be covered by at least six (6) inches of soil immediately after placement in the landfill to minimize emissions of waste to the air, or otherwise managed to control wind dispersal of particulate matter;

c. Placement of an interim cover is not required since each cell of the landfill is closed separately and independently from the other cells. Wastes shall be placed no higher than three (3) feet below the crest of the cell perimeter dike, and sloped up at not less than two percent (2%) or more than five percent (5%) to a crown in the center. No portion of the final grade of the crowned waste shall be higher than the lowest elevation of the cell perimeter dike. When waste placement reaches the final grade specified in this provision in a cell, capping of the cell shall be initiated in accordance with Provisions VII.E.1 and VII.E.2.;

d. All collections and holding facilities (e.g., tanks or basins) associated with run-on and runoff 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; [30 TAC Section 335.173(i)]

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. Following closure, the amount of liquids removed from each leak detection system sump must be recorded as specified in Provisions VII.G.13 and VII.G.14;

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 Provision V.G.4.b; [30 TAC Section 335.173(j)]

k. Stabilization of Liquid Wastes

(1) The permittee shall not place liquids or waste containing free liquids, whether or not sorbents have been added (except lab waste in overpacked containers, as described in 40 CFR 264.316) 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) An absorbent is defined as a material that is capable of physically holding a liquid within pores or interstices by such physical forces as tension or capillary action. An adsorbent is defined as a material that is capable of physically adhering a liquid to its (the material's) surface(s) through molecular polar forces. The terms "absorbent" and "adsorbent" shall both be indicated whenever the term "sorbent" is used in this permit;

l. Stabilization of LDR Wastes

Appropriate stabilization methods shall be used for waste streams requiring treatment to meet the 40 CFR Part 268 treatment standards. Successful stabilization is said to be achieved if post-treatment analyses demonstrate that applicable treatment standards will be achieved in accordance with the land disposal restrictions of 40 CFR Part 268;

m. 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];

n. 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(e)]:

(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;

o. 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].

   a. 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 from 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. Following closure, the permittee shall conduct ALR determinations in accordance with Provision VII.G.15. The ALRs for the sumps in each landfill cell are given on Table V.G.1 - Landfills.

   b. 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

1. The boilers and their approved waste types are shown in Table V.I.1 - Boilers. The permittee is authorized to operate the boilers for processing subject to the limitations contained herein. The conditions and limitations of this subsection and its associated tables apply to each boiler unless otherwise noted.

2. Limitations on Wastes Burned

   a. The feed rate of total hazardous wastes and total pumpable hazardous wastes (Not applicable for Tier I or Tier I adjusted metals screening limits) shall not exceed the limitations set out in Table V.I.2 - Boiler Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems. [40 CFR 266.102(e)(2)(i)(A), 266.102(e)(4), and 266.102(e)(5)]

   b. The total feed rate of metals, ash, and chlorine shall not exceed the limitations set out in Table V.I.3 - Maximum Constituent Feed Rates, at any time. [40 CFR 266.102 (e)(4), 266.102(e)(3)(i), and 266.102(e)(5)]

   c. The hazardous waste feeds to the boilers shall not contain greater than 100 ppm of any organic hazardous constituent listed in 40 CFR Part 261 Appendix VIII, unless the constituent has a thermal stability Classification equal to or greater than hydrogen cyanide. Hydrogen cyanide was the principal organic hazardous constituent used in the trial burn test and has a thermal stability Class of 1. [40 CFR 266.102(e)(2)(i)(G)]

   d. Compliance with the ash and chlorine feed rate limits identified in Table V.I.3 - Maximum Constituent Feed Rates for each boiler shall be evaluated using both detected and non-detected analytical results for ash and chlorine in the feed

streams to the unit. Detections are analytical results equal to or greater than the statistically-derived Method Detection Limit (MDL) as adjusted to account for sample-specific characteristics and actions, including sample matrix, sample size, preparation or cleanup procedures performed, and any concentration or dilution of the sample by the laboratory. If ash or chlorine is not detected, the results shall be reported at the value equal to the MDL, adjusted as described above to reflect sample-specific characteristics and actions, and shall be flagged with a notation, such as "<" or "U", to indicate that the constituent was not detected in the sample. Feed rate calculations for ash and chlorine shall use the full value of the detected analytical results and the full value of the non-detected results. [30 TAC Section 305.127(2)]

3. Boiler Area Operating Conditions

   a. Compliance with the permit conditions specified in Provision V.I.2. of this permit will be generally regarded as compliance with the performance standards of 40 CFR 266.104 through 266.107, as adopted by reference in Provision II.C. However, any evidence that compliance with Provision V.I.2. is insufficient to ensure compliance with the referenced performance 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.I.1 - Boilers unless the following operating conditions are satisfied:

      (1) The unit meets the conditions specified in Table.V.I.2 – Boiler Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems. [40 CFR 266.102(e)(2)-(e)(5)]

      (2) The permittee maintains and operates an automatic waste feed cutoff system which shall activate under the conditions listed in Table V.I.2 - Boiler Permit Conditions, Monitoring and Automatic Waste Feed Cut-Off Systems. [40 CFR 266.102(e)(7)]

   c. The boilers must be operated in accordance with Provision V.I.3.b. at all times when hazardous waste remains in the unit(s). [40 CFR 266.102(e)(1)]

   d. 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 and other fuels fired into the boilers are within the physical and chemical composition limits specified in this permit. [40 CFR 266.102(b)(2)]

   e. A boiler shall cease burning hazardous wastes when changes in the combustion properties or feed rates of the hazardous waste, feedstocks, or other fuels, or changes in boiler design or operating conditions deviate from the limits specified herein. [40 CFR 266.102(e)(7)(iii)]

   f. No hazardous wastes may be fed to the boilers directly from a transport vehicle. The permittee may submit a permit amendment or modification application in accordance with the requirements of 30 TAC Section 305.62 or Section 305.69 requesting authorization to conduct direct transfer activities for consideration. [30 TAC Section 335.225]

g. The permittee shall ignore periods of time when one-minute values are not available for calculating the hourly rolling average. The permittee must calculate the hourly rolling average as the average of the available one-minute values for the parameter until enough one-minute values are available to calculate an hourly rolling average. The permittee may not begin a monitoring device calibration or cease monitoring a parameter in an attempt to avoid an automatic waste feed cutoff event. Subsequent to an automatic hazardous waste feed cutoff event, the permittee may not begin a monitoring device calibration or cease monitoring the cutoff parameter to allow restarting of the hourly rolling average calculation and hazardous waste feeding operations to the combustion unit. [30 TAC Section 305.127(2)]

h. If the carbon monoxide continuous emission monitoring system detects a response that results in a one-minute average at or above the 3,000 ppmv span limit while burning hazardous waste, the one-minute average must either be recorded as 10,000 ppmv and used in the calculation of the hourly rolling average or an automatic waste feed cutoff shall occur and the hazardous waste feed shall not be restarted until an hourly rolling average below 100 ppm is re-established with a minimum of sixty one-minute readings subsequent to the automatic waste feed cutoff. [30 TAC Section 305.127(2)]

4. Trial Burn Requirements (Reserved)

5. Short-term Boiler/Industrial Furnace Operating Conditions (Reserved)

6. Boiler 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 of 40 CFR 266.102, and 40 CFR 266.104 through 266.107 and for determining adequate operating conditions under 40 CFR 266.102(e) or 40 CFR Part 63, Subpart EEE. 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 the permit or upon request of the Executive Director, sampling and analysis of the exhaust emissions shall be conducted to verify compliance the emission limits in Table V.I.4 - Maximum Allowable Emission Rates and to ensure achievement of the performance standards 40 CFR 266.104(b) through 266.107 under normal operating conditions. Under normal operating conditions, each of the operating parameters specified in Table V.I.2 - Boiler 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. Based upon the similarity determination, Permit Unit Nos. 11 and 12 may be tested in an alternating fashion with regard to the five year testing frequency in lieu of testing each unit every five (5) years. The permittee shall include in the test plan a summary of the Food and Drug Administration (FDA) hydrogen cyanide stream analyses over the previous 12-month period documenting no significant changes in the stream have occurred in lieu of proposing to sample and analyze the hydrogen cyanide stream identified in Table IV.B. Conflicting parameters shall be identified in association with the targeted operating parameter ranges for the testing in the sampling plan. [40 CFR 266.102(e)(8)(i)(C)]

(1) The permittee shall submit an original and four 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 boilers shall be tested for emissions of carbon monoxide, particulate matter, and oxygen, the constituents listed in Table V.I.4 - Maximum Allowable Emission Rates, and other constituents as requested by the Executive Director.

(3) The operating parameters listed in Table V.I.2 - Boiler 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 four copies of the final sampling report shall be forwarded to the Executive Director within ninety (90) days after receipt of the sampling results.

7. Boiler Monitoring, Testing and Inspection Requirements

a. The permittee shall monitor and record the parameters listed in Table V.I.2 - Boiler Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems for Permit Unit Nos. 11 and 12. All monitors 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 and 266.102. [40 CFR 266.102(e)(8)]

b. Stack oxygen and carbon monoxide concentrations shall be measured using continuous emissions monitoring systems (CEMS). [40 CFR 266.102(e)(8)]

(1) The oxygen and carbon monoxide CEMS shall meet the installation, performance and equipment specifications in 40 CFR Part 266, Appendix IX, Section 2.1.

(2) Oxygen concentration shall be quantified and reported as percent by volume (%) on a dry basis. Carbon monoxide concentrations shall be quantified and reported as parts per million by volume (ppmv), corrected to 7% by volume oxygen, on a dry basis.

c. The permittee shall properly calibrate, maintain, and operate all CEMS and establish a quality assurance program to evaluate and monitor the CEMS performance in accordance with Appendix IX of 40 CFR Part 266. [40 CFR 266.102(e)(8)]

d. To verify operability, the waste feed cut-off system and associated alarms for the boilers must be tested at least once every seven (7) days when hazardous waste is being burned. In addition, a complete inspection and function test shall be performed on all system alarms and emergency control devices at least annually. [40 CFR 266.102(e)(8), 30 TAC Section 305.127]

(1) System testing will be accomplished by activating (i.e., closing) the waste feed cutoff valve 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" valve (i.e., remains in the closed position in event of failure), only the control panel circuits and associated alarms need testing each seven (7) day period. 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 actually closing the "fail safe" valve.

(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 valves and non-pumpable waste feed cutoff systems. However, the other components of the cutoff system still must be tested to ensure they are functioning properly.

e. The monitoring and inspection data collected in Provisions V.I.7.a.-d. shall be recorded and placed in the operating log as required by 40 CFR 266.102(e)(10). In addition to the specific requirements of that paragraph, the permittee shall also record:

(1) All occasions when waste is being fed to the boilers and the operating limits specified in Provision V.I.2. are exceeded;

(2) All occasions when the waste feed is cut off by the automatic waste feed cut-off system, including the date, time, and cause of the incident that triggered the cut-off; and

(3) All occasions when waste is being fed and fugitive emissions from the boilers are detected.

f. During an automatic waste feed cut-off, the permittee shall continue to monitor the operating parameters for which permit limits are established. [40 CFR 266.102(e)(7)]

g. For each set of ten exceedances of an emission standard or operating limit, while hazardous waste remains in the combustion chamber 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. The Executive Director of the TCEQ shall take appropriate action based on the results of the report. [40 CFR 266.102(e)(7)(ii)]

h. Except for an instrument during its calibration period, the permittee shall continuously record all monitoring data as required in Table V.I.2 – Boiler Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems. Waste may continue to be fed to the boiler/industrial furnace during CEMS calibration check periods not exceeding 20 minutes in duration. Each carbon monoxide and oxygen CEMS shall operate at a minimum of 90% uptime when wastes are being fed, based on a twenty-four (24) hour period of operation.

8. Indirect Risk Provisions

a. The feed rates of the constituents of concern shall not exceed the limitations set out in Table V.I.3 - Maximum Constituent Feed Rates.

b. Compliance with the hourly feed rate limits in Table V.I.3 - Maximum Constituent Feed Rates shall be determined using hourly rolling average feed rates.

c. Metals concentrations of the constituents of concern in Table V.I.3 - Maximum Constituent Feed Rates shall be determined according to the methods in the Waste Analysis Plan adopted by reference in Permit Section IV.A.

d. Compliance with the annual feed rate limits (i.e., tons/year) in Table V.I.3 - Maximum Constituent Feed Rates shall be determined by using the hourly rolling average feed rates for a distinct year beginning with the anniversary of permit issuance and continuing for one calendar year.

e. Compliance with the metals feed rate limits identified in Table V.I.3 - Maximum Constituent Feed Rates for each boiler shall be evaluated using both detected and non-detected analytical results for metals in the feed streams to the unit. Detections are analytical results equal to or greater than the statistically-derived MDL as adjusted to account for sample-specific characteristics and actions, including sample matrix, sample size, preparation or cleanup procedures performed, and any concentration or dilution of the sample by the laboratory. If a metal is not detected, the results shall be reported at the value equal to the MDL, adjusted as described above to reflect sample-specific characteristics and actions, and shall be flagged with a notation, such as "<" or "U", to indicate that the constituent was not detected in the sample.

Feed rate calculations for each metal shall use the full value of the detected analytical results and the full value of the non-detected results. The feed rates of metals shall be determined in accordance with 40 CFR 266.102(e)(6).

f. For Table V.I.3 - Maximum Constituent Feed Rates, total chromium detected will be assumed as hexavalent chromium unless the permittee demonstrates a defensible hexavalent chromium/total chromium ratio by conducting the appropriate stack emissions testing.

J. Drip Pads (Reserved)

K. Miscellaneous Units

A miscellaneous unit and its approved waste types are shown in Table V.K - Miscellaneous Units. The permittee is authorized to operate the miscellaneous unit for

closure activities only subject to the limitations contained in the permit application submittals referenced in Provision I.B. (Incorporated Application Materials). Final closure of the Thermal Desorption Unit (Permit Unit No. 10) shall be completed no later than November 30, 2014.

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 stratigraphic unit referred to as Stratum II, Upper Sand, in the upper unit of the Chicot Aquifer. The Detection Monitoring System shall yield groundwater samples from the uppermost aquifer that represents 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 units listed in Table VI.B.3.b - Unit Groundwater Detection Monitoring System and as authorized by Provision V.G. 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 each permitted unit that extends down into the uppermost aquifer/water bearing zone underlying 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 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 Wells are those wells that are unaffected by the operations of the unit. The Background Wells are depicted in Attachment E (Maps Showing Location of Monitoring and Recovery Wells) 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 E (Maps Showing Location of Monitoring and Recovery Wells) 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 Permit 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 F (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 F (Well Design and Construction Specifications). Detection monitoring wells and other selected groundwater wells used for potentiometric surface mapping will be surveyed in accordance with Attachment F requirements.

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 F (Well Design and Construction Specifications). The Detection Monitoring Wells shall be installed in accordance with the specifications outlined in Attachment F (Well Design and Construction Specifications).

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 F (Well Design and Construction Specifications).

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 Permit 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 F (Well Design and Construction Specifications).

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 Stratum II, Upper Sand, in the upper unit of the Chicot Aquifer. The Beaumont Formation and the upper Lissie Formation comprise the Upper Chicot Aquifer, extends from ground surface to approximately 200 feet below grade in the vicinity of the facility. The top of the uppermost aquifer/water-bearing zone extends from approximately 10 feet below ground surface (BGS) to approximately 60 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 does 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 areas listed in Provision VI.A.1. shall remain in the Detection Monitoring Program during the active life of the units 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, the permittee may submit a written proposal to the Executive Director to discontinue or amend the detection monitoring program for the specified unit. The proposal shall include a demonstration acceptable to the Executive Director that the amended monitoring program for the specified unit is protective of human health and the environment. The permittee shall continue the detection monitoring program as described in the permit documents until such a time as any proposed amendments are approved.

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 parameter listed in Table VI.B.3.c - Groundwater Detection Monitoring Parameters 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 Permit 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.

(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

a. 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.

b. The statistical procedure that shall be used to determine if an SSI has occurred over background values limits shall be nonparametric prediction interval statistical procedure with resample for the units identified in Provision VI.A.1.

To employ the selected statistical procedure listed above, the permittee is required to collect a sample from each unit's POC Wells during each sampling event. Since prediction limits are based on historic data from the Background Wells, additional sampling of the Background Wells is not required under this statistical procedure. An initial exceedance of the prediction limit for one or more of the monitoring parameters in a single well triggers a resampling of that well. If the resample for the same constituent(s) also exceeds the prediction limit, then an SSI is declared. To ensure that an independent sample is obtained, a minimum interval of one (1) month and a maximum interval of two (2) months between sampling and resampling collection episodes is allowed. Additional time for resampling beyond this specified period shall require prior TCEQ approval.

c. 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 at 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.

The Annual Groundwater Detection Monitoring Report shall be submitted to the TCEQ Industrial and Hazardous Waste Permits Section (MC 130) by March 1st of each year and shall be a separate document from the Biennial Report required in Provision II.B.7 and the SR/WM Annual Report required by Provision II.B.8.

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.

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. 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 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 or container storage 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, 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 landfill cell, 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, 30 TAC Section 350.32 (Texas Risk

Reduction Program (TRRP) Remedy Standard A) and 30 TAC Section 350.33 (TRRP, Remedy Standard B). 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 indicate wash water concentrations and/or soil concentrations are below the applicable critical Protective Concentration Level (PCL) for Remedy Standard A. 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 $2,177,600 (2011 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

      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 unit(s) identified as TCEQ Permit Unit Nos. 05, 08, 09, 10, 11, 12, 13 and 15 in accordance with the approved Closure Plans, 40 CFR Part 264, Subpart G, 40 CFR 264.178 (container storage), 264.197 (tanks), 264.601-602 (miscellaneous units), 266.102(e)(11) and 266.102(a)(2)(vii) (boilers & industrial furnaces), 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 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 thirty (30) 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 landfills identified as TCEQ Permit Unit Nos. 02 and 16 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 landfill cell using a final cover as follows:
   a. A minimum three (3) foot thick layer of compacted clay meeting the construction, material and compaction specifications of Provision V.G.3.b. This layer shall be sloped upwards from the perimeter of the landfill at greater than 2.0% and less than 5.0% to a crown in the center of each cell.
   b. A continuous layer of 40 mil thick, high density polyethylene (HDPE), flexible membrane shall be installed on the compacted clay-rich soil cover and shall be continuously joined by seaming to the primary liner geomembrane, thereby enclosing the cell contents. The installation of the geomembrane shall be in accordance with the applicable requirements of Provision V.G.3.c.
   c. The membrane shall be covered with a continuous protective geotextile layer and then a 1-foot thick sand drainage layer, topped with a second continuous layer of protective geotextile.
   d. A layer of uncompacted fertile topsoil not less than eighteen (18) inches thick shall be placed over the geotextile layer. The topsoil shall be seeded with a mixture of persistent native grasses to establish a self-sustaining vegetative cover.
   e. Drainage structures shall be constructed around the landfill cell perimeter, along the dikes, and, as necessary, in other parts of the facility to promote drainage, prevent ponding, minimize surface water infiltration into the landfill cell, and minimize erosion of the landfill cell cover and perimeter containment levee.
2. The permittee shall complete construction of each landfill cell cap in accordance with the permit application and the terms and conditions of this permit. After completion of 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, including tests performed on the interim cover, if any, for the landfill. 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. A scaled plan view and east-west and north-south cross-sections which accurately depict the areal boundaries and dimensions of the cover; surrounding

natural ground surface elevations; minimum, maximum, and representative elevations of the upper surface of the interim cover; minimum, maximum, and representative elevations of the upper surface of the final cover; and thickness, extent, and materials of component parts of the cover system.

b. For the compacted clay-rich soil, all tests required and at the frequency specified for constructed soil liners in Provision V.G.3.b. Soil moisture content determinations shall be performed on the interim cover during construction at a rate of at least one (1) a month and within 24 hours of installing the final cover.

c. For the HDPE liner:

All tests required as specified in Provision V.G.3.c.

d. For the sand drainage layer:

All tests required and at the frequency specified for the leachate collections drainage layer in Provision V.G.3.d.

e. 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.

3. The permittee shall install a permanent benchmark at each corner of all closed landfill cells at the site within six (6) months after closure.

4. The permittee shall install and maintain a permanent type of identification on all leachate riser pipes at the site denoting the landfill cell number as specified on "Attachment E" of this permit, and designation as primary or secondary leachate collection systems.

5. Within sixty (60) days of certification closure of each cell in the landfill, the permittee shall submit to the Executive Director documentation demonstrating compliance with 40 CFR 264.119, pertaining to deed recordation.

6. Within sixty (60) days of completion of closure of each landfill cell, the permittee shall submit to the Executive Director a closure certification report, as specified in Permit 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 Permit 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.

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 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 Permit Unit Nos. 1, 2, 3, and 16, as applicable, such that the cover promotes drainage, prevents ponding, minimizes surface water infiltration, and minimizes erosion of the cover. Any desiccation cracks, erosion, gullying, 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 Section XI (Compliance Plan) and Provision VI.A.1. of the permit.
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 (300 gallons/day/cell for the Active Landfill and 111 gallons/day/cell for the New Landfill) 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 $3,269,000 (2011 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.

   c. 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) dated February 19, 1987, 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 Permit Section XI.H. of this permit.

B. Corrective Action Obligations

Refer to Section XI of this permit.

C. Units Requiring Investigation

Refer to Section XI of this permit.

D. Variance from Investigation

Refer to Section XI of this permit.

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

Refer to Section XI of this permit.

F. Remedy Selection

Refer to Section XI of this permit.

G. Compliance Plan

The permittee shall follow Permit 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 Provision 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 Provision 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 water-bearing sands of the Beaumont and Lissie formations of the Chicot Aquifer. The Chicot Aquifer is the upper most unit of the Gulf Coast Aquifer.

   Language for both the Corrective Action Program (30 TAC Section 335.166) and the Compliance Monitoring Program (30 TAC Section 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 AOCs.

4. The Compliance Plan is specific to the SWMU and/or AOC listed in CP Table I (Item C) and depicted in 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 Permit 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 Permit 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 TCEQ unless otherwise specified. This Compliance Plan was developed based on the Compliance Plan Renewal Application dated July 9, 2010, and as revised dated February 6, 2012, which contained a Sampling and Analysis Plan dated December 31, 2009, and as revised dated January 30, 2012.

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 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 (Permit 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.J.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.
    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 (Permit 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 Permit 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 Permit 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 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.J.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 Table 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, 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 in Permit Unit 03 and SWMUs A, C, I, J, and 02 shall continue on the existing schedule. For Permit Unit 03, samples shall be collected on a semiannual basis during the first thirty (30) days of each first and third quarter. For SWMUs A, C, I, J, and 02, samples shall be collected on an annual basis during the first thirty (30) days of each first 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 POC, POE, and APOE well listed in CP Table V; and each AMP if applicable, CAO, and CAS well depicted in Attachment A shall be sampled and analyzed semiannually for Permit Unit 03 and annually for SWMUs A, C, I, J, and 02. The wells will be analyzed for the constituents of CP Table IIIA until the achievement of the GWPS in accordance with Provision XI.D.6, at which point background wells will also be sampled.

(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 wells in the Permit Unit 03 corrective action sampling program and annually for wells in the SWMUs A, C, I, J, and 02 corrective action sampling programs. These wells are designated in CP Table V and depicted in CP Attachment A.

(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 Permit 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

(2) An alternative statistical method proposed by the permittee and approved by the TCEQ. Any proposed alternative method must be appropriate with respect to distributional assumptions and must provide reasonable control of both false positive and false negative error rates.

c. Within thirty (30) days of an initial data evaluation that determines concentration limits have been exceeded in a well, pursuant to Provisions XI.F.4.a. or XI.F.4.b., the permittee may resample and repeat the analysis to verify concentration limits have been exceeded. If the second analysis indicates that the sample does not exceed the concentration limits, then the well shall be considered compliant with the concentration limits for the sampling event.

G. Response and Reporting

1. Corrective Action Monitoring for units specified in CP Table I, Items A, C, or D (if alternative corrective action requirements apply).

   a. If the permittee or the Executive Director determines that the Corrective Action Program required by this Compliance Plan no longer satisfies the requirements of 30 TAC Sections 335.166 or 335.167, the permittee must, within ninety (90) days of either the permittee's determination or Executive Director's notification, submit an application for a Compliance Plan modification or amendment to make any appropriate changes to the Corrective Action Program which will satisfy the regulations.

   b. If the Executive Director determines that the lateral or vertical extent of groundwater contamination is not delineated, the permittee must, within ninety (90) days of the date of the Executive Director's notification unless otherwise directed, initiate an investigation to determine the extent of the contamination based on the Practical Quantitation Limit (PQL), Method Quantitation Limit (MQL), or other applicable standard as required or approved by the Executive Director.

   c. This section applies only if POEs are defined in CP Table V and a GWPS is assigned at the POE; and attenuation action level (if applicable) is assigned to its respective attenuation monitoring point. If during two (2) consecutive sampling events the GWPS is exceeded at the POE, or the attenuation action level (if applicable) is exceeded at its respective attenuation monitoring point, then within ninety (90) days of completing the data evaluation of the second sampling event, the permittee must:

      (1) Install groundwater recovery wells or alternate Corrective Action System design to mitigate the downgradient migration of the contaminant plume; and/or

      (2) Reevaluate the criteria originally used to establish the GWPS, in accordance with Provision XI.D.4., and submit an application to modify or amend the Compliance Plan to address the GWPS exceedance; and/or reevaluate the criteria originally used to establish the attenuation action level and submit an analysis to the Executive Director for approval to request changes to the attenuation action level.

2. Compliance Monitoring for units specified in CP Table I, Item B

   a. Compliance with the GWPS for each POC (POE and APOE, if applicable) well of CP Table V 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 or exceed the concentration limits when directly compared to the concentration limits of CP Table IVA. If the permittee determines that any 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.J.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.J.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 AOCs 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.J.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 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 $991,000.00 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 12 Office in Houston, 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.

ATTACHMENT E

FINAL DRAFT PERMIT
PART 2

Table III.D – Inspection Schedule

Facility Unit(s) and Basic Elements	*Possible Error, Malfunction, or Deterioration*	*Frequency of Inspection*
Closed Landfill (Permit Unit 01)	• Access and Perimeter Roads: Impeded access to groundwater monitoring wells and cap • Signs: Missing or illegible • Final Cover: Erosion, burrows, settlement/subsidence, ponded water, deep-rooted plans growing on cap • Site Drainage: Perimeter ditches contain blockages, slope not routing run-off off cap • Groundwater Monitoring Wells: Damage to well caps, surface casings, protective pads, or guard posts; wells not secured, wells deteriorating (e.g., silting in) • Elevation Benchmarks: Settlement or subsidence of landfill cap	Semi-annually
	• Leachate Collection System: Evidence of excess leachate presence, evidence of malfunction	Monthly
Active Landfill (Permit Unit 02)	• Wind Dispersal Control: Deterioration, erosion • Run-On/Run-Off Control Systems: Deterioration, obstructions, erosion, slumping, animal burrows • Leachate Collection and Leak Detection Systems: Evidence of malfunction, amount of liquids removed greater than Action Leakage Rate (ALR).	Weekly and after storms (active cell only)
	• Cap: Deterioration, cracks, cave-in, ponding • Banks: Deterioration, cracks, cave-in • Leachate Collection and Leak Detection Systems: Evidence of malfunction, amount of liquids removed greater than ALR	Weekly *(closed cells only)*

Table III.D – Inspection Schedule (cont.)

Facility Unit(s) and Basic Elements	*Possible Error, Malfunction, or Deterioration*	*Frequency of Inspection*
Closed IWPF Surface Impoundments (Permit Unit 03)	• Access and Perimeter Roads: Impeded access to groundwater monitoring wells and cap • Security Fencing and Signs: Missing or illegible • Final Cover: Erosion, burrows, settlement/subsidence, ponded water, deep-rooted plans growing on cap • Site Drainage: Perimeter ditches contain blockages, slope not routing run-off off cap • Groundwater Monitoring Wells: damage to well caps, surface casings, protective pads, or guard posts; wells not secured, wells deteriorating (e.g., silting in) • Elevation Benchmarks: settlement or subsidence of landfill cap	Semi-annually
Indoor Container Storage Area (Permit Unit 05)	• Loading/Unloading Areas: Spills • Secondary Containment Area: Spills	Daily (during loading/unloading)
	• Storage Areas: Leaking containers • Containment: Deterioration • Containers: Deterioration, labels illegible	Weekly
IWPF Tanks (Permit Units 08 and 09)	• Overfill Control Equipment: Malfunction • Above Ground Tank Exterior: Corrosion, leaks • Data Gathered from Monitoring and Leak Detection Equipment: tank system malfunction • Tank Construction Materials and Area Immediately Surrounding Externally Accessible Portion of Tank System: Corrosion, erosion or signs of release (e.g., wet spots) • Secondary Containment: Cracks, corrosion, deterioration • Secondary Containment Area: Accumulated precipitation • Piping and Valves: Leaks, corrosion	Daily
	• Source of Impressed Current for Cathodic Protection System: Malfunction, deterioration.	Bi-monthly (every other month)
	• Cathodic Protection System: Malfunction, deterioration	Annually
Thermal Desorption Unit (Permit Unit 10)	• Temperature Controls and Sensors: Operable, accurate • Alarms: Operable, accurate	At start-up when unit is on-site

Table III.D – Inspection Schedule (cont.)

Facility Unit(s) and Basic Elements	*Possible Error, Malfunction, or Deterioration*	*Frequency of Inspection*
	• Base, Liner, Secondary Containment Structure: Cracks, damage, tears, spills • Dryer, Connections: Deterioration, leaks, malfunction	Daily when unit is on-site
	• Monitoring Equipment: Inoperable, broken • Safety and Emergency Equipment: Missing, inadequate • Fire Extinguishers: Not charged, expired	Weekly when unit is on-site
AN Boilers 30H5 and 31H4 (Permit Units 11 and 12)	• Boilers, Pumps, Valves, and Piping: Presence of leaks, spills, fugitive emissions, evidence of tampering • CO and O_2 CEMS: Calibration check and system audit	Daily
	• Automatic Waste Feed Cutoff and Alarms: Operation malfunction	Weekly (when burning hazardous waste)
	• CO and O_2 CEMS: Calibration error test	Quarterly
	• CO and O_2 CEMS: Calibration drift test, response time test, and alternative relative accuracy test per 40 CFR Part 266, Appendix IX, Sections 2.1.9, 2.1.10.1, 2.1.4.2, and 2.1.4.5	Annual
Outdoor Container Storage Area (Permit Unit 13)	• Loading/Unloading Areas: Spills • Secondary Containment Area: Spills • Secondary Containment Area: Accumulated precipitation	Daily (during loading/unloading)
	• Storage Areas: Leaking containers • Containers: Deterioration, labels illegible	Weekly
PROPOSED IWPF Container Storage Area (Permit Unit 15; to be built)	• Loading/Unloading Areas: Spills • Secondary Containment Area: Spills • Secondary Containment Area: Accumulated precipitation	Daily
	• Storage Areas: Leaks, seeps, wet spots • Containment: Integrity • Containers: Deterioration, labels illegible	Weekly

Table III.D – Inspection Schedule (cont.)

Facility Unit(s) and Basic Elements	*Possible Error, Malfunction, or Deterioration*	*Frequency of Inspection*
PROPOSED New Landfill (Permit Unit 16; to be built)	• Wind Dispersal Control: Deterioration, erosion • Run-On/Run-Off Control Systems: Deterioration, obstructions, erosion, slumping, animal burrows • Leachate Collection and Leak Detection Systems: Evidence of leachate presence, evidence of malfunction, amount of liquids removed greater than Action Leakage Rate (ALR)	Weekly and after storms (active cell only)
	• Cap: Deterioration, cracks, cave-in, ponding • Banks: Deterioration, cracks, cave-in • Leachate Collection and Leak Detection Systems: Evidence of malfunction, amount of liquids removed greater than ALR	Weekly *(closed cells only)*
Emergency Response/Safety Equipment	• Alarm Systems: Power failure, verified • Emergency Eyewash/Showers: Water pressure, leakage, drainage	Monthly
	• Fire Protection Equipment: Fire extinguishers.	Monthly
	• Spill Control Equipment, Stores Location: Absorbent socks/snakes, absorbent pads, and absorbent booms.	• Consumables are checked at least monthly and after each use • Equipment checked per manufacturer's specifications
	• Spill Control Equipment, Manufacturing and Process Areas (as needed for each area): Booms, absorbent material (kitty litter), absorbent socks/snakes, spill kits (comprised of Overpacks, plastic and metals drums, spill booms and pads, soda ash, vermiculite and kitty litter), soda ash (for neutralization), vacuum trucks, HAZMAT suits, PPE, caustic (for neutralization), water supply for removing neutralization agents.	• Consumables are checked at least monthly and after each use • Equipment checked per manufacturer's specifications
Emergency Response/Safety Equipment (continued)	• Decontamination Equipment: HAZMAT decon stations (comprised of water, scrubbers, collection vessels/buckets), soda ash/caustic for neutralization, soap, water supply, steam source, and high pressure water.	• Consumables are checked at least monthly and after each use • Equipment checked per manufacturer's specifications
	• Self-Contained Breathing Apparatus: Tank empty, delivery system, quantity	Monthly/after use
	• Respirators/Gas Masks: Seals, valves, appropriate quantity and sizes	Annually, after use

Table III.D – Inspection Schedule (cont.)

Facility Unit(s) and Basic Elements	*Possible Error, Malfunction, or Deterioration*	*Frequency of Inspection*
Security	• Fence: Breach, damage • Gates: Damage, operable • Warning Signs: Deterioration, missing, illegible	Monthly

Table IV.B - Wastes Managed In Permitted Units

No.	Waste	EPA Waste Codes	TCEQ Waste Codes
1	Contaminated Soils	-	3191
2	Concrete, Brick, Construction and Demolition Debris	-	3191
3	General Plant Trash	-	3191
4	Process Equipment Maintenance Debris	-	3191
5	Construction Debris, Concrete, Lumber	-	3192
6	Sandblasting Media	-	3892
7	Catalyst Sludge	K011	609H
8	Process Decon Wastewaters	-	1191
9	Nonhazardous Plant Wastewaters	-	1191
10	AN Wastewater Column Bottoms	K011	102H
11	AN Stripper Column Bottoms	K013	102H
12	AN Stripper Column Overheads	D001, D003, D018	212H
13	HCN By-Product Stream	D001, D003, D018, P063	212H
14	AN Rerun Column Bottoms (RRCB)	D001, D010, D038	219H
15	Process Residues and Misc. Solids	-	4031
16	Mfg. Process Residue	D001, D002, D003, D004, D005, D007, D018, D038, F003, F039, P003, P030, P063, P101, P106, U002, U003, U009, U019, U080, U122, U123, U135, U161, U188, U220	403H
17	Spent Organic Catalysts	-	6971
18	Misc. Plant Organic Liquids	D001, D002, D003, D018, D038, F003, P063, P101	219H
19	Spent Carbon	-	4041
20	Spent Carbon	D002, D018, D038, F039, K011, K013, U053, U188	404H

Table IV.B - Wastes Managed In Permitted Units (cont.)

No.	Waste	EPA Waste Codes	TCEQ Waste Codes
21	Asbestos Solids and Debris	U122	311H
22	Contaminated Soils	D002, D003, D018, D035, F039, K011, K013, K022, P101, U018, U019, U122, U134, U154, U161, U188, U220	301H
23	Contaminated Insulation, Concrete, Debris, and Other Solids	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D018, D019, D038, F002, F003, F005, F039, K011, K013, P003, P063, P101, P106, U002, U003, U009, U019, U022, U053, U080, U122, U123, U134, U135, U154, U161, U188, U196, U220	319H
24	Lab Packs	-	0021
25	AN BIF Units Refractory Brick	P063	303H
26	Spill Cleanup Debris	-	3191
27	Mfg. Unit Wastewaters	D001, D002, D003, D004, D005, D007, D009, D018, D019, D038, F003, F039, K011, K013, P003, P030, P063, P101, P106, U002, U003, U009, U019, U053, U080, U122, U123, U134, U135, U154, U161, U188, U220	119H
28	Misc. Sludges	-	6091
29	Biological Waste Treatment Sludge	-	3912
30	Soil from Injection Well Drilling	-	3192

Table IV.B - Wastes Managed In Permitted Units (cont.)

No.	Waste	EPA Waste Codes	TCEQ Waste Codes
31	Industrial Process Sludge	D001, D002, D003, D004, D005, D007, D009, D018, D019, D038, F002, F003, F005, F039, K011, K013, P003, P016, P030, P063, P098, P101, P105, P106, U001, U002, U003, U004, U008, U009, U019, U022, U053, U080, U122, U123, U134, U135, U154, U161, U188, U196, U220	609H
32	Contaminated Oil/Water Emulsion	D001, D018, F039, K011, K013, U053, U122, U154, U158, U188, U220	205H
33	336 Tanks Wastewater	D018, F003, F039, K011, K013, P063, P101, U002, U009, U019, U053, U122, U134, U154, U161, U188, U220	114H
34	Wastewater from Settling Tanks	-	1141
35	Spent Solid Filters or Absorbents	D018, F039, K011, K013, P063, U009, U053, U188	310H
36	Industrial Process Wastewater	D001, D002, D003, D004, D005, D007, D009, D018, D019, D038, F002, F003, F005, F039, K011, K013, P003, P063, P101, P106, U002, U003, U009, U019, U022, U053, U080, U122, U123, U134, U135, U154, U161, U188, U196, U220	102H
37	Wastewater from 336 tanks	-	1141
38	Spent Solvents	D001, D011, D018, F002, F003, U002	204H
39	Absorbent Carbon	-	3192
40	Water Treatment Sludge	-	5192
41	Landfill Leachate	F039	116H
42	Recovered Groundwater	D018, F039, K011, K013	119H

Table IV.B - Wastes Managed In Permitted Units (cont.)

No.	Waste	EPA Waste Codes	TCEQ Waste Codes
43	Asbestos Insulation	-	3111
44	MHBA Raffinate Stripper Bottoms	D002, D018, D038	105H
45	Spent Carbon	-	4041
46	Spent Catalysts	-	3931
47	Zinc Filters	-	3102
48	Sodium (meta) Bisulfite	-	3192
49	Waste Oil	D001, D002, D018, F039, K011, K013, P063, P101, U009, U019, U053, U122, U161, U188	206H
50	Liquid Organic Compounds	-	2051
51	Lab Packs	D001, F001, F003, F005, K011, K013, P022, P063, U002, U003, U009, U022, U044, U122, U154, U188, U220, U239, U240	003H
52	AN Waste Stripper Bottoms	D001, D003, K011, K013	605H
53	Non-Process Stormwater	-	1011
54	Soil Contaminated with Organics	-	3011
55	Incinerator Scrubber Blowdown	-	1151
56	Debris from Groundwater Wells Operations	F039	319H

Table IV.C - Sampling and Analytical Methods

Waste No.[1]	Sampling Location	Sampling Method	Frequency	Parameters	Test Methods[3]	Desired Accuracy Level[2]
7	catalyst settling unit	grab	annual review, re-analyzed if necessary	Acetonitrile, Acrylamide, Acrylonitrile, Benzene, Cyanides (total), Reactivity	335.2, 8031, 8033, 8260, 8316, 9010, TCLP	MDL
10	sample point/cabinet on mfg. unit column	grab	annual review, re-analyzed if necessary	Acetonitrile, Acrylamide, Acrylonitrile, Benzene, Cyanides (total), Reactivity	335.2, 8031, 8033, 8260, 8316, 9010, TCLP	MDL
11	sample point/cabinet on mfg. unit column	grab	annual review, re-analyzed if necessary	Acetonitrile, Acrylamide, Acrylonitrile, Benzene, Cyanides (total), Reactivity	335.2, 8031, 8033, 8260, 8316, 9010, TCLP	MDL
12	sample point/cabinet on mfg. unit column	grab	annual review, re-analyzed if necessary	Benzene, Ignitability, Reactivity	8260, TCLP, 40 CFR Part 261	MDL
13	chilled water sample cabinet on AN purification structure	grab	annual review, not re-sampled due to extreme toxicity	Waste Characterization: Benzene, Cyanides (total), Ignitability, Reactivity BIF *Constituents*: Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Lead, Mercury, Silver, Thallium, Chloride, Ash, Heat Content	Waste Characterization: 335.2, 8260, 9010, TCLP, 40 CFR Part 261 BIF Constituents: 6010A, 7060, 7471, 300.0, ASTM D482, ASTM D240-76	MDL
14	sample point/cabinet on mfg. unit column	grab	annual review, re-analyzed if necessary	Ignitability, Pyridine, Selenium	6010, 8270, TCLP, 40 CFR Part 261	MDL
16	point of generation	grab or composite	initially to characterize, thereafter re-analyzed if necessary	Acetone, Acetonitrile, Acrylonitrile, Arsenic, Barium, Benzene, Chromium, Corrosivity, Cyanides (amenable), Cyanides (total), Formaldehyde, Ignitability, Methyl Isobutyl Ketone, Phenol, Pyridine, Toluene, Reactivity	335.1, 335.2, 6010, 8260, 8270, 8315, 9010, 8031, TCLP, 40 CFR Part 261	MDL
18	injection well effluent pump system	grab	annual review, re-analyzed if necessary	Benzene, Corrosivity, Cyanides (amenable), Cyanides (total), Ignitability, Pyridine, Reactivity	335.1, 335.2, 8260, 8270, 9010, TCLP, 40 CFR Part 261	MDL
20	point of generation	grab or composite	initially to characterize, thereafter re-analyzed if necessary	Acetonitrile, Acrylamide, Acrylonitrile, Benzene, Corrosivity, Cyanides (total), Phenol, Pyridine, Reactivity	335.2, 8031, 8033, 8260, 8270, 8316, 9010, TCLP, 40 CFR Part 261	MDL
21	N/A	–	–	Formaldehyde	8315	MDL

Table IV.C - Sampling and Analytical Methods (cont.)

Waste No.[1]	Sampling Location	Sampling Method	Frequency	Parameters	Test Methods[3]	Desired Accuracy Level[2]
22	point of generation	grab or composite	initially to characterize, thereafter re-analyzed if necessary	Acetonitrile, Acetophenone, Acrylamide, Acrylonitrile, Benzene, Corrosivity, Cyanides (total), Diphenylamine, Diphenylnitrosamine, Formaldehyde, Hydrogen Fluoride, Methanol, Phenol, Reactivity, Toluene	335.2, 6010, 8031, 8033, 8100, 8260, 8270, 8315, 8316, 9010, TCLP, 40 CFR Part 261	MDL
23	point of generation	grab or composite	initially to characterize, thereafter re-analyzed if necessary	Acetonitrile, Acrylamide, Acrylonitrile, Arsenic, Barium, Benzene, Cadmium, Chromium, Corrosivity, Cyanides (total), Formaldehyde, Hydrogen Fluoride, Ignitability, Lead, Mercury, Methanol, Methyl Isobutyl Ketone, Phenol, Reactivity, Selenium, Toluene	335.2, 6010, 8031, 8033, 8260, 8270, 8315, 8316, 9010, TCLP, 40 CFR Part 261	MDL
25	AN BIF Unit	grab or composite	initially to characterize, thereafter re-analyzed if necessary	Cyanides (amenable), Cyanides (total)	335.1, 335.2, 9010	MDL
27	injection well effluent pump system	grab	annual review, re-analyzed if necessary	Acetone, Acetonitrile, Acrylamide, Acrylonitrile, Arsenic, Barium, Benzene, Corrosivity, Cyanides (amenable), Cyanides (total), Formaldehyde, Hydrogen Fluoride, Methanol, Methyl Isobutyl Ketone, Phenol, Pyridine, Reactivity, Toluene	335.1, 335.2, 6010, 8031, 8033, 8260, 8270, 8315, 8316, 9010, TCLP, 40 CFR Part 261	MDL
31	point of generation	grab or composite	annual review, re-analyzed if necessary	Acetone, Acetonitrile, Acrylamide, Acrylonitrile, Arsenic, Benzene, Chromium, Corrosivity, Crotonaldehyde, Cyanides (amenable), Cyanides (total), Toluene, Ignitability, Reactivity	335.1, 335.2, 6010, 8031, 8033, 8260, 8316, 9010, TCLP, 40 CFR Part 261	MDL
32	point of generation	grab	initially to characterize, thereafter re-analyzed if necessary	Acetonitrile, Acrylamide, Acrylonitrile, Benzene, Cyanide (total), Formaldehyde, Ignitability, Methanol, Toluene, Reactivity, Phenol	335.2, 8031, 8033, 8260, 8270, 8315, 8316, 9010, TCLP, 40 CFR Part 261	MDL

Table IV.C - Sampling and Analytical Methods (cont.)

Waste No.[1]	Sampling Location	Sampling Method	Frequency	Parameters	Test Methods[3]	Desired Accuracy Level[2]
33	injection well effluent pump system	grab	annual review, re-analyzed if necessary	Acetone, Arsenic, Barium, Carbon Tetrachloride, Corrosivity, Formaldehyde, Hydrogen Fluoride, Methanol, Methyl Isobutyl Ketone, Pyridine, Reactivity, Toluene, Acetonitrile, Acrylamide, Acrylonitrile, Benzene, Cyanides (amenable), Cyanides (total), Phenol	335.1, 335.2, 8031, 8033, 8260, 8270, 8315, 8316, 9010, TCLP	MDL
35	point of generation	grab or composite	initially to characterize, thereafter re-analyzed if necessary	Acetonitrile, Acrylamide, Acrylonitrile, Benzene, Cyanides (amenable), Cyanides (total), Phenol, Reactivity	335.1, 335.2, 8031, 8033, 8260, 8270, 8316, 9010, TCLP	MDL
36	injection well effluent pump system	grab	annual review, re-analyzed if necessary	Acetone, Arsenic, Barium, Hydrogen Fluoride, Methyl Isobutyl Ketone, Acetonitrile, Acrylamide, Acrylonitrile, Benzene, Corrosivity, Cyanides,(amenable), Cyanides (total), Formaldehyde, Methanol, Phenol, Pyridine, Toluene, Reactivity	335.1, 335.2, 6010, 8031, 8033, 8260, 8270, 8315, 8316, 9010, TCLP, 40 CFR Part 261	MDL
38	point of generation	grab	initially to characterize, thereafter re-analyzed if necessary	Acetone, Benzene, Ignitability, Silver	6010, 8260, TCLP, 40 CFR Part 261	MDL
41	landfill collection sumps	grab	Initially to characterize, thereafter re-analyzed if necessary	Benzene, Cyanides (total), Ethylbenzene, Naphthalene	335.2, 8260, 8270, 9010, TCLP	MDL
42	container	grab	each sampling event	Benzene, Cyanides (total), Ethylbenzene, Naphthalene, Total Organic Carbon	335.2, 8260, 8270 9010, 9060, TCLP	MDL
44	sample point/cabinet on mfg. unit column	grab	annual review, re-analyzed if necessary	Benzene, Corrosivity, Pyridine	8260, 8270, TCLP, 40 CFR Part 261	MDL
49	point of generation	grab	initially to characterize, thereafter re-analyzed if necessary	Acetonitrile, Acrylamide, Acrylonitrile, Benzene, Corrosivity, Cyanides (amenable), Cyanides (total), Formaldehyde, Ignitability, Methyl Isobutyl Ketone, Phenol, Reactivity	335.1, 335.2, 8031, 8033, 8260, 8270, 8315, 8316, 9010, TCLP, 40 CFR Part 261	MDL

Table IV.C - Sampling and Analytical Methods (cont.)

Waste No.[1]	Sampling Location	Sampling Method	Frequency	Parameters	Test Methods[3]	Desired Accuracy Level[2]
51	point of generation	grab	initially to characterize, thereafter re-analyzed if necessary	Acetone, Acetonitrile, Acrylonitrile, Benzene, Carbon Disulfide, Chloroform, Corrosivity, Cyanides (total), Methyl Ethyl Ketone, Pyridine, Benzo(a)pyrene, Formaldehyde, Ignitability, Phenol, Toluene, Trichloroethylene, Xylenes, Reactivity	8031, 8260, 8270, 8315, 40 CFR Part 261	MDL
52	point of generation	grab	initially to characterize, thereafter re-analyzed if necessary	Acetonitrile, Acrylamide, Acrylonitrile, Benzene, Cyanides (total), Ignitability, Reactivity	335.2, 8031, 8033, 8260, 8316, 9010, TCLP, 40 CFR Part 261	MDL
56	point of generation	grab or composite	initially to characterize, thereafter re-analyzed if necessary	Arsenic, Benzene, Cyanides (total)	6010, 8015, 8020, 8260, 9010, TCLP, 40 CFR Part 261	MDL

1. From Table IV.B first column.
2. MDL = Method Detection Limit
3. In place of methods specified above, the most recent update or equivalent approved method as specified in Permit Provision II.B.1 may be used.

Table V.B - Container Storage Areas

Permit Unit No.	Container Storage Area	N.O.R. No.	Rated Capacity	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit will manage Ignitable,[1] Reactive,[1] or Incompatible[2] Waste (state all that apply)
5	Indoor Container Storage Area	18	3,960 gallons	34 ft x 60 ft	See Note 3	Ignitable, Reactive, Incompatible
13	Outdoor Container Storage Area	78	1500 tons	206 ft x 178 ft pad	Not Required	None
15	PROPOSED - IWPF Container Storage Area	103	1283 cu yds	180 ft x 180 ft	34,650 cu ft	Ignitable

1 Containers managing ignitable or reactive waste must be located at least 15 meters (50 feet) from the facility's property line.

2 Incompatible waste must be separated from other waste or materials stored nearby in other containers, piles, open tanks, or surface impoundments by means of a dike, berm, wall, or other device.

3 Portable secondary containment units will be used for all containers stored in the Indoor Container Storage Area. In general, one secondary containment unit will hold up to four 55-gallon drums. Each secondary containment unit will have a minimum capacity equal to the grater of i) 10% of the total volume of the containers, or ii) the volume of the largest container.

Table V.C - Tanks and Tank Systems

No.*	Tank	N.O.R. Unit #	Storage and/or Processing	Waste No.s[1]	Rated Capacity	Dimensions	Containment Volume (including rainfall for unenclosed areas)	Unit Will Manage Ignitable, Reactive, or Incompatible Waste (State all that apply)
08	IWPF Tank 332T1-1	59	Storage and Processing	8, 9, 10, 11, 12, 14, 18, 27, 31, 33, 34, 36, 37, 41, 42, 44, 50, 53, 55	1 million gal	82 ft diameter, 34 ft high	1.5 million gal	No - Ignitable Yes - Reactive No - Incompatible
09	IWPF Tank 332T1-2	60	Storage and Processing	8, 9, 10, 11, 12, 14, 18, 27, 31, 33, 34, 36, 37, 41, 42, 44, 50, 53, 55	1 million gal	82 ft diameter, 34 ft high	1.5 million gal	No - Ignitable Yes - Reactive No - Incompatible

[1]from 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.

Table V.D.1 – Surface Impoundments

No.*	Surface Impoundment	N.O.R. Unit #	Waste No.s[1]	Rated Capacity	Dimensions	Distance from lowest liner to groundwater	Action Leakage Rate (if required)[2]	Unit will manage Ignitable, Reactive, Incompatible, or F020, F021, F022, F023, F026, and F027 Waste (state all that apply)
03	Closed IWPF Surface Impoundments	05	16, 17, 18, 19, 29, 111, 61, 62, 56, 57, 59, 60, 70, 71, 82, 92	20,000,000 gal (when active)	525 ft wide x 750 ft long (entire unit)	3 - 82 ft	Not applicable	No

[1]from Table IV.B, first column
[2]If not required in accordance with 40 CFR 264.222, state "NOT REQUIRED."
* 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.

Table V.G.1 - Landfills

No.*	Landfill	N.O.R. Unit #	Waste No.s[1]	Rated Capacity	Dimensions	Distance from lowest liner to groundwater	Action Leakage Rate (if required)[2]	Unit will manage Ignitable, Reactive, Incompatible, or F020, F021, F022, F023, F026, and F027 Waste (state all that apply)
01	Closed Landfill	06	1, 2, 3, 4, 5, 6, 7, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 35, 39, 40, 43, 45, 46, 47, 48	258,000 cu yd	9.2 acres	10 to 40 ft	Not Required	No
02	Active Landfill	51	1, 2, 3, 4, 5, 6, 7, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 35, 39, 40, 43, 45, 46, 47, 48, 54	54,000 cu yd estimated total waste volume	1305 ft x 530 ft (entire unit)	20 to 30 ft	300 gpd/cell	No
16	PROPOSED New Landfill	104	1, 2, 3, 4, 5, 6, 7, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 28, 29, 30, 31, 35, 39, 40, 43, 45, 46, 47, 48, 54	60,000 cu yd estimated total waste volume	1279 ft x 643 ft (entire unit)	10 to >30 ft	111 gpd/cell	No

[1]from Table IV.B, first column
[2]If not required in accordance with 40 CFR 264.302, state "NOT REQUIRED."
* 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.

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
02	Active Landfill	HDPE	< 1E-07 cm/sec	100 mil	HDPE	< 1E-07 cm/sec	80 mil	• Compacted Clay • % Passing No. 200 Sieve: 30% • Plasticity Index: 15% • Liquid Limit: 30%	< 1E-07 cm/sec	3 ft
16	PROPOSED New Landfill	HDPE	< 1E-10 cm/sec	80 mil	HDPE	< 1E-10 cm/sec	80 mil	• Compacted Clay • % Passing No. 200 Sieve: 30% • Plasticity Index: 15% • Liquid Limit: 30%	< 1E-07 cm/sec	3 ft

* This number should match the Permit Unit No. given *on* Table V.G.1.

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**
Active Landfill (Permit Unit 02)	Sand/Gravel with permeability > 1E-02 cm/sec	Perforated stainless steel, HDPE, or other appropriate material	Spun-bonded needle-punched polypropylene	Polyethylene	Stainless steel, HDPE, or other appropriate material	Sand/Gravel with permeability > 1E-02 cm/sec	Perforated stainless steel, HDPE, or other appropriate material	Spun-bonded needle-punched polypropylene	Polyethylene	Stainless steel, HDPE, or other appropriate material
PROPOSED New Landfill (Permit Unit 16)	Sand/Gravel with permeability > 1E-02 cm/sec	HDPE	Nonwoven needle-punched polypropylene	Polyethylene	HDPE	HDPE 200 mil Double-sided Geocomposite	HDPE	Nonwoven needle-punched polypropylene	Polyethylene	HDPE

Table V.I.1 - Boilers

Permit Unit No.	Boilers/Industrial Furnaces	N.O.R. No.	Waste Nos.[1]	Waste Physical Form (Pumpable or Non-pumpable)	Reactive, Incompatible, or F020, F021, F022, F023, F026, or F027 Waste
11	AN Boiler 30H5	79	13	Pumpable	Reactive
12	AN Boiler 31H4	80	13	Pumpable	Reactive

[1]From the first column of Table IV.B.

Table V.I.2 - Boiler Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems

AN Boilers 30H5 (Permit Unit No. 11) and 31H4 (Permit Unit No. 12)

Parameter	Monitoring Basis[1]	Monitoring Device	Device Location	Permit Limit	AWFCO Y/N
Operating Parameters					
Maximum Total Hazardous Waste Feed Rate	Instantaneous	Flow Meter	HCN Feed Piping	12,250 lb/hr	Y
Maximum Total Pumpable Hazardous Waste Mass Feed Rate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	N
Minimum Device Production Rate (Boiler Water Feed Rate)	Instantaneous	Flow Meters	Boiler Water Feed System	26,000 lb/hr	N
Maximum Device Production Rate (Boiler Water Feed Rate)	Instantaneous	Flow Meters	Boiler Water Feed System	181,380 lb/hr	N
Minimum Combustion Temperature	Instantaneous	Thermocouple System[2]	Combustion Chamber Exit	1540 °F	Y
Maximum Combustion Temperature	Not Applicable	Not Applicable	Not Applicable	Not Applicable	N
Maximum Flue Gas Temperature at PM Control Device Inlet	Not Applicable	Not Applicable	Not Applicable	Not Applicable	N
Maximum Combustion Gas Velocity Indicator $Q_{acfm}=(Q_{air,\ scfm} + Q_{AOG,\ scfm})\ x\ (T_{Comb.\ Temp.,\ °R}/528\ °R)$	Instantaneous	Flow Meters, Thermocouple System	Combustion Air and AOG Flows with Combustion Chamber Temperature	437,633 acfm	Y
Atomization parameters	Not Applicable	Not Applicable	Not Applicable	Not Applicable	N
Feed Rates: (Metals, Total Chlorine, and Ash)	Instantaneous	Flow Meter and WAP	HCN Feed Piping	Limits Specified in Table V.I.3.	N

Table V.I.2 - Boiler Permit Conditions, Monitoring and Automatic Waste Feed Cutoff Systems

AN Boilers 30H5 (Permit Unit No. 11) and 31H4 (Permit Unit No. 12) (cont.)

Parameter	Monitoring Basis[1]	Monitoring Device	Device Location	Permit Limit	AWFCO Y/N
Number of Soot Blowing Events per 24 hours	Not Applicable	Not Applicable	Not Applicable	No Soot Blowing	N
Combustion Zone Pressure	Not Applicable	Not Applicable	Not Applicable	Not Applicable	N
CEMS Monitoring Parameters					
Stack Oxygen	Instantaneous	CEMS	Stack	No Limit (for correction to 7% O_2)	N
Stack CO	Continuous HRA	CEMS[3]	Stack	100 ppmv HRA, 7% O_2, dry basis	Y
Stack THC	Not Applicable	Not Applicable	Not Applicable	Not Applicable	N
APCD Parameters					
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	N

Notes:

[1] Instantaneous = Value at any time or one-minute average value.
[2]Triplicate thermocouple system with middle value reading as the AWFCO control.
[3]Fully functional dual CO CEMS. One CO CEMS must have hourly rolling average readings >90 ppm with the other CO CEMS having hourly rolling average readings of >100 ppm prior to required AWFCO system activation. A single CO CEMS reading <100 ppm may be used to continue burning hazardous waste when one of the CO CEMS in the dual CO CEMS system is not in service.

Table V.I.3 - Maximum Constituent Feed Rates

The total feed rate of constituents to the boilers shall not exceed the following limitations in grams per hour (g/hr) or tons per year (T/yr), as noted. The metals limitations have been evaluated through risk assessment. The ash and chlorine limits are based upon testing or regulatory limits.

Constituent	Permit Unit 11 Maximum Allowable Feed Rate In Total Feedstreams (g/hr)	Permit Unit 11 Maximum Allowable Feed Rate In Total Hazardous Waste Feedstreams (g/hr)[1]	Permit Unit 11 Maximum Allowable Feed Rate in Total Pumpable Hazardous Waste Feedstreams Hourly Basis (g/hr)[1]	PermitUnit 11 Maximum Allowable Feed Rate in Total Feedstreams Annual Basis (T/yr)
Arsenic	7.92E-01	Not Applicable	Not Applicable	7.65E-03
Beryllium	6.08E+00	Not Applicable	Not Applicable	5.87E-02
Cadmium	2.00E+01	Not Applicable	Not Applicable	1.93E-01
Total Chromium	2.00E+01	Not Applicable	Not Applicable	1.54E-01
Antimony	3.96E+03	Not Applicable	Not Applicable	1.53E-01
Barium	3.96E+03	Not Applicable	Not Applicable	3.82E+00
Lead	3.11E+03	Not Applicable	Not Applicable	1.35E+01
Mercury	1.26E+02	Not Applicable	Not Applicable	1.50E-03
Silver	8.28E+01	Not Applicable	Not Applicable	8.00E-01
Thallium	8.28E+02	Not Applicable	Not Applicable	1.53E-01
Total Chloride/Chlorine	7.78E+03	Not Applicable	Not Applicable	Not Applicable
Ash	1,200	Not Applicable	Not Applicable	Not Applicable

[1]Not applicable for Tier I or Tier I adjusted metals feed rate screening limits.
[Hourly feed rate limits must comply with the requirements of 40 CFR 266.106 for carcinogenic metals and non-carcinogenic metals. As applicable, the feed rate for chromium may be specified as hexavalent and total chromium limits. The maximum annual average dilution factor is 0.035 micrograms/cubic meter per gram per second emission rate for Permit Units 11 and 12.]

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Table V.I.3 - Maximum Constituent Feed Rates (cont.)

Constituent	Permit Unit 12 Maximum Allowable Feed Rate In Total Feedstreams (g/hr)	Permit Unit 12 Maximum Allowable Feed Rate In Total Hazardous Waste Feedstreams (g/hr)[1]	Permit Unit 12 Maximum Allowable Feed Rate in Total Pumpable Hazardous Waste Feedstreams Hourly Basis (g/hr)[1]	PermitUnit 12 Maximum Allowable Feed Rate in Total Feedstreams Annual Basis (T/yr)
Arsenic	7.92E-01	Not Applicable	Not Applicable	7.65E-03
Beryllium	6.08E+00	Not Applicable	Not Applicable	5.87E-02
Cadmium	2.00E+01	Not Applicable	Not Applicable	1.93E-01
Total Chromium	2.00E+01	Not Applicable	Not Applicable	1.54E-01
Antimony	3.96E+03	Not Applicable	Not Applicable	1.53E-01
Barium	3.96E+03	Not Applicable	Not Applicable	3.82E+00
Lead	3.11E+03	Not Applicable	Not Applicable	1.35E+01
Mercury	1.26E+02	Not Applicable	Not Applicable	1.50E-03
Silver	8.28E+01	Not Applicable	Not Applicable	8.00E-01
Thallium	8.28E+02	Not Applicable	Not Applicable	1.53E-01
Total Chloride/Chlorine	7.78E+03	Not Applicable	Not Applicable	Not Applicable
Ash	1,200	Not Applicable	Not Applicable	Not Applicable

[1]Not applicable for Tier I or Tier I adjusted metals feed rate screening limits.
[Hourly feed rate limits must comply with the requirements of 40 CFR 266.106 for carcinogenic metals and non-carcinogenic metals. As applicable, the feed rate for chromium may be specified as hexavalent and total chromium limits. The maximum annual average dilution factor is 0.035 micrograms/cubic meter per gram per second emission rate for Permit Units 11 and 12.]

Table V.I.4 - Maximum Allowable Emission Rates
Permit Units 11 and 12

Carcinogenic Constituent (Compliance Tier)	Maximum Allowable Emission Rate[1]	Units[2]
Arsenic (Adj. Tier I)	Not Applicable	g/hr
Beryllium (Adj. Tier I)	Not Applicable	g/hr
Cadmium (Adj. Tier I)	Not Applicable	g/hr
Chromium, Total (Adj. Tier I)	Not Applicable	g/hr
Non-Carcinogenic Constituent (Compliance Tier)	**Maximum Allowable Emission Rate[1]**	**Units[2]**
Antimony (Adj. Tier I)	Not Applicable	g/hr
Barium (Adj. Tier I)	Not Applicable	g/hr
Lead (Adj. Tier I)	Not Applicable	g/hr
Mercury (Adj. Tier I)	Not Applicable	g/hr
Silver (Adj. Tier I)	Not Applicable	g/hr
Thallium (Adj. Tier I)	Not Applicable	g/hr
Hydrogen Chloride (Adj. Tier I)	Not Applicable	g/hr
Free Chlorine (Adj. Tier I)	Not Applicable	g/hr
Particulate Matter	0.08	Grains/dscf

[1] Not applicable for Tier I or Tier I adjusted feed rate screening limits.

[2] g/hr denotes grams per hour. Grains/dscf denotes grains per dry standard cubic foot (standard conditions: 760 mm Hg, 68 °F) after correction to a stack gas concentration of 7% oxygen.

Table V.K - 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)
10	Thermal Desorption Unit NOTE: UNIT IS INACTIVE - CLOSURE PENDING	72	Processing	7, 20	5 ton/hr max	9 ft x 45 ft flatbed trailer on 130 ft x 85 ft concrete pad	No

[1]from Table IV.B, first column

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

Closed Landfill (Permit Unit 01)

Well Specifications	Monitoring Well Location: Well D-8	Well D-8A	Well D-9	Well D-10	Well D-12	Well D-13	Well MW-11	Well MW-13	Well MW-14	Well MW-15	Well U-4	Well U-5*
Hydrogeologic Unit Monitored:	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II
Type of Well:	POC	POC	POC	POC	BG	BG	POC	POC	BG	POC	POC	POC
Upgradient/Downgradient:	down	down	down	down	up	up	down	down	up	down	down	down
Casing Diameter/Material:	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC
Screen Diameter/Material:	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC
Screen Slot Size (in):	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Top of Casing Elev. (ft msl):	14.84	12.46	9.01	8.71	26.12	27.67	14.85	8.94	9.35	15.73	17.28	16.9
Ground Surf. Elev. (ft msl):	11.6	9.5	4.8	5.3	22.8	24.5	12.5	5.4	7.7	13.70	14.00	14.1
Well Depth (ft bgs):	46	40.5	38.0	33.5	52.0	44.0	35.0	43.0	40.0	44.3	33.0	32.0
Screen Interval (ft bgs):	28.0-43.0	22.5-37.5	20.0-35.0	14.0-29.0	34.0-49.0	26.0-41.0	27.0-32.0	35.0-40.0	35.0-40.0	39.3-44.3	15.0-30.0	14.0-29.0
Facility North Coordinate (ft):	299.5	472.3	636.3	608.6	497.3	300.5	130	610	670	45	45	45.2
Facility West Coordinate (ft):	-4160	-4157	-3938	-3383	-3126	-3109	-4160	-3600	-2965	-3980	-3773	-3552

Notes:

1. Closed Landfill (Permit Unit 01) well locations are shown on Figure VI.18.
2. Well casing and screen diameters represent nominal pipe diameter dimensions.
3. All wells screened within uppermost Chicot Aquifer (Beaumont Formation).
4. POC = Point of Compliance; BG = Background; MSL = Mean Sea Level; BGS = Below Ground Surface.
5. Strat II = All wells monitor the groundwater conditions in Stratum II (uppermost groundwater bearing unit).
6. BG wells are not sampled as part of the Groundwater Detection Monitoring Program.

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

Active Landfill (Permit Unit 02)

Well Specification	Monitoring Well Location													
	Well MW-28	Well MW-29	Well MW-30	Well MW-31	Well MW-32	Well MW-33	Well MW-34	Well MW-36	Well MW-40	Well MW-41	Well MW-43	Well MW-44	Well MW-45	Well MW-46
Hydrogeologic Unit Monitored:	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II
Type of Well:	POC	POC	POC	POC	POC	POC	BG	BG	POC	BG	BG	POC	POC	BG
Upgradient or Downgradient:	down	down	down	down	down	down	up	up	down	up	up	down	down	up
Casing Diameter/Material:	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC
Screen Diameter/Material:	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC
Screen Slot Size (in):	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Top of Casing Elev. (ft msl):	16.54	16.37	15.16	14.36	15.97	16.38	15.46	17.00	17.36	15.46	15.55	16.54	16.50	16.57
Ground Surf. Elev. (ft msl):	12.96	13.3	12.3	12.4	12.7	13.0	12.5	12.8	13.2	13.0	13.0	13.9	13.6	13.1
Well Depth (ft bgs):	42.5	63.0	60.0	58.5	60.0	64.0	33.5	48.0	42.5	36.0	38.0	41.9	41.5	38.0
Screen Interval (ft bgs):	29.0-39.0	51.5-61.5	47.0-57.0	48.0-58.0	49.4-59.4	49.0-59.0	22.0-32.0	36.0-46.0	30.0-40.0	25.0-35.0	27.5-37.5	31.9-41.9	31.5-41.5	26.5-36.5
Facility North Coordinate (ft):	1097	1095	1105	1195	1325	1442	1510	1510	1095	1495	1290	1091	1091	1510
Facility West Coordinate (ft):	-4498	-4340	-4150	-4130	-4149	-4149	-4280	-4505	-4746	-4890	-5270	-5220	-4899	-5270

Notes:

1. Active Landfill (Permit Unit 02) well locations are shown on Figure VI.19.
2. Well casing and screen diameters represent nominal pipe diameter dimensions.
3. All wells screened within uppermost portion of the Chicot Aquifer (Beaumont Formation).
4. POC = Point of Compliance; BG = Background; MSL = Mean Sea Level; BGS = Below Ground Surface.
5. Strat II = All wells monitor the groundwater conditions in Stratum II (uppermost groundwater bearing unit).
6. BG wells are not sampled as part of the Groundwater Detection Monitoring Program.

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

New Landfill (Permit Unit 16)

Well Specifications	Monitoring Well Location							
	Well MW-34	Well MW-36	Well MW-41	Well MW-43	Well MW-46	Well MW-47	Well MW-48	Well MW-49
Hydrogeologic Unit Monitored:	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II	Strat II
Type of Well:	BG	BG	BG	BG	BG	POC	POC	POC
Upgradient/Downgradient:	up	up	up	up	up	down	down	Down
Casing Diameter/Material:	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC
Screen Diameter/Material:	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC	4"/PVC
Screen Slot Size (in):	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010
Top of Casing Elev. (ft MSL):	15.46	17.00	15.46	15.55	16.57	To Be Determined During Installation	To Be Determined During Installation	To Be Determined During Installation
Ground Surf. Elev. (ft MSL):	12.5	12.8	13.0	13.0	13.1			
Well Depth (ft BGS):	33.5	48.0	36.0	38.0	38.0			
Screen Interval (ft BGS):	22.0-32.0	36.0-46.0	25.0-35.0	27.5-37.5	26.5-36.5			
Facility North Coordinate (ft):	1510	1510	1495	1290	1510			
Facility West Coordinate (ft):	-4280	-4505	-4890	-5270	-5270			

Notes:

1. New Landfill (Permit Unit 16) proposed well locations are shown on Figure VI.20. Background locations are shown on Figure VI.19.
2. Well casing and screen diameters represent nominal pipe diameter dimensions.
3. Exact well coordinates, top of casing and surface elevations, total depths, and screen intervals for MW-47, MW-48, and MW-49 will be determined based on field conditions encountered during well installation.
4. All wells screened within uppermost Chicot Aquifer (Beaumont Formation).
5. POC = Point of Compliance; BG = Background; MSL = Mean Sea Level; BGS = Below Ground Surface.
6. Strat II = All wells monitor the groundwater conditions in Stratum II (uppermost groundwater bearing unit).
7. BG wells are not sampled as part of the Groundwater Detection Monitoring Program.

Table VI.B.3.c – Groundwater Detection Monitoring Parameters

Closed Landfill (Permit Unit 01): All Point of Compliance Wells (D-8, D-8A, D-9, D-10, MW-11, MW-13, MW-15, U-4, and U-5)
Active Landfill (Permit Unit 02): All Point of Compliance Wells (MW-28, MW-29, MW-30, MW-31, MW-32, MW-33, MW-40, MW-44, and MW-45)
New Landfill (Permit Unit 16): All Point of Compliance Wells (MW-47, MW-48, and MW-49)

Parameter	*Sampling Frequency*	*Analytical Method*	*Detection Limits (mg/L)*	*Concentration Limits[1] (mg/L)*
Benzene	Semi-annual (1st and 3rd Quarters)	EPA 8260	0.005	0.005
Ethylbenzene	Semi-Annual (1st and 3rd Quarters)	EPA 8260	0.005	0.005
Naphthalene	Semi-Annual (1st and 3rd Quarters)	EPA 8260	0.005	0.005
Cyanide	Semi-Annual (1st and 3rd Quarters)	EPA 9010	0.01	0.01
pH	Semi-Annual (1st and 3rd Quarters)	Field	NA	NA
Specific Conductance	Semi-Annual (1st and 3rd Quarters)	Field	NA	NA
Temperature	Semi-Annual (1st and 3rd Quarters)	Field	NA	NA

Notes:
1. The concentration limit is the basis for determining whether a release has occurred from the waste management unit/area.
2. Analytical methods are referenced to U.S. EPA, "Test Methods for Evaluating Solid Waste," SW-846, 3rd Edition (updated), September 1994.
3. Groundwater samples analyzed in the field for temperature, specific conductance, and pH. Static water levels elevations measured in designated monitoring wells. Well locations are shown on Figures VI.18, VI.19, and VI 20 for Permit Units 01, 02, and 16, respectively.
4. Point of Compliance wells sampled on a semi-annual basis during the first 30 days of the first and third quarters.
5. Background wells were sampled quarterly from January 2003 to October 2005 to establish the upper prediction interval concentration limit. Background wells will not be sampled during semi-annual sampling events.
6. Monitoring wells will be re-sampled to confirm release to groundwater if any parameter is detected at a concentration exceeding the Concentration Limit.
7. NA = Not Applicable;
8. Equivalent analytical methods may be used, as necessary.

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

Existing Unit Closure Cost Estimate	
Unit	Cost
Closed Landfill (Permit Unit 01)	Closed
Active Landfill (Permit Unit 02)	$498,500
Closed IWPF Surface Impoundments (Permit Unit 03)	Closed
Indoor Container Storage Area (Permit Unit 05)	$21,500
IWPF Tanks (Permit Units 08 and 09)	$926,400
Thermal Desorption Unit (Permit Unit 10)	$14,900
AN Boiler 30H5 (Permit Unit 11)	$12,000
AN Boiler 31H4 (Permit Unit 12	$12,000
Outdoor Container Storage Area (Permit Unit 13)	$692,300
Total Existing Unit Closure Cost Estimate	$2,177,600 (in 2011 Dollars)[1]

Proposed Unit Closure Cost Estimate	
Unit	Cost
IWPF Container Storage Area (Permit Unit 15)	$11,365,960
New Landfill (Permit Unit 16)	$544,000

Notes:
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.

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

Existing Unit Post-Closure Cost Estimate	
Unit	Cost
Closed Landfill (Permit Unit 01)	$820,400
Active Landfill (Permit Unit 02)	$2,103,000
Closed IWPF Surface Impoundments (Permit Unit 03)	$345,600
Total Existing Unit Post-Closure Cost Estimate	$3,269,000 (in 2011 Dollars)[1]

Proposed Unit Post-Closure Cost Estimate	
Unit	Cost
New Landfill (Permit Unit 16)	$1,752,000

Notes:
1. As units are added or deleted from these tables through future permit amendments or modifications, the remaining itemized unit costs should be updated for inflation when re-calculating the revised total cost in current dollars.

Table VII.G – Post-Closure Period

Unit Name	Date Certified Closed	Permitted Post Closure Period (Yrs)	Date Post Closure Ends
Closed Landfill (Permit Unit 01)	1995	30 years	2025
Active Landfill (Permit Unit 02)	2020 (estimated)	30 years	2050
Closed IWPF Surface Impoundments (Permit Unit 03)	1997	30 years	2027

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

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

Unit Name	Notice of Registration (NOR) Number, if applicable	Date Program Requirement and Remedy Standard Completed[4]
1.Permit Unit 03 (Closed IWPF Surface Impoundments)	005	Start Date = 10 January 1997 (remedy on-going)

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

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

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

Unit Name	Notice of Registration (NOR) Number, if applicable	Date Program Requirement and Remedy Standard Completed[4]
1.Unit A, Phenolic Tar Pits	N/A	Start Date = 21 May 2008 (remedy on-going)
2.Unit C, Phthalic Anhydride Area	N/A	Start Date = 21 May 2008 (remedy on-going)
3.Unit I, Emergency Runoff Surface Impoundment	N/A	Start Date = 21 May 2008 (remedy on-going)
4.Unit J, Phenol Wet Well	N/A	Start Date = 21 May 2008 (remedy on-going)
5.Unit 02, Vacuum Truck Pit	N/A	Start Date = 21 May 2008 (remedy on-going)

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

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

E. Facilities Operations Area(4) (FOA) 30 TAC 350.131 – 350.135, 335.156, and 350

Unit Name	Notice of registration (NOR) Number, if applicable	Date Program Requirement and Remedy Standard CompleteD[4]
1.RESERVED	RESERVED	RESERVED

CP Table I: Waste Management Units and Areas Subject to Groundwater Corrective Action and Compliance Monitoring (cont.)

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 No Further Action approval letter for program requirement and remedy standard completed for all media of concern.

CP Table II: Solid Waste Management Units and/or Areas of Concern Addressed in Permit Section XI.H.

Unit Name	NOR Number, if applicable	Date Program Requirement and Remedy Standard Completed [1]
1.Unit A, Phenolic Tar Pits (SWMU)	N/A	Soil Requirement: 15 Aug. 2006 Completed: 15 July 2009 Groundwater Requirement 21 May 2008 Completed On-going
2.Unit C, Phthalic Anhydride Area (SWMU)	N/A	Soil Requirement: 15 Aug. 2006 Completed: 15 July 2009 Groundwater Requirement: 21 May 2008 Completed: On-going
3.Unit I, Emergency Runoff Surface Impoundment (ERSI) (SWMU)	N/A	Soil Requirement: 15 Aug. 2006 Completed: 15 July 2009 Groundwater Requirement: 21 May 2008 Completed: On-going
4.Unit J, Phenol Wet Well (SWMU)	N/A	Groundwater Requirement: 21 May 2008 Completed: On-going
5.Unit 02, Vacuum Truck Pit (SWMU)	N/A	Groundwater Requirement: 21 May 2008 Completed: On-going

SWMU = Solid waste Management Unit

AOC = Area of concern

Foot Note:

1. Specify the date of Commissions No Further Action approval letter for program requirement and remedy standard completed for all media of concern.

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

Unit Name	Column A Hazardous Constituents	Column B Groundwater Protection Standards (mg/l)
1. Permit Unit 03 (Closed IWPF Surface Impoundments)		
	Benzene	0.005 MCL
	Carbon Disulfide	3.65 MSC
	Ethylbenzene	0.7 MCL
	4-Methyl-2-Pentanone	2.92 MSC
	Toluene	1.0 MCL
	Bis(2-Ethylhexyl)Phthalates	<0.01 ND
	2-Methylnaphthalene	<0.01 ND
	Naphthalene	1.46 MSC
	Phenol	61.0 MSC
	Arsenic	0.01 MCL
	Barium	2.0 MCL
	Chromium	0.1 MCL
	Cobalt	2.19 MSC
	Cyanide	0.2 MCL
	Nickel	0.1 MCL
	Sulfide	<10.0 ND
	Thallium	0.002 MCL
	Vanadium	0.256 MSC
2. Unit A, Phenolic Tar Pits		
	Benzene	0.005 MCL
	Chloroform	0.1 MSC
	Ethylbenzene	0.7 MCL
	Methylene Chloride	0.005 MCL
	Styrene	0.1 MCL
	Toluene	1.0 MCL
	Bis(2-Ethylhexyl)Phthalate	0.006 MCL
	Naphthalene	2.0 MSC
	Phenol	61.0 MSC
3. Unit C, Phthalic Anhydride Area		
	Benzene	0.005 MCL
	Tetrachloroethene	0.005 MCL
	Pentachlorophenol	0.001 MCL
	Arsenic	0.01 MCL
4. Unit I, Emergency Runoff Surface Impoundment (ERSI)		
	Benzene	0.005 MCL

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

Unit Name	Column A Hazardous Constituents	Column B Groundwater Protection Standards (mg/l)
	1,2-Dichloroethane	0.005 MCL
	Ethylbenzene	0.7 MCL
	Methylene Chloride	0.005 MCL
	Benzo(b)fluoranthene	0.00039 MSC
	Bis(2-Ethylhexyl)Phthalate	0.006 MCL
	Arsenic	0.01 MCL
5. Unit J Phenol Wet Well		
	Acetone	10.0 MSC
	Benzene	0.005 MCL
	Carbon Tetrachloride	0.005 MCL
	Chlorobenzene	0.1 MSC
	Chloroform	0.1 MSC
	Cumene	10.0 MCL
	Ethylbenzene	0.7 MCL
	Alpha-Methyl-Styrene	7.2MSC
	Tetrachloroethene	0.005 MCL
	Trichloroethene	0.005 MCL
	Vinyl Chloride	0.002 MCL
	Phenol	61.0 MSC
6. Unit 02 Vacuum Truck Pit		
	Benzene	0.005 MCL
	2-Chloroethylvinylether	0.0026 MSC
	1,2-Dichloroethane	0.005 MCL
	Ethylbenzene	0.7MCL
	Methylene Chloride	0.005MCL
	Styrene	0.1 MCL
	Toluene	1.0 MCL
	Bis(2-Ethylhexyl)Phthalate	0.006 MCL

Foot Notes:

MSC ACL pursuant to 30 TAC Section 335.160(b) based upon the Groundwater Medium-Specific Concentration, Industrial Risk Reduction Standard No. 3 specified in 30 TAC Section 335 Subchapter S.

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.

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 groundwater that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating condition.

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

Unit Name	Column A Hazardous Constituents	Column B Groundwater Protection Standards (mg/l)
1. Permit Unit 03 (Closed IWPF Surface Impoundments)		
	Benzene	0.005 MCL
2. Unit A, Phenolic Tar Pits		
	Benzene	0.005 MCL
	Chloroform	0.1 MSC
	Ethylbenzene	0.7 MCL
	Methylene Chloride	0.005 MCL
	Styrene	0.1 MCL
	Toluene	1.0 MCL
	Bis(2-Ethylhexyl)Phthalate	0.006 MCL
	Naphthalene	2.0 MSC
	Phenol	61.0 MSC
3. Unit C, Phthalic Anhydride Area		
	Benzene	0.005 MCL
	Tetrachloroethene	0.005 MCL
	Pentachlorophenol	0.001 MCL
	Arsenic	0.01 MCL
4. Unit I, Emergency Runoff Surface Impoundment (ERSI)		
	Benzene	0.005 MCL
	1,2-Dichloroethane	0.005 MCL
	Ethylbenzene	0.7 MCL
	Methylene Chloride	0.005 MCL
	Benzo(b)fluoranthene	0.00039 MSC
	Bis(2-Ethylhexyl)Phthalate	0.006 MCL
	Arsenic	0.01 MCL
5. Unit J Phenol Wet Well		
	Acetone	10.0 MSC
	Benzene	0.005 MCL
	Carbon Tetrachloride	0.005 MCL
	Chlorobenzene	0.1 MSC
	Chloroform	0.1 MSC
	Cumene	10.0 MCL
	Ethylbenzene	0.7 MCL
	Alpha-Methyl-Styrene	7.2 MSC
	Tetrachloroethene	0.005 MCL
	Trichloroethene	0.005 MCL

CP Table IIIA: Corrective Action Program Table of Indicator Parameters and Groundwater Protection Standard (cont.)

Unit Name	Column A Hazardous Constituents	Column B Groundwater Protection Standards (mg/l)
	Vinyl Chloride	0.002 MCL
	Phenol	61.0 MSC
6. Unit 02 Vacuum Truck Pit		
	Benzene	0.005 MCL
	2-Chloroethylvinylether	0.0026 MSC
	1,2-Dichloroethane	0.005 MCL
	Ethylbenzene	0.7MCL
	Methylene Chloride	0.005MCL
	Styrene	0.1 MCL
	Toluene	1.0 MCL
	Bis(2-Ethylhexyl)Phthalate	0.006 MCL

Foot Note:

MSC ACL pursuant to 30 TAC Section 335.160(b) based upon the Groundwater Medium-Specific Concentration, Residential {...or Industrial...) Risk Reduction Standard No. 2 {...or No. 3} specified in 30 TAC Section 335 Subchapter S.

MCL ACL pursuant to 30 TAC 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.

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 groundwater that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating condition.

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

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

CP Table V: Designation of Wells

Point of Compliance Wells

1. Permit Unit 03 (Closed IWPF Surface Impoundments)
Stratum II – Upper Sand: D-5[a], D-6, MW-7, MW-16[a], MW-50[a], OW-I-11, and OW-IWP-3[a]

2. Unit A, Phenolic Tar Pits
Stratum II – Upper Sand: OW-A-2[b], OW-02-8[b], TW-5[b]

3. Unit C, Phthalic Anhydride Area
Stratum II- Upper Sand: OW-C-1[c], OW-C-1a[c]

4. Unit I, Emergency Runoff Surface Impoundment (ESRI)
Stratum II – Upper Sand: MW-20[d], MW-21[d], OW-I-01

5. Unit J, Phenol Wet Well
Stratum II – Upper Sand: OW-J-07[e]

6. Unit 02 Vacum Truck Pit
Stratum II – Upper Sand: OW-02-12[f]

Point of Exposure Wells None

Alternate Point of Exposure Wells None

Background Wells

1. Permit Unit 03 (Closed IWPF Surface Impoundments)
Stratum II – Upper Sand: D-7, MW-9, U-3

2. Unit A, Phenolic Tar Pits
Stratum – Upper Sand: OW-A-1

3. Unit C, Phthalic Anhydride Area
Stratum II – Upper Sand: OW-02-1

4. Unit I, Emergency Runoff Surface Impoundment (ESRI)
Stratum II – Upper Sand: D-7

5. Unit J, Phenol Wet Well
Stratum II – Upper Sand: OW-D-2

6. Unit 02 Vacum Truck Pit
Stratum II – Upper Sand: OW-02-1[f]

CP Table V: Designation of Wells (cont.)

([a]) D-5, MW-16 and OW-IWP-3 are Point of Compliance wells that are also used to evaluate concentration trends. MW-50 is a Point of Compliance well that is also used to evaluate plume stability/shrinkage.

([b]) OW-A-2 is a Point of Compliance well that is also used to evaluate concentration trends. OW-02-8 and TW-5 are Point of Compliance wells that are also used to evaluate plume stability/shrinkage.

([c]) OW–C-1 and OW- C-1a are Point of Compliance wells that are also used to evaluate plume stability/shrinkage.

([d]) MW-20 and MW-21 are Point of Compliance wells that are also used to evaluate plume stability/shrinkage.

([f]) OW-02-12 is a Point of Compliance well that is also used to evaluate concentration trends.

Note: Wells 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

Permitted Unit 03 (Closed IWWPI Surface Impoundments)	Year or Number of Years
Year Waste Management Activities Initiated	1964
Year Closed	1997
Compliance Period	33 Years
Compliance Period Began	1997

RESERVED	Year or Number of Years
Year Waste Management Activities Initiated	20**
Year Closed	20**
Compliance Period	** Years
Compliance Period Began	20**

CP Table VII: Reporting Requirements

Item	Program	Reporting Frequency	Requirements
1.	All programs	Annually by January 21	Each report shall be certified by a qualified engineer and/or geologist.
2.	Corrective Action	Annually by 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	Annually by January 21	A summary of any activity within an area subject to institutional control.
4.	Corrective Action	Annually by January 21	Tabulation of well casing elevations in accordance with CP Attachment C;
5.	Corrective Action	Annually by 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	Annually by January 21	Recommendation for any changes to the program;
7.	Corrective Action	Annually by January 21	Any other items requested by the Executive Director;
8.	Corrective Action	Annually by January 21	Water table maps shall be prepared from the groundwater data collected pursuant to Permit Section XI.G. and shall be evaluated by the permittee with regard to the following parameters: a. Direction and gradient of groundwater flow; b. Estimation of the rate and direction of groundwater contamination migration.
9.	Corrective Action	Annually by January 21	The permittee shall submit a report to each recipient listed in Provision XI.J.3., which includes the following information in items 3 through 25 determined since the previously submitted report, if those items are applicable. 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	Annually by January 21	The Corrective Action System(s) authorized under Provision XI.B.3. in operation during the reporting period and a narrative summary of the evaluations made in accordance with Permit Sections XI.E, XI.F., and XI.G. 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.

CP Table VII: Reporting Requirements (cont.)

Item	Program	Reporting Frequency	Requirements
11.	Corrective Action	Annually by January 21	The method(s) utilized for management of recovered/purged groundwater shall be identified in accordance with Provision XI.B.8. The permittee shall maintain this list as part of the facility operating record and make it available for inspection upon request.
12.	Corrective Action	Annually by January 21	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 Provision XI.A.7. and any changes subsequently approved by the Executive Director pursuant to Provision XI.B.3. 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;
13.	Corrective Action	Annually by January 21	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;
14.	Corrective Action	Annually by January 21	Tabulation of all water level elevations required in Provision XI.F.3.d.(1), depth to water measurements, and total depth of well measurements collected since the data that was submitted in the previous monitoring report;
15.	Corrective Action	Annually by January 21	Potentiometric surface maps showing the elevation of the water table at the time of sampling, and the direction of groundwater flow gradients;
16.	Corrective Action	Annually by January 21	Tabulation of all data evaluation results pursuant to Provision XI.F.4. and status of each well with regard to compliance with the Corrective Action objectives and compliance with the GWPS;
17.	Corrective Action	Annually by January 21	An updated summary as required by CP Table VIII;
18.	Corrective Action	Annually by January 21	Summary of any changes made to the monitoring/ corrective action program and a summary of well inspections, repairs, and any operational difficulties;

CP Table VII: Reporting Requirements (cont.)

Item	Program	Reporting Frequency	Requirements
19.	Corrective Action	Annually by 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	Annually by January 21	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	Annually by January 21	Tabulation of the total contaminant mass recovered from each recovery system for each reporting period;
22.	Corrective Action only	Annually by January 21	Maps of the contaminated area where GWPSs are exceeded depicting concentrations of CP Table IIIA constituents and any newly detected CP Table III 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.
23.	Corrective Action only	Annually by January 21	Maps and tables indicating the extent and thickness of the NAPLs both light and dense phases, if detected;
24.	Corrective Action only	Annually by January 21	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 Provision XI.H.6., 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 Provision XI.H.7. are being met.
25.	Corrective Action only	Annually by January 21	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 Permit Section XI.H. and ICM Program for a SWMU and/or AOC which documents that the objectives of Provision XI.H.8.b. are being achieved. This summary shall be included as a section of the Compliance Plan semiannual report.

CP Table VIII: Compliance Schedule

ITEM	COMPLIANCE SCHEDULE (from the date of issuance of the Compliance Plan unless otherwise specified)	REGULATORY CITATION	REQUIREMENT
A.	60	Compliance Plan	Submit to the Executive Director a schedule summarizing all activities required by the Compliance Plan. The schedule shall list the starting dates of all routine activities. The permittee shall include an updated schedule in the groundwater monitoring report required by Provision XI.G.3. The schedule shall list the activity or report, the Compliance Plan Section which requires the activity or report and the calendar date the activity or report is to be completed or submitted (if this date can be determined.)
B	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 an additional response actions will be required at an affected property.

Solutia, Inc.
2,514.00 Acres

Perry and Austin League No. 2
Abstract No. 107

STATE OF TEXAS §

COUNTY OF BRAZORIA §

METES AND BOUNDS DESCRIPTION of a 2,514.00 acre tract of land in the Perry and Austin League No. 2, Abstract No. 107, Brazoria County, Texas. Said 2,514.00 acre tract being out of a 3,000.00 acre tract in a deed to Solutia, Inc. as recorded in Clerk's File No. 97 030692 in the Brazoria County Clerk's Office. Said 2,514.00 acre tract is more particularly described by metes and bounds as follows:

BEGINNING at a concrete monument for the north corner of said Perry and Austin League No. 2, Abstract – 107, said point also is the west corner of the Perry and Austin League No. 7, Abstract – 110, and is in the southeast line of the S.F. Austin 1-3/4 League, Abstract – 37, said point is the north corner of the herein described tract;

THENCE, South 48°35'40" East, along the northeasterly line of said Perry and Austin League No. 2, Abstract – 107, same being the southwest line of said Perry and Austin League No. 7, Abstract – 110, for a distance of 11,240.38 feet to the east corner of the herein described tract;

THENCE, South 41°21'50" West, along the southeasterly line of the aforementioned 3,000 acre tract, at distance of 270.00 feet pass the north corner of a 2,381.247 acre tract described in a deed to Amoco Chemicals Corporation as recorded in Volume 983, Page 82 of the Brazoria County Deed Records, and continuing for a total distance of 16,581.27 feet to a point on the edge of water of Chocolate Bayou, said point being the south corner of the herein described tract;

THENCE, along the edge of water of said Chocolate Bayou with the following meanders;

North 41°07'40" West, for a distance of 228.88 feet
North 05°22'10" West, for a distance of 183.13 feet
North 09°01'40" East, for a distance of 172.21 feet
North 29°08'30" East, for a distance of 453.84 feet
North 43°26'30" East, for a distance of 230.23 feet
North 53°26'30" East, for a distance of 184.98 feet
North 73°19'50" East, for a distance of 408.20 feet
North 63°24'20" East, for a distance of 243.41 feet
North 46°53'00" East, for a distance of 357.96 feet
North 37°27'40" East, for a distance of 309.37 feet
North 13°58'40" East, for a distance of 124.21 feet.
North 03°54'20" West, for a distance of 144.26 feet
North 24°48'52" West, for a distance of 311.79 feet
North 44°52'30" West, for a distance of 211.41 feet

North 67°36'30" West, for a distance of 192.71 feet
North 78°24'10" West, for a distance of 270.94 feet
South 83°13'50" West, for a distance of 164.33 feet
South 64°48'30" West, for a distance of 508.63 feet
South 82°22'00" West, for a distance of 341.89 feet
North 62°21'20" West, for a distance of 366.77 feet
North 41°14'10" West, for a distance of 204.06 feet
North 07°05'10" West, for a distance of 299.01 feet
North 04°49'00" East, for a distance of 549.47 feet
North 10°26'40" West, for a distance of 259.89 feet
North 16°52'20" West, for a distance of 237.89 feet
North 29°22'30" West, for a distance of 334.12 feet
North 46°53'30' West, for a distance of 446.27 feet
North 60°07'30" West, for a distance of 216.77 feet
North 70°28'40" West, for a distance of 343.20 feet
North 85°08'30" West, for a distance of 274.86 feet
North 89°18'00" West, for a distance of 196.58 feet
North 69°07'50" West, for a distance of 201.12 feet
North 14°37'20" West, for a distance of 648.68 feet
North 43°56'50" West, for a distance of 271.27 feet
North 67°25'50" West, for a distance of 245.27 feet,
South 81°44'20" West, for a distance of 1,831.44 feet to a point for the most southerly west corner of the aforementioned 3,000 acre tract, same being the south corner of a 1,416.694 acre tract described in a deed to Cain Chemical, Inc. as recorded in Clerk's File No. 89684 359 in the Brazoria County Clerk's Office, said point being the most southerly west corner of the herein described tract;

THENCE, North 41°21'50" East, along the common line of said 3,000 acre tract and said 1,416.694 acre tract, said line being parallel to the northwest line of the aforementioned Perry and Austin League No. 2, Abstract – 107, for a distance of 4,772.68 feet to an angle point;

THENCE, North 18°38'10" East, continuing along said common line for a distance of 3,632.88 feet to an angle point;

THENCE, North18°27'40" East, continuing along said common line for a distance of 2,650.44 feet to an angle point;

THENCE, North 16°12'50" East, continuing along said common line for a distance of 2,001.53 feet to an angle point;

THENCE, North 05°02'20" East, continuing along said common line for a distance of 889.09 feet to a point in the northwest line of the aforementioned Perry and Austin League No. 2, Abstract – 107, same being the southeast line of the aforementioned S.F. Austin 1- 3/4 League, Abstract No. 37;

THENCE, North 41°21'50" East, continuing along said common line for a distance of 2,337.47 feet to the POINT OF BEGINNING, containing a computed area of 3,000.00 acres (130,680,032 square feet); SAVE AND EXCEPT a 486.00 acre tract as described in a deed to Shintech Incorporated recorded in Clerk's File No. 2007028061in the

Brazoria County Clerk's Office. Said 486.00 acre tract is more particularly described by metes and bounds as follows:

COMMENCING at a concrete monument for the north corner of said Perry and Austin League No. 2, Abstract – 107, said point also is the west corner of the Perry and Austin League No. 7, Abstract – 110, and is in the southeast line of the S.F. Austin 1-3/4 League, Abstract – 37, said point being the north corner of the above described 3000.001 acre tract;

THENCE, South 48°35'40" East, along the northeasterly line of said Perry and Austin League No. 2, Abstract – 107, same being the southwest line of said Perry and Austin League No. 7, Abstract – 110, for a distance of 7,879.72 feet to a point for corner;

THENCE, South 41°24'20" West, for a distance of 270.00 feet to the POINT OF BEGINNING of the herein described 486.00 acre tract;

THENCE, South 48°35'40" East, for a distance of 1,562.10 feet to a point for corner;

THENCE, South 41°21'50" West, for a distance of 3,509.41 feet to a point for corner;

THENCE, South 48°38'10" East, for a distance of 597.23 feet to a point for corner;

THENCE, South 41°21'50" West, for a distance of 546.25 feet to a point for corner;

THENCE, South 48°38'10" East, for a distance of 1,052.98 feet to a point for corner, said point being 148.55 feet northwesterly from the southeasterly line of the aforementioned 3000.00 acre tract;

THENCE, South 41°21'50" West, 148.55 feet northwesterly of and parallel to the southeasterly line of said 3000.00 acre tract for a distance of 2,294.22 feet to a point for corner;

THENCE, North 48°38'10" West, for a distance of 1,291.31 feet to a point for corner;

THENCE, South 41°21'50" West, for a distance of 392.32 feet to a point for corner;

THENCE, South 48°38'10" East, for a distance of 250.03 feet to a point for corner;

THENCE, South 41°21'50" West, for a distance of 2,303.50 feet to a point for corner;

THENCE, South 87°30'56" West, for a distance of 897.89 feet to a point for corner;

THENCE, South 41°21'50" West, for a distance of 707.55 feet to a point for corner;

THENCE, North 48°38'10" West, for a distance of 348.47 feet to a point for corner;

THENCE, South 41°21'50" West, for a distance of 1,831.03 feet to a point for corner;

THENCE, North 48°38'10" West, for a distance of 390.26 feet to a point for corner;

THENCE, South 41°21'50" West, for a distance if 545.80 feet to a point for corner;

THENCE, South 08°38'12" East, for a distance of 1,214.22 feet to a point for corner;

THENCE, South 19°25'38" West, for a distance of 539.14 feet to a point on the edge of water of Chocolate Bayou;

THENCE, along the edge of water of said Chocolate Bayou with the following meanders

South 71°37'18" West, for a distance of 131.08 feet to a point for corner;
South 52°41'04" West, for a distance of 108.94 feet to a point for corner;
South 51°20'47" West, for a distance of 84.44 feet to a point for corner;
North 48°04'41" West, for a distance of 55.73 feet to a point for corner;
North 20°44'23" West, for a distance of 47.32 feet to a point for corner;
North 06°41'49" West, for a distance of 40.46 feet to a point for corner;
North 06°22'53" East, for a distance of 226.62 to a point for corner;
North 03°39'56" West, for a distance of 121.73 feet to a point for corner;
North 02°14'01" West, for a distance of 234.88 feet to a point for corner;
North 11°41'46" West, for a distance of 277.77 feet to a point for corner;
North 20°08'01" West, for a distance of 388.27 feet to a point for corner;
North 24°22'22" West, for a distance of 127.41 feet to a point for corner;
North 34°37'48" West, for a distance of 205.68 feet to a point for corner;
North 42°39'48" West, for a distance of 60.64 feet to a point for corner;
South 85°42'20" East, leaving the edge of water of Chocolate Bayou for a distance of 207.28 feet to a point for corner;

THENCE, North 41°21'50" East, for a distance of 1,302.45 feet to a point for corner;

THENCE, South 48°38'10" East, for a distance of 410.30 feet to a point for corner;

THENCE, North 41°21'50" East, for a distance of 1,831.03 feet to a point for corner;

THENCE, South 48°38'10" East, for a distance of 328.47 feet to a point for corner;

THENCE, North 41°21'50" East, for a distance of 244.83 feet to a point for corner;

THENCE, North 48°38'10" West, for a distance of 406.52 feet to a point for corner;

THENCE, North 41°21'50" East, for a distance of 1,417.98 feet to a point for corner, said point being the point of curvature of a curve to the left;

THENCE, along said curve to the left having a radius of 600.00 feet, a central angle of 78°31'35", (chord bears North 02°06'03" East, 759.46 feet), for an arc distance of 822.33 feet to the point of tangency;

THENCE, North 37°09'44" West, for a distance of 130.76 feet to a point for corner, said point being the point of curvature of a curve to the right;

THENCE, along said curve to the right having a radius of 400.00 feet, a central angle of 46°07'54" east, (chord bears North 14°05'48" West, 313.43 feet), for an arc distance of 322.06 feet to a point for corner;

THENCE, North 41°21'50" East, for a distance of 7,611.86 feet to the POINT OF BEGINNING, containing a computed area of 486.00 acres (211,699,975 square feet). **Leaving a total net acreage of 2,514.00 acres (109,510,058 sq. ft.)**

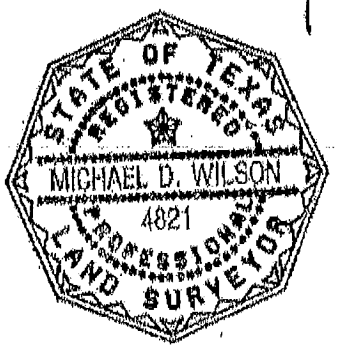
Note:

1. Bearings shown hereon are based on the deed recorded in Clerk's File No. 97 030692 as recorded in the Brazoria County Clerk's Office.
2. A separate exhibit plat has been prepared in connection with this metes and bounds description.

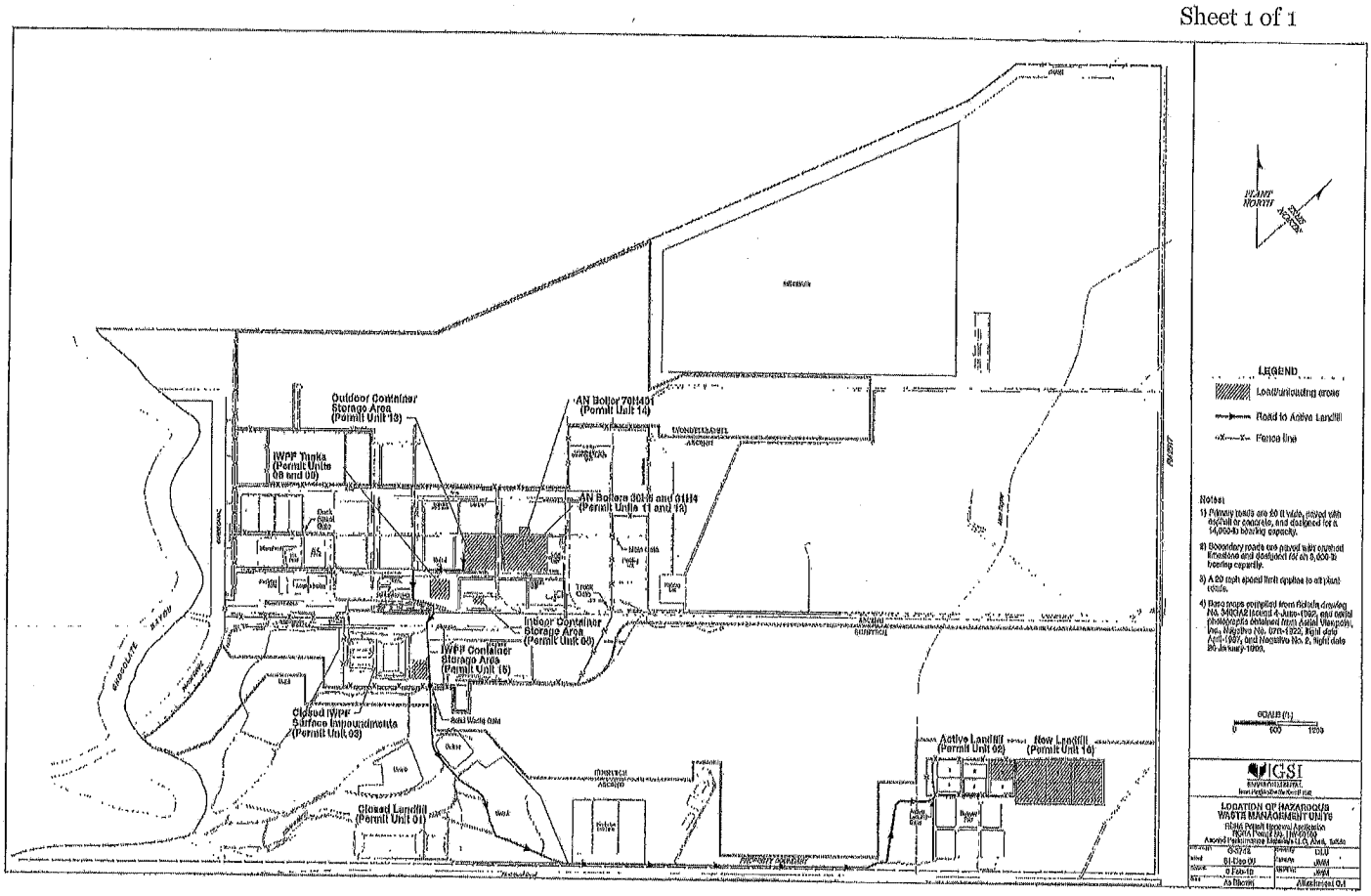
The Wilson Survey Group, Inc.
2006 East Broadway, Suite 105
Pearland, Texas 77581
(281) 485-3991
Job No. 09-135

Michael D. Wilson, R.P.L.S.
Registration No. 4821

06/26/09



Permit No. 50189
Attachment B
Sheet 1 of 1



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

TCEQ Part B Application Form

I. General Information

A. Facility Name
B. Facility Contact
C. Operator
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

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 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
C. Applicants Requesting Facility Expansion, Capacity Expansion, or New Construction

Table VIII.C. - Estimated Capital Costs

IX. Releases From Solid Waste Units And Corrective Action

A. Preliminary Review Checklists
B. Appendices to Preliminary Review
C. Preliminary Review Submittal Format

X. Air Emission Standards

A. Process Vents
B. Equipment Leaks
C. Tanks, Surface Impoundments, and Containers
D. Optional TCEQ Office of Air Quality Information

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

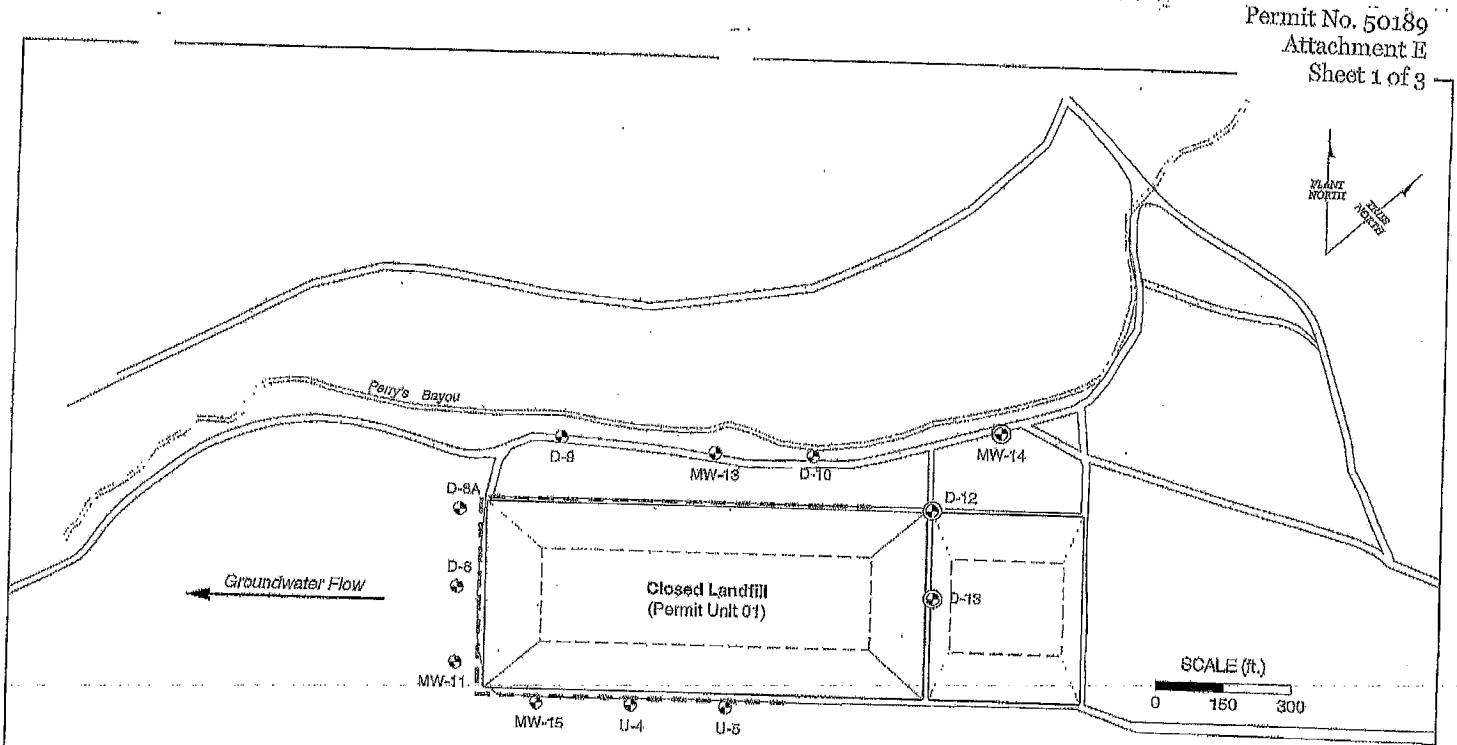
Action and Compliance Monitoring
CP Table II - Solid Waste Management Units and Areas of Concern for which Corrective Action applies pursuant to 30 TAC 335.167
CP T Table III - Corrective Action Program Table of Detected Hazardous and Solid Waste Constituents and the Groundwater Protection Standard
CP Table IIIA - Corrective Action Program Table of Indicator Parameters and the Groundwater Protection Standard
CP Table IV - Compliance Monitoring Program Table of Hazardous and Solid Waste Constituents and Practical Quantitation Limits or Method Quantitation Limits for Compliance Monitoring
CP Table IVA - Compliance Monitoring Program Table of Detected Hazardous Constituents and the Groundwater Protection Standard for Compliance Monitoring
CP Table V - Designation of Wells by Function
CP Table VI - Compliance Period for RCRA-Regulated Units
CP Table VIII - Compliance Schedule
Attachment A - Alternate Concentration Limits
Attachment B - Well Design and Construction Specifications
Attachment C - Sampling and Analysis Plan

XII. Confidential Material

Authorized Facility Units

TCEQ Permit Unit No.	Unit Name	Unit Description	Capacity
01	Closed Landfill (NOR 006)	Secure landfill, above grade, total surface area of all cells approximately 9.2 acres (POST-CLOSURE CARE)	258,000 cu yds
02	Active Landfill (NOR 051)	Secure landfill, above grade, total surface area of all cells approximately 35.52 acres	54,000 cu yds
03	Closed IWPF Surface Impoundments (NOR 005)	Surface impoundments, above grade, complex of six impoundments with maximum areal dimensions of 525 ft by 750 ft (POST CLOSURE CARE)	20,000,000 gallons
04	Oily Water System Forebay (NOR 016)	Surface impoundment, below grade, total surface area not greater than 0.1 of an acre (CLEAN CLOSED)	120,000 gallons
05	Indoor Container Storage Area (NOR 018)	Container storage area	3,960 gal or 29 tons
06	Outdoor Container Storage Area (NOR 019)	Container storage area (CLEAN CLOSED)	22,000 gallons
07	Tanks 337T6, 336T5, and 336S1 (Collectively NOR 025)	Tanks, above-grade (CLEAN CLOSED UNDER INTERIM STATUS)	4,119 gallons
08	IWPF Tank 332T-1 (NOR 059)	Tank, above grade, floating roof, internally coated, carbon steel	1,000,000 gallons
09	IWPF Tank 332T1-2 (NOR 060)	Tank, above grade, floating roof, internally coated, carbon steel	1,000,000 gallons
10	Thermal Desorption Unit (NOR 072)	Miscellaneous unit	5 tons/hr
11	AN Boiler 30H5 (NOR 079)	Boiler	8 tons/hr
12	AN Boiler 31H4 (NOR 080)	Boiler	8 tons/hr
13	Outdoor Container Storage Area (NOR 078)	Container storage area	1,500 tons

TCEQ Permit Unit No.	Unit Name	Unit Description	Capacity
14	AN Boiler 70H401 (NOR 087)	Boiler (CLEAN CLOSED)	10 tons/hr
15	IWPF Container Storage Area (NOR 103)	Container storage area (PROPOSED)	70,200 cu ft
16	New Landfill	Secure landfill, above grade, total surface area of all cells approximately 19.0 acres (PROPOSED)	60,000 cu yds



LEGEND

- Background monitoring well location (not sampled)
- Point of Compliance monitoring well location
- Point of Compliance
- Representative groundwater flow direction
- GWDMP — Groundwater Detection Monitoring Program

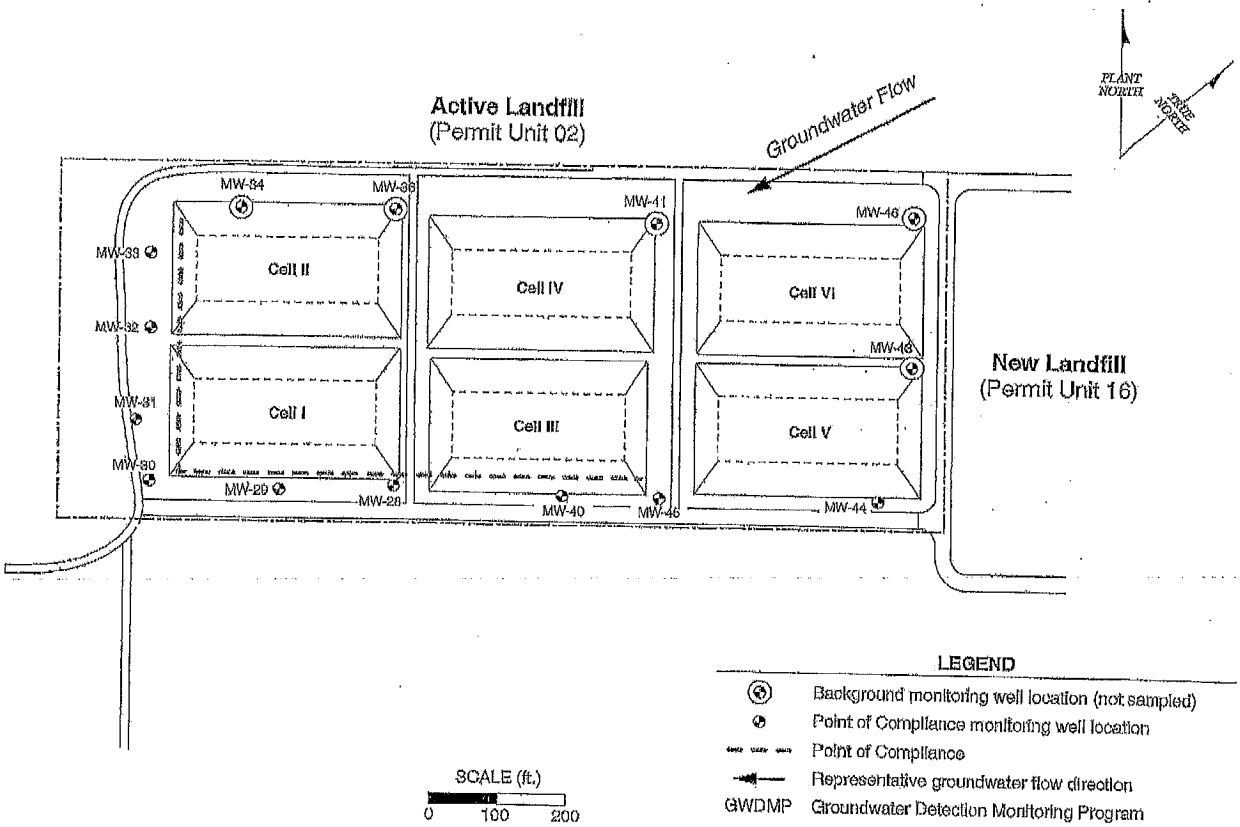
Note: Only wells in the Groundwater Detection Monitoring Program are shown.

GSI ENVIRONMENTAL
Texas Registration Number: F-1105

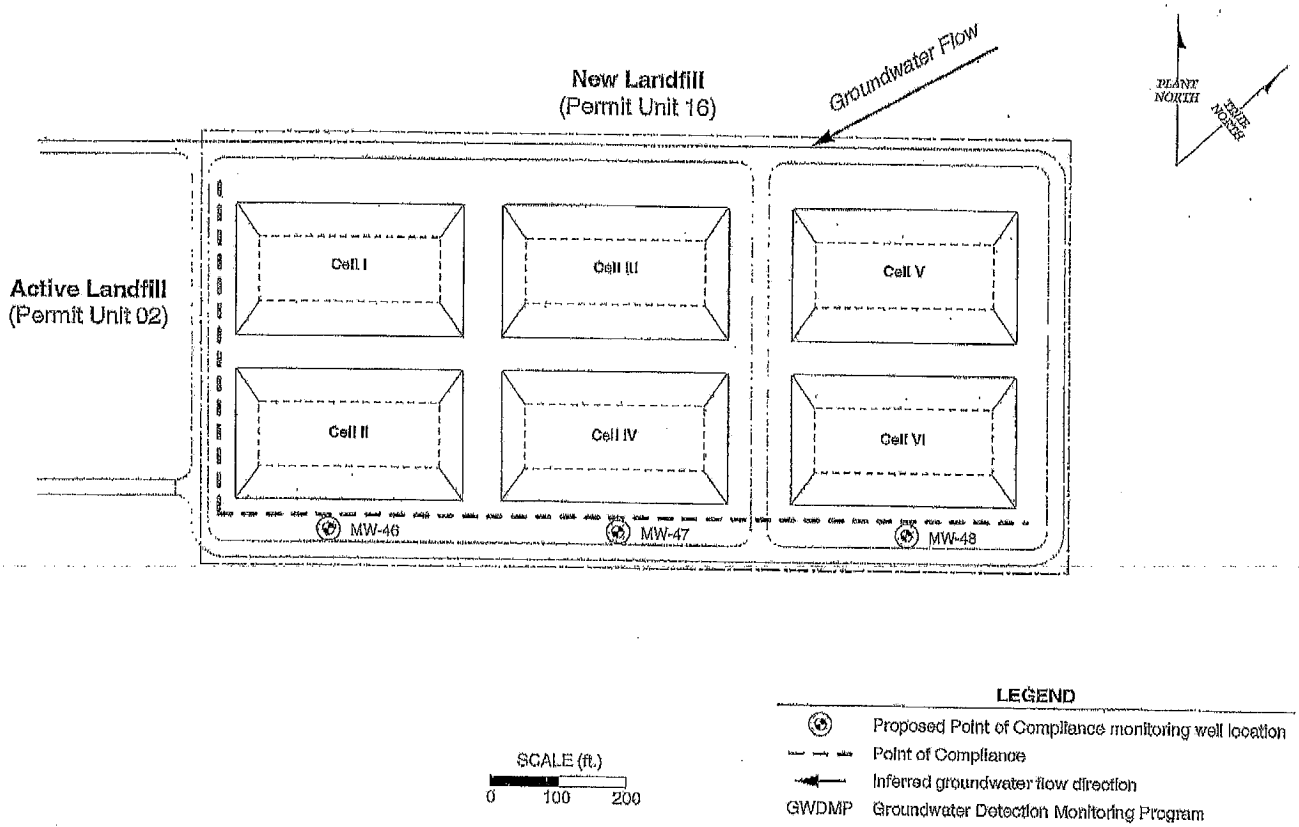
MONITORING WELL NETWORK FOR CLOSED LANDFILL (PERMIT UNIT 01)

RCRA Permit Renewal Application
RCRA Permit No. HW-50189-000
Ascend Performance Materials LLC, Alvin, Texas

GSI Job No:	G-3379	Drawn By:	DLB
Issued:	31-Dec-09	Chkd By:	JMM
Revised:		App'd By:	RSL
Scale:	As Shown	FIGURE VI.18	



GSI ENVIRONMENTAL Texas Registration Number: F-1198	GSI Job No. G-3379 Issued: 31-Dec-09 Revised: —— Scale: As Shown	Drawn By: DLB Chk'd By: JMM Apv'd By: RSL FIGURE VI.19	**MONITORING WELL NETWORK FOR ACTIVE LANDFILL (PERMIT UNIT 02)** RCRA Permit Renewal Application RCRA Permit No. HW-50189-000 Ascend Performance Materials LLC, Alvin, Texas



GSI ENVIRONMENTAL
Texas Registration Number: F-1198

GSI Job No.	G-3379	Drawn By:	DLB
Issued:	31-Dec-09	Chk'd By:	JMM
Revised:	———	Aprv'd By:	RSL
Scale:	As Shown	FIGURE VI.20	

MONITORING WELL NETWORK FOR NEW LANDFILL (PERMIT UNIT 16)
RCRA Permit Renewal Application
RCRA Permit No. HW-50189-000
Ascend Performance Materials LLC, Alvin, Texas

Attachment F - 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 ground water 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 ground-water 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 ground-water 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 ground-water recovery or injection wells to optimize the ground-water 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.

Ground-water 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 ground-water recovery and injection wells, drilling fluids containing freshwater and treatment agents may be utilized in accordance with standard engineering practice to facilitate proper well installation. In these cases, the water and agents added should be chemically analyzed to evaluate their potential impact on in-situ water quality and to assess the potential for formation damage. All such additives shall be removed to the extent practicable during well development.

10. Upon completion of installation of a well, the well must be developed to remove any fluids used during well drilling and to remove fines from the formation to provide a particulate-free discharge to the extent achievable by accepted completion methods and by commercially available well screens. Development shall be accomplished by reversing flow direction, surging the well or by air lift procedures. No fluids other than formation water shall be added during development of a well unless the aquifer to be screened is a low-yielding water-bearing aquifer. In these cases, the water to be added should be chemically analyzed to evaluate its potential impact on in-situ water quality, and to assess the potential for formation damage.

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

11. Each well shall be secured and/or designed to maintain the integrity of the well borehole and ground water.

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 76.1000 through 76.1009 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 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 form:

    This is to certify that installation (or abandonment and plugging) of the following facility components authorized or required by TCEQ Permit No. HW- ***** 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. HW-*****." (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.

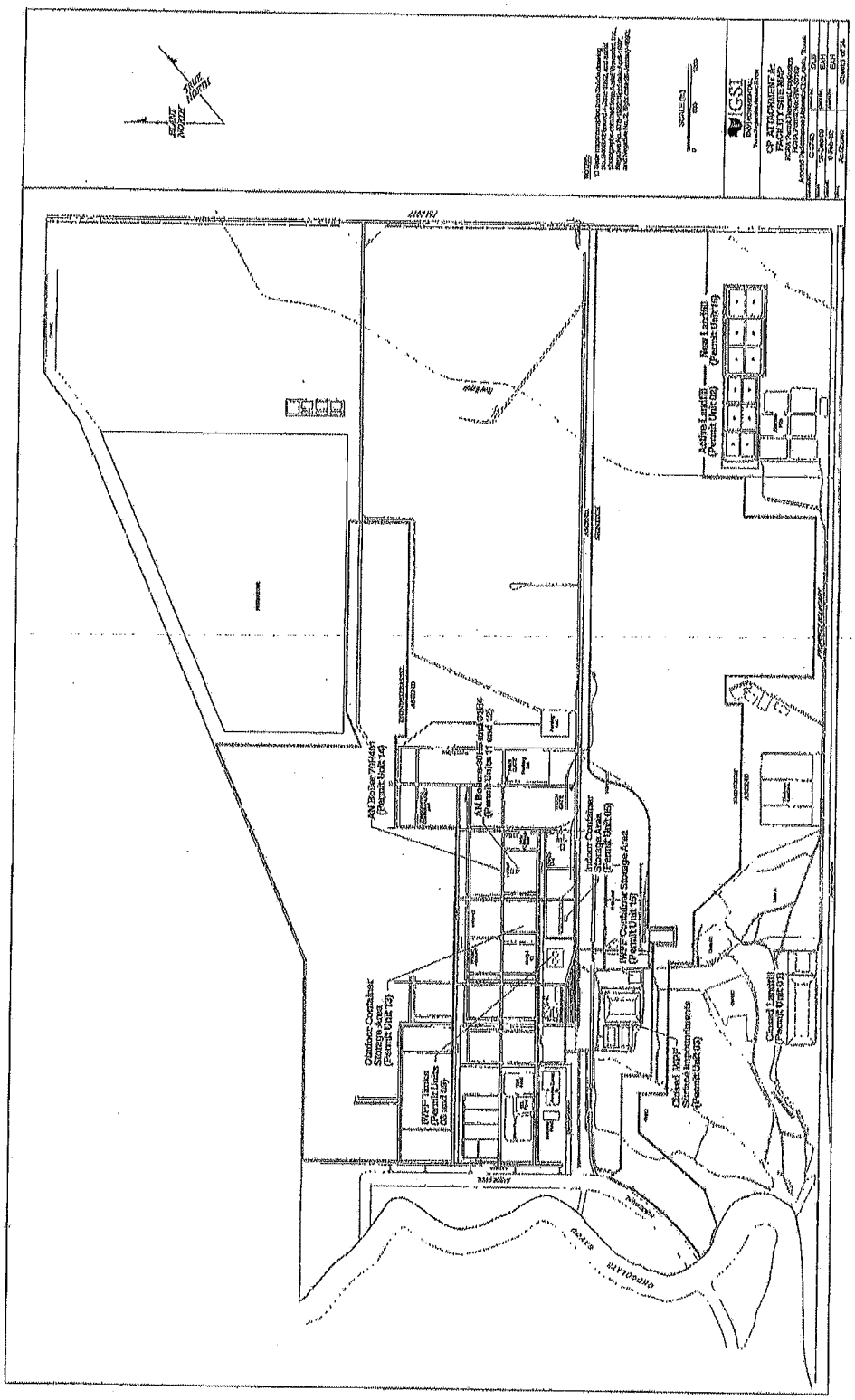
16. The Permittee shall measure and keep a record of the elevation of the top of each well casing in feet above mean sea level to the nearest 0.01 foot and permanently mark the measuring point on the well. The Permittee shall compare old and new elevations from previously surveyed wells and determine 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 ground-water quality.

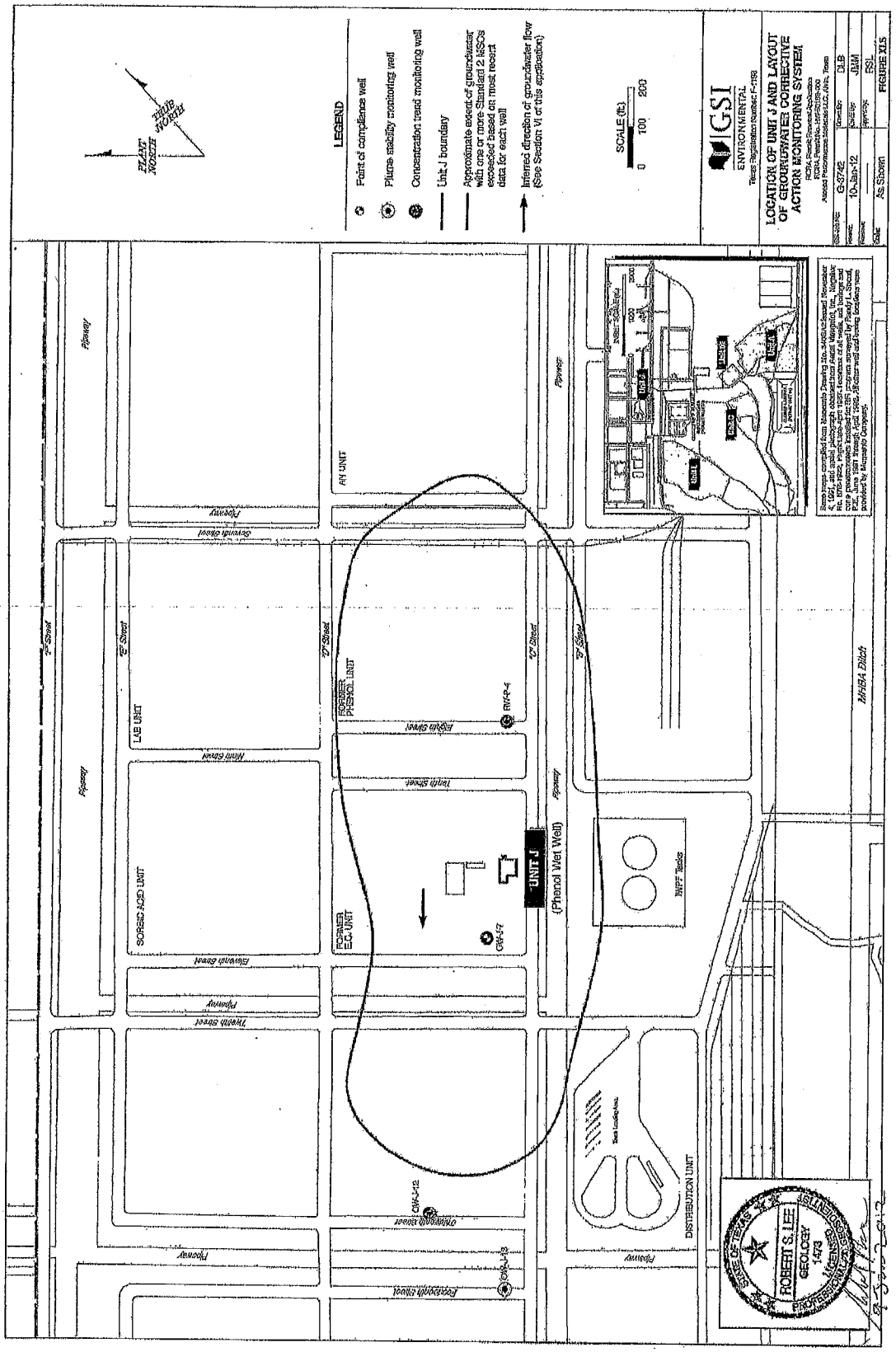
18. The Permittee shall plug soil test borings and wells removed from service after issuance of the Compliance Plan with a cement/bentonite grout mixture so as to prevent the preferential migration of fluids in the area of the borehole. Certification of each plugging shall be reported in accordance with Provision 14 of this attachment to this permit. The plugging of wells shall be in accordance with 16 TAC § 76.1000 through § 76.1009 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.

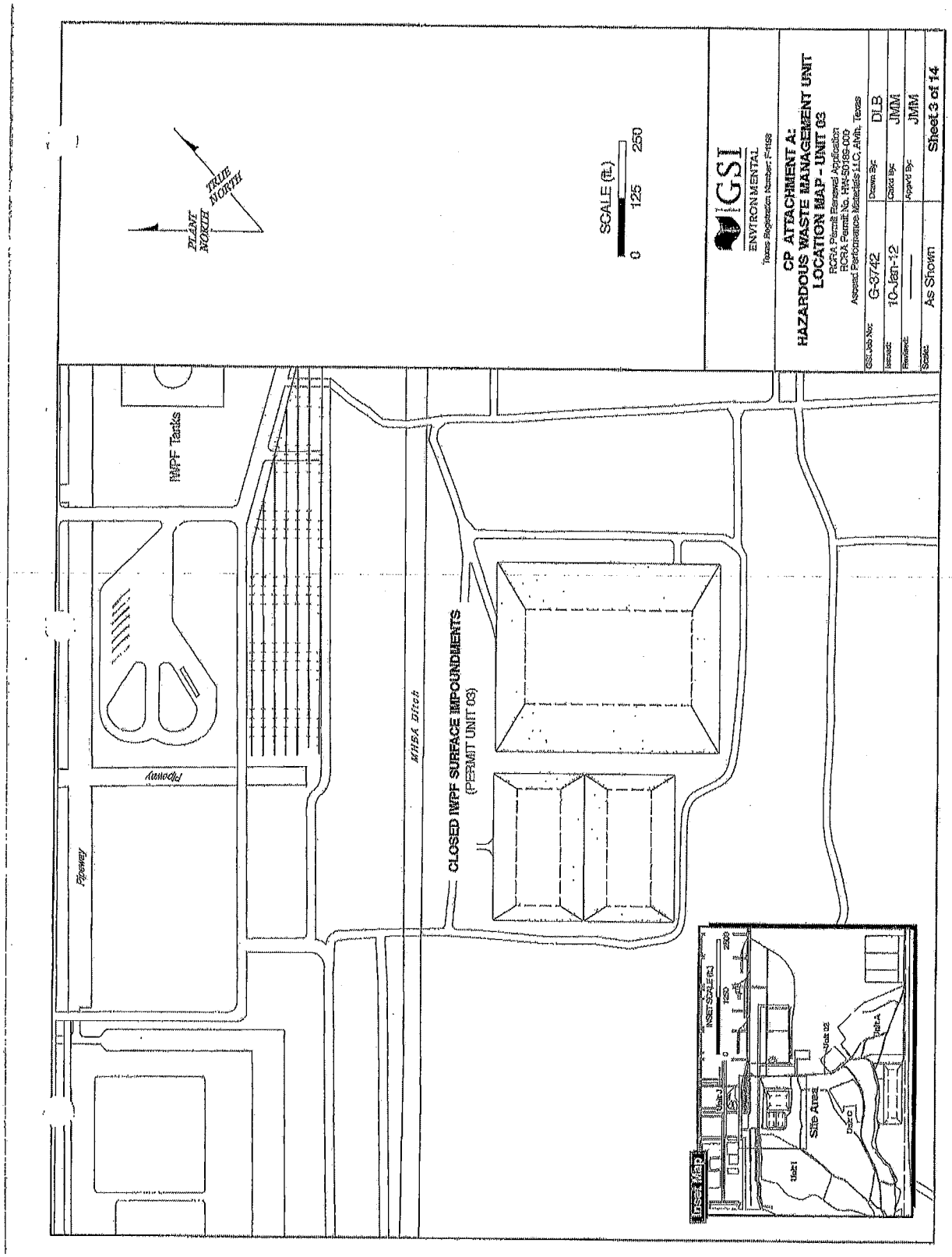
CP ATTACHMENT A, FACILITY SITE MAP



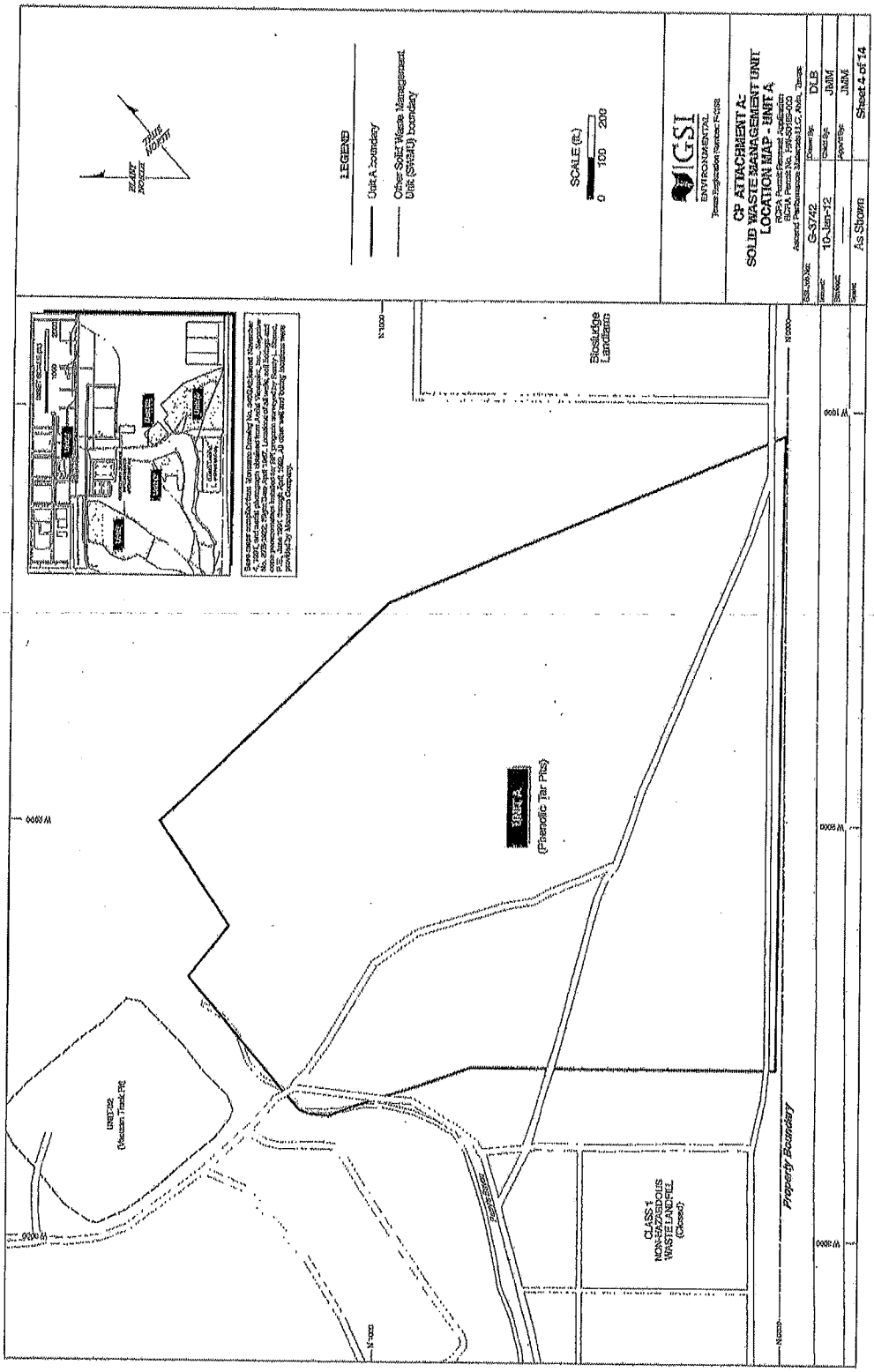
CP ATTACHMENT A, LOCATION OF UNIT J AND LAYOUT OF GROUNDWATER CORRECTIVE ACTION MONITORING



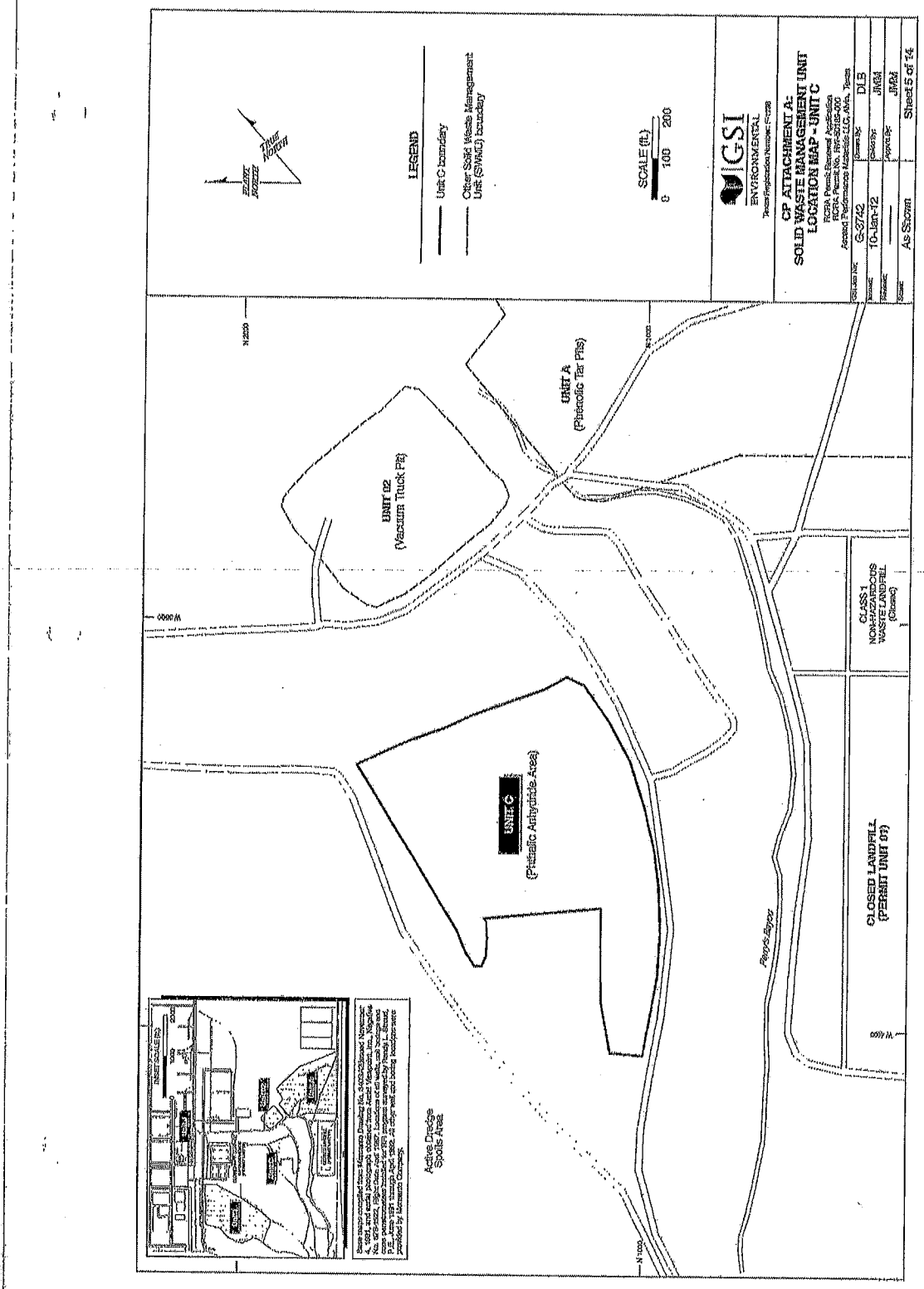
CP ATTACHMENT A, HAZARDOUS WASTE MANAGEMENT LOCATION MAP - UNIT 03



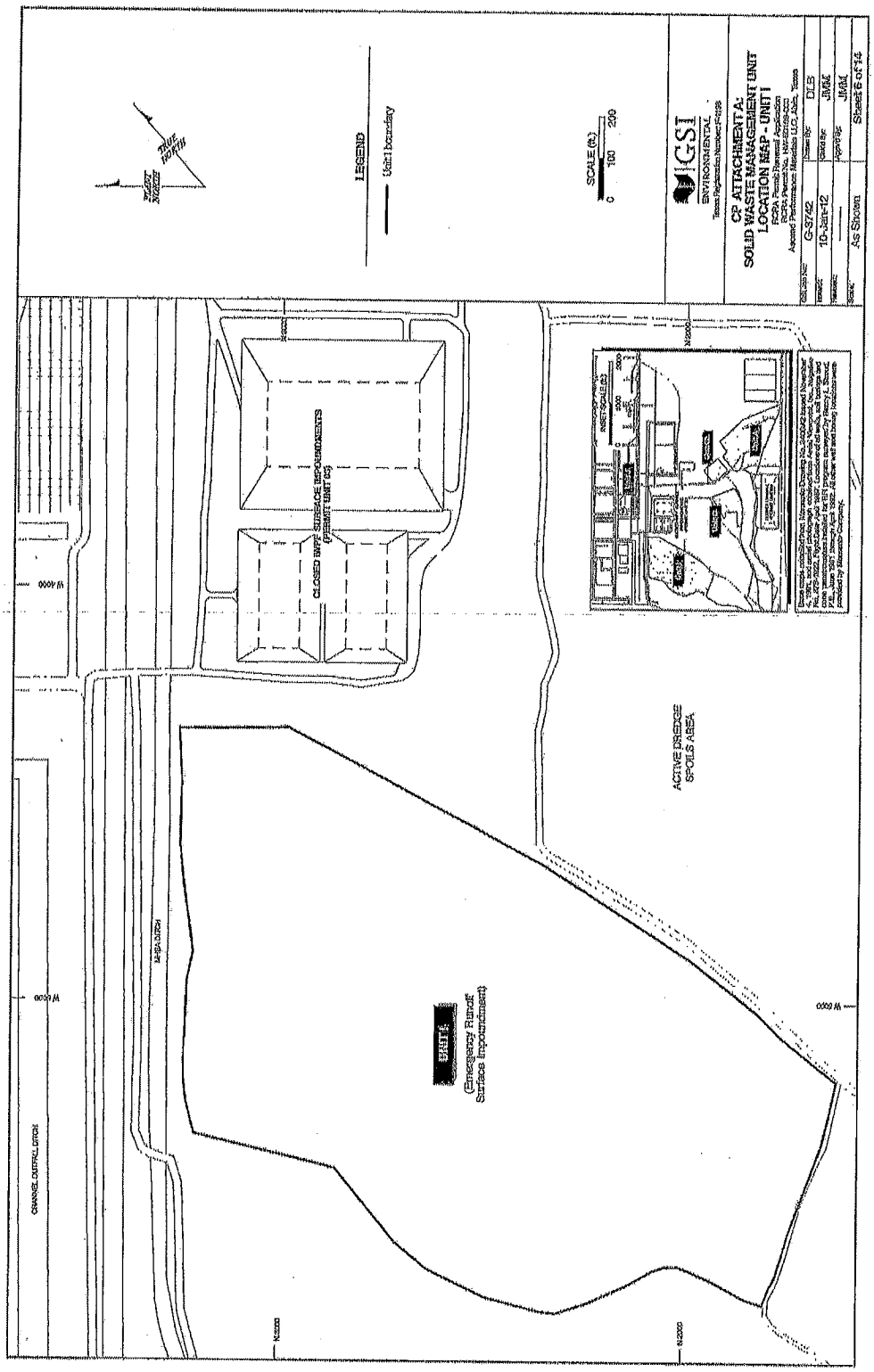
CP ATTACHMENT A, SOLID WASTE MANAGEMENT UNIT LOCATION MAP – UNIT A



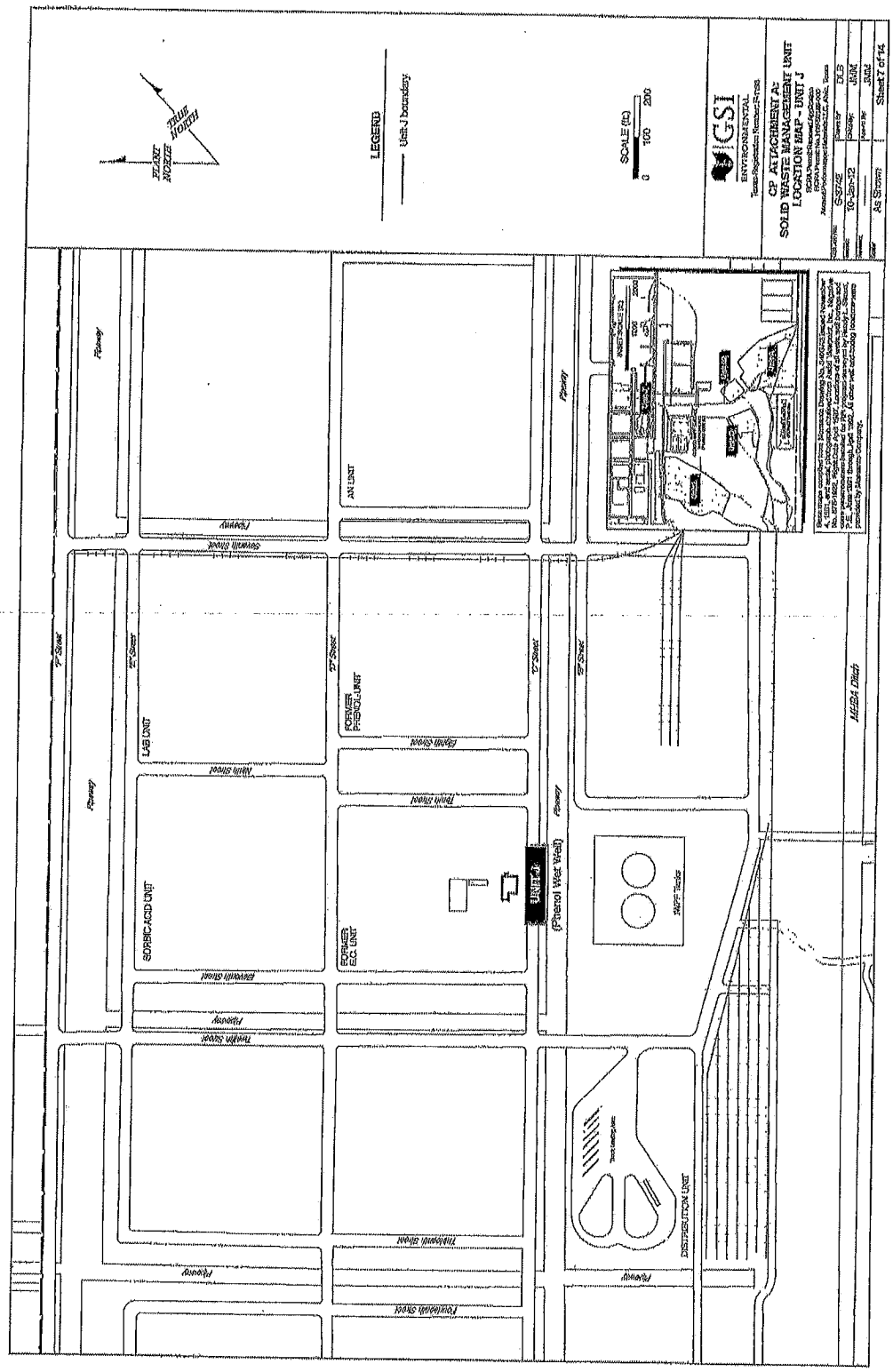
CP ATTACHMENT A, SOLID WASTE MANAGEMENT UNIT LOCATION MAP – UNIT C



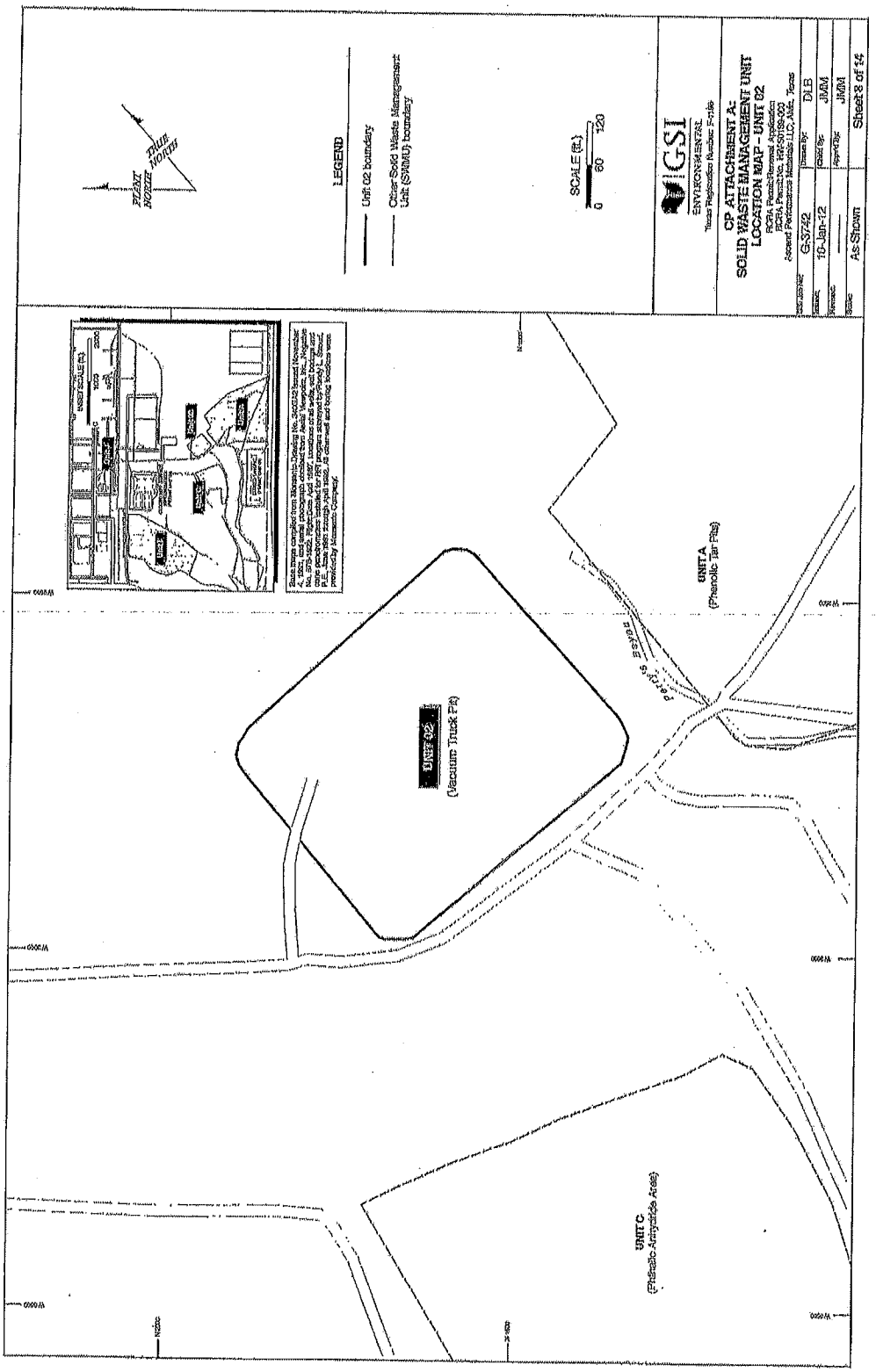
CP ATTACHMENT A, SOLID WASTE MANAGEMENT UNIT LOCATION MAP – UNIT I



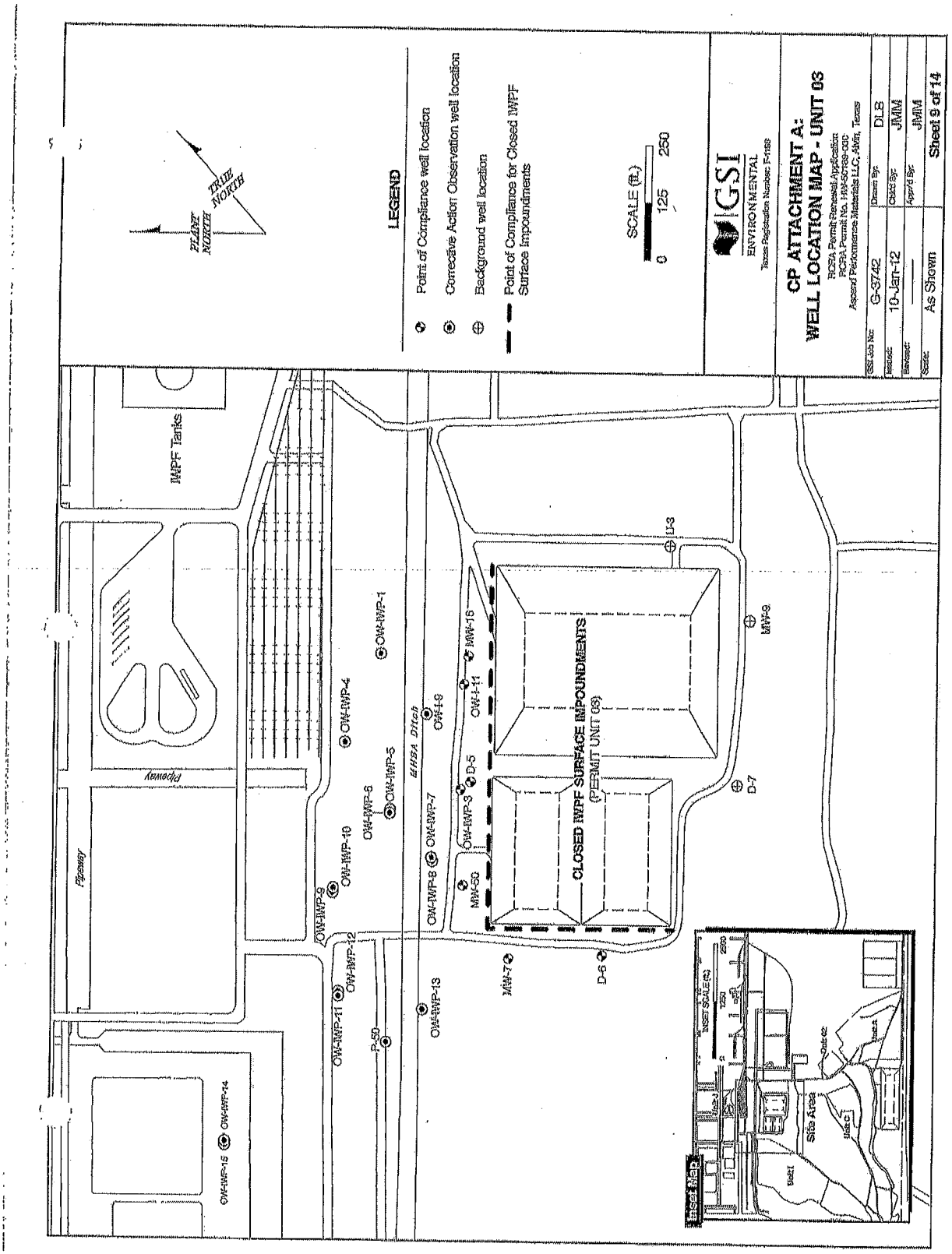
CP ATTACHMENT A, SOLID WASTE MANAGEMENT UNIT LOCATION MAP – UNIT J



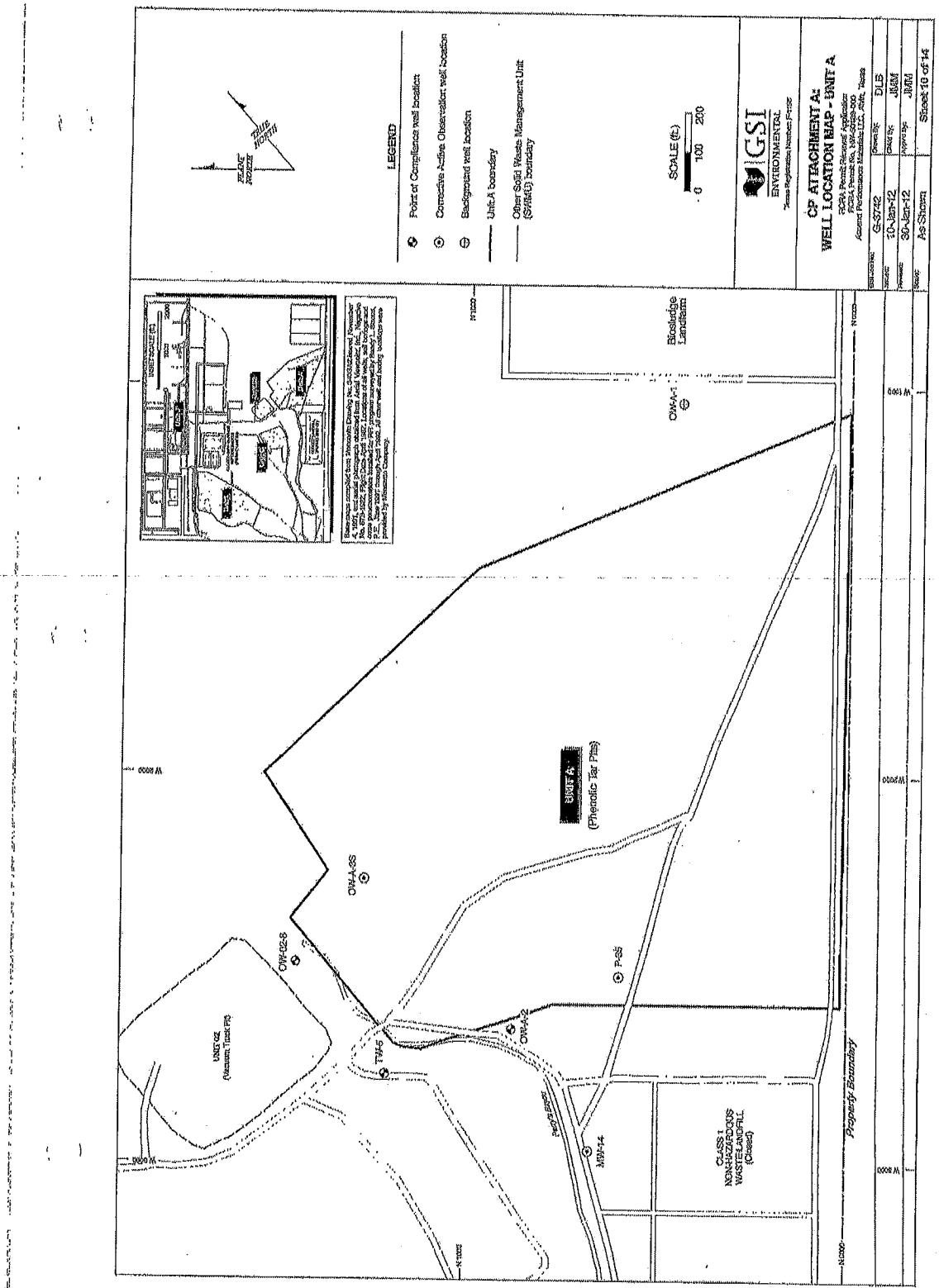
CP ATTACHMENT A, SOLID WASTE MANAGEMENT UNIT LOCATION MAP – UNIT 02



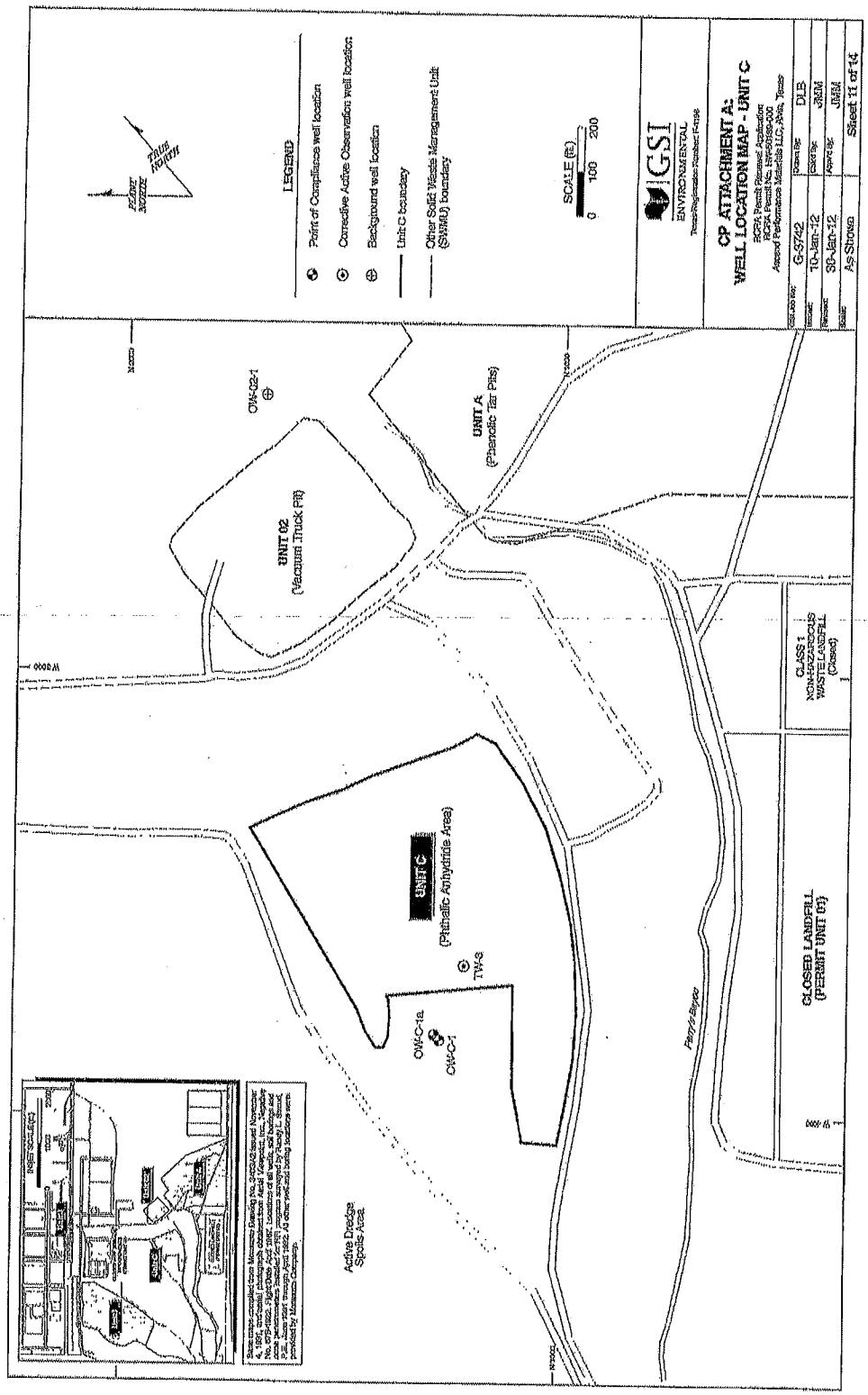
CP ATTACHMENT A, WELL LOCATION MAP – UNIT 03



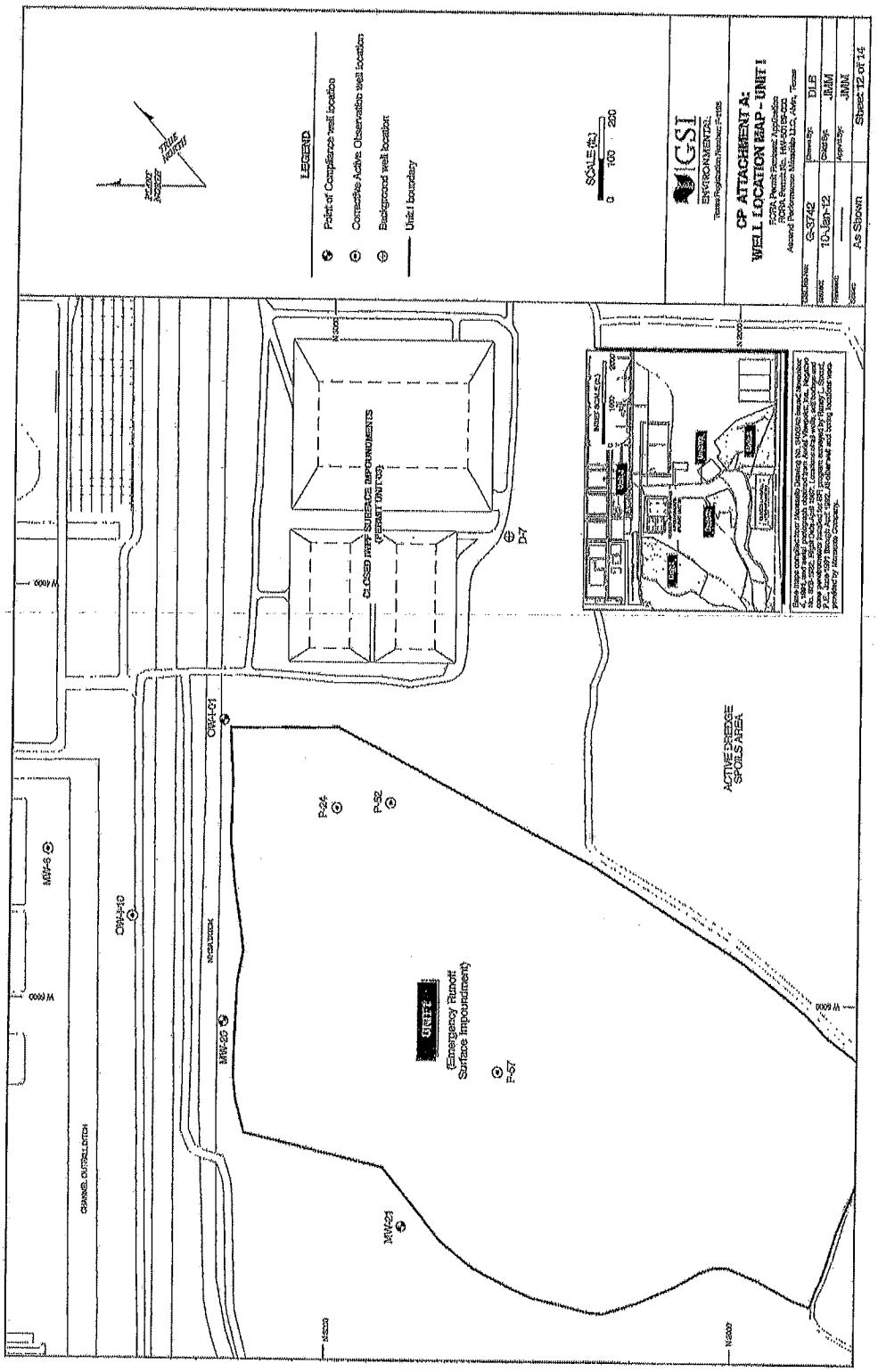
CP ATTACHMENT A, WELL LOCATION MAP – UNIT A



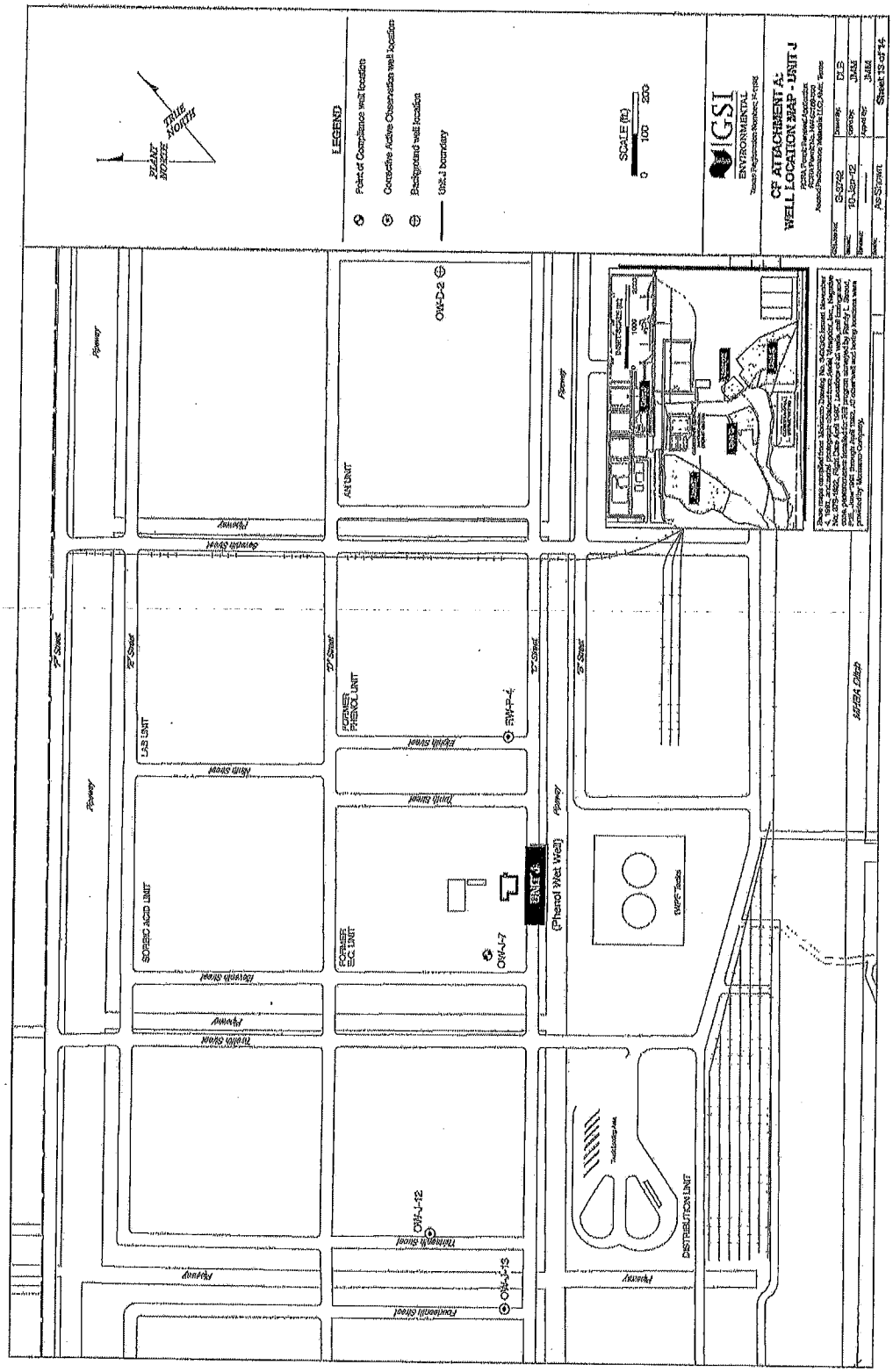
CP ATTACHMENT A, WELL LOCATION MAP – UNIT C



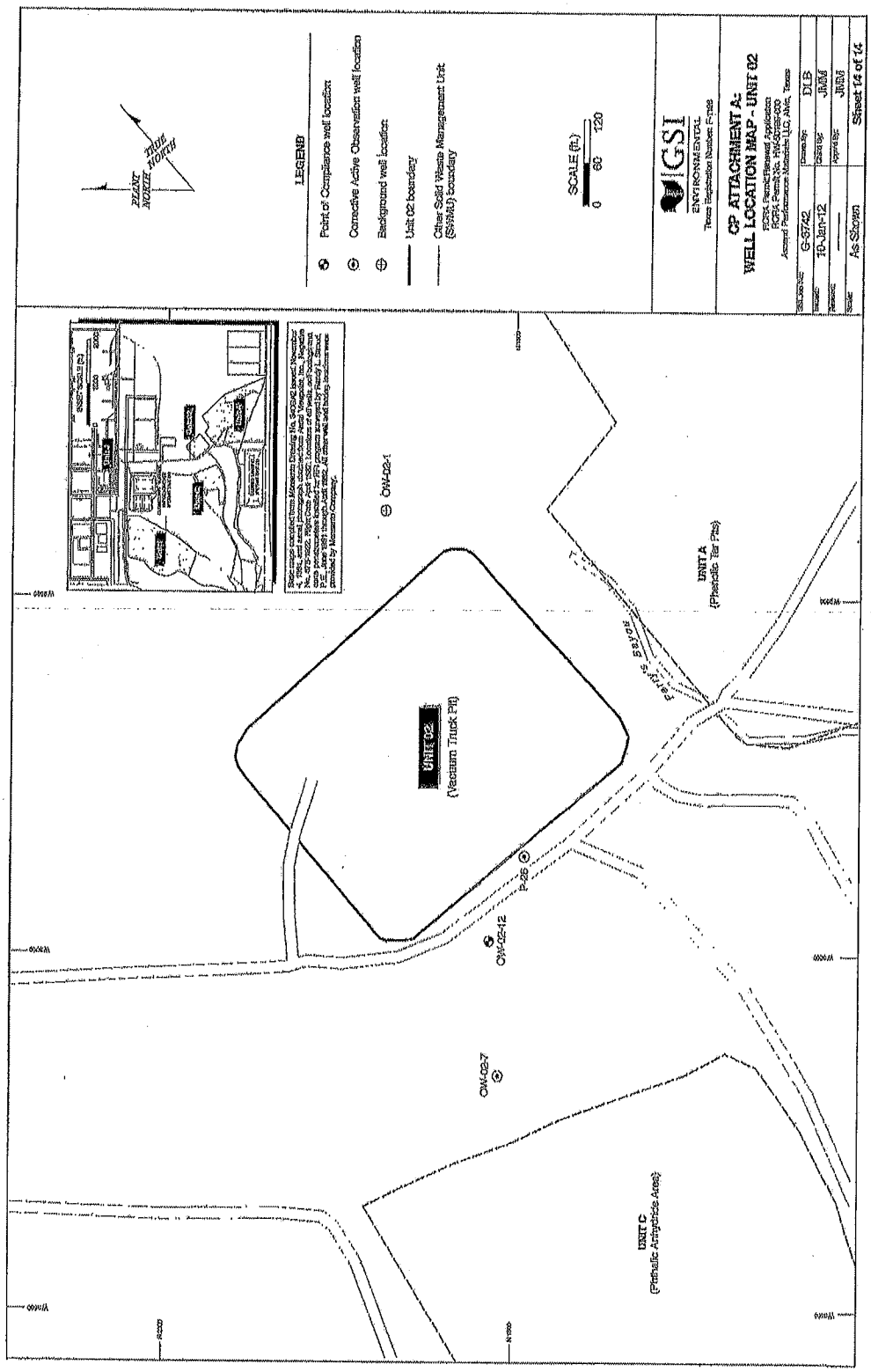
CP ATTACHMENT A, WELL LOCATION MAP – UNIT I



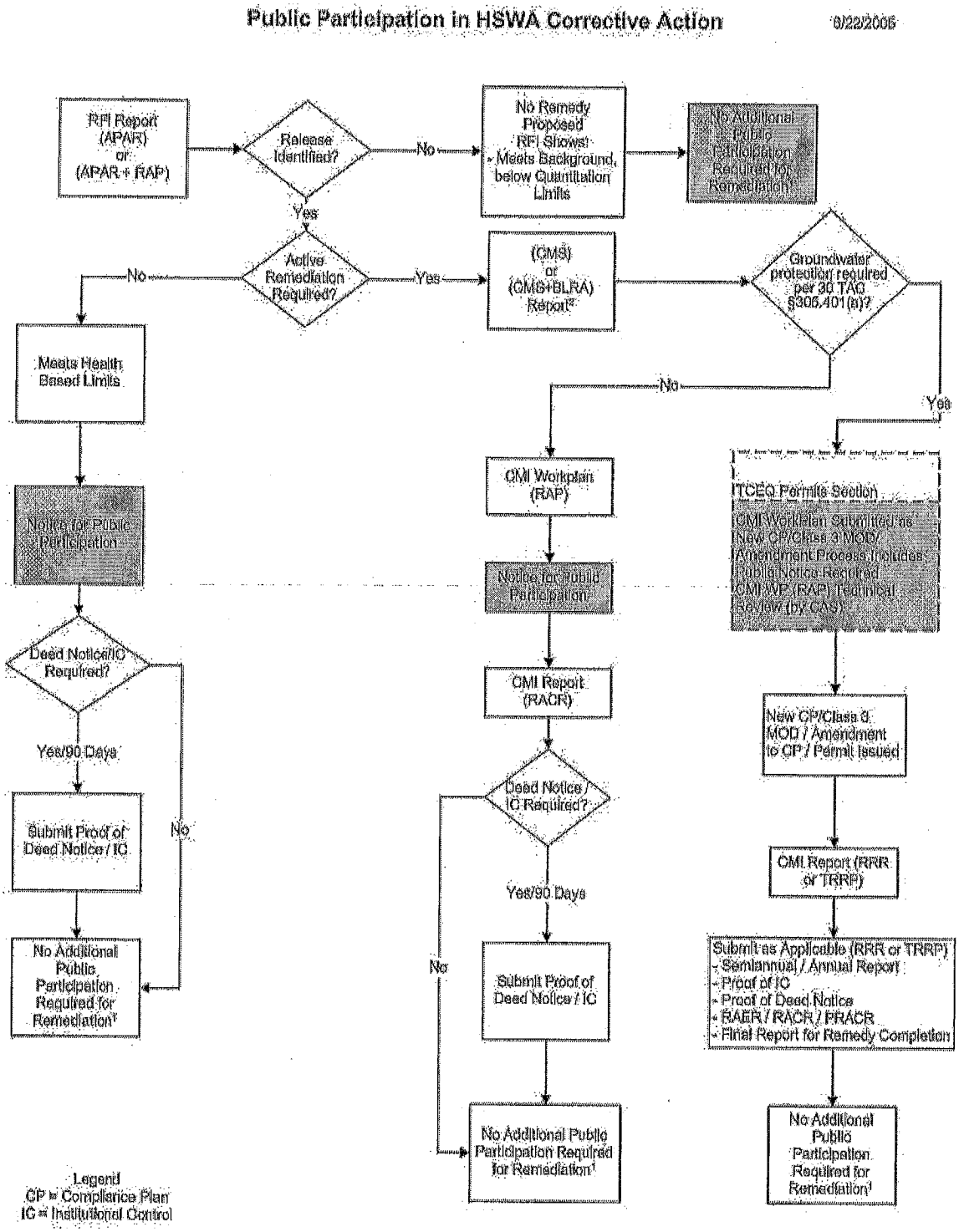
CP ATTACHMENT A, WELL LOCATION MAP – UNIT J



CP ATTACHMENT A, WELL LOCATION MAP – UNIT 02



CP Attachment B, Sheet 1 of 1



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.

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.

    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. The attached Table Of Well Construction Details is to be completed or updated for each well installed and kept on site. Items in the table that require a yes or no answer indicate diagrams plans, or procedures that shall be kept on site and made available to inspection. The completed table and other records shall include all of 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.

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 CP 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 CP 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 XI.B.1 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 XI.B.2, shall commence upon written approval of the Executive Director. The well shall be plugged and abandoned in accordance with requirements of this Attachment C. The Permittee shall certify proper plugging and abandonment in accordance with CP 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 in the first report submitted pursuant to CP Table VII following installation or plugging and abandonment. Copies of the State of Texas Plugging Report filed with the Texas Department of Licensing and Regulation and 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:

"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 Compliance Plan No. (Insert CP number):" (Add description of facility components with reference to applicable Compliance Plan provisions).

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.

Table Of Well Construction Details

Well number					
Hole diameter (in)					
Well diameter (in)					
Total borehole depth (ft)					
Constructed well depth (ft)					
Well location available (Y/N)					
Intended Use of Well (sampling, recovery, etc.)					
Drilling & lithologic logs available (Y/N)					
Drill method					
Date drilled					
Casing I.D (in)					
Casing type/materials					
How joined					
Stick-up length					
Top of casing (+0.01 MSL)					
Ground surface elevation (+0.01 MSL)					
Capped/lockable					
Surface pad size(ft)					
Detailed drawing of well (include dimensions) Y/N					
Depth to surface seal(ft)					
Surface seal design & construction available (Y/N)					
Well development procedure available (Y/N)					
Annulus fill					
Depth to annulus seal(ft)					

Depth to gravel pack(ft)					
Depth to 1st saturated zone					
Length of gravel pack(ft)					
Size-gravel pack					
Filter pack volume (how many bags, buckets, etc.)					
Filter pack placement method					
Depth to screen(ft)					
Sealant materials					
Sealant volume (how many bags, buckets, etc.)					
Sealant placement method					
Screen slot size/length(in)					
Screen type					
Screen length(ft)					
Blank length(ft)					
Dev. method					
Well coordinates (lat & long)					