CLEAN HARBORS DEER PARK – PROPOSED PCB STORAGE AND DISPOSAL APPROVAL AND SUPPORTING DOCUMENTS

APPENDICES

CONDITIONS OF APPROVAL
FOR INCINERATION AND COMMERCIAL STORAGE
OF LIQUID AND SOLID PCBs
AT CLEAN HARBORS DEER PARK, LLC
LA PORTE, TEXAS

This approval is issued pursuant to Section 6(e) of the Toxic Substances Control Act (TSCA) and the federal Polychlorinated Biphenyls (PCB) Regulations, 40 CFR Part 761.

The terms and abbreviations in these conditions are in accordance with those defined in 40 CFR § 761.3 unless otherwise noted. The term "Facility" hereinafter refers to Clean Harbors Deer Park, LLC.

I. LOCATION OF FACILITY

The Facility is located at 2027 Independence Parkway South, La Porte, Texas.

II. PCB WASTE AND UNITS AUTHORIZED

A. PCB WASTE UNITS AUTHORIZED

The Facility is authorized for commercial storage and disposal by incineration of liquid and solid polychlorinated biphenyls (PCBs) regulated pursuant to 40 C.F.R. 761.

B. FACILITY UNITS AUTHORIZED

The Facility shall comply with 40 C.F.R. § 761.65 (Storage for disposal) and 40 C.F.R. §761.70 (Incineration), unless otherwise specified in these conditions, in the following authorized disposal and storage areas:

1. The "Train 1" incinerator (design capacity of 216 MMBtu) consisting of a shredder and shredded material repackaging area, bulk feed tank, bulk feed system, rotary kiln, afterburner, pollution control system and related bulk liquid tanks.

2. The bulk feed tanks numbered as:

   a. Tanks T-1, T-2, T-18R, T-19, T-31, T-32, T-60, T-61, T-70, T-71, T-75 and V-109 with a total design capacity of 529,200 gallons.

   b. Tanks T-29, T-30 and the Tank Truck Storage Pad with a total design capacity of 83,800 gallons.

3. The PCB storage areas, consisting of the warehouse, DSP-4, DSP-5 and DSP-7, with a total

design storage capacity of 520,800 gallons

4. The Transformer & Drum Handling Building with a total design capacity of 163,980 gallons.

5. The Bulk Storage Area (BSA) consisting of BSA-1 BSA-2, and BSA-3 with a total design capacity of 7,800 cubic yards.

6. Bulk Feed Tank, T-201, with a total design capacity of 7,198 gallons.

7. Bulk Container Storage Area, DSP-11, with a total design capacity of 305,795 gallons.

C. AUTHORIZATION TO OPERATE ADDITIONAL UNITS

1. For a new disposal or storage unit not identified in II.B. above, the Facility shall not commence storage or disposal in the new unit until it has notified the EPA Region 6 PCB Coordinator and received a written approval from the EPA authorizing the new unit for PCB storage or disposal.

2. For expansion in capacity or major modification of an existing unit, the Facility shall not store or dispose of PCBs in the modified unit until it has notified the EPA Region 6 PCB Coordinator and received a written approval from the EPA for the expansion or modification. A major modification shall be defined as a change in the configuration or location of those authorized units listed in II. B. above.

III. FACILITY OPERATION

A. GENERAL OPERATING REQUIREMENTS:

1. The Facility shall at all times during PCB storage and disposal, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used to achieve compliance with the conditions of this approval. Proper operation and maintenance include effective performance, adequate funding, adequate operator staffing and training and adequate laboratory and process controls, including appropriate quality assurance procedures.

2. All transport vehicles owned by the Facility and used for the transport of PCBs on public highways shall be properly maintained and inspected as required by the applicable Department of Transportation regulations.

B. PCB INCINERATOR OPERATING REQUIREMENTS

1. Clean Harbors Deer Park shall commence a PCB Trial Burn in conjunction with the facility's Clean Air Act Comprehensive Performance Test (CPT) on or before May 31, 2026, to confirm compliance with the incineration requirements in 40 CFR § 761.70. Written reports discussing the results of the testing or monitoring shall be submitted to the EPA Region 6 PCB Coordinator within 120 days of this test.

2. At all times during PCB disposal, the incinerator shall meet the incineration operating requirements specified in 40 CFR § 761.70 (a) and (b) except for the minimum temperature requirement and minimum residence time requirement under 40 CFR § 761.70(a)(1)(i), which is replaced as required by condition B. 6. a. of this section and condition B.13 after demonstration of PCB destruction efficiency of at least 99.9999 percent in the TSCA PCB Trial Burn report dated May 2006.

3. The Facility shall analyze each batch feed of PCBs from each liquid/sludge feed tank, or liquid sludge container of PCBs, for PCB concentration prior to the waste being introduced into the incinerator. The results of the analysis shall be recorded and kept on file. All PCB analyses shall be completed in accordance with the Facility Waste Analysis Plan (WAP) for PCBs.

4. The Facility shall take a representative sample, consisting of at least three aliquots, out of ten percent of the drums in each shipment of PCB solids (other than PCB Capacitors) to be fed to the incinerator system. A "shipment" is defined as one or more drums of PCB material that have come from the same source of contamination as identified by the generator's waste profile. For shipments of less than ten drums, at least one drum shall be sampled to verify the generator's waste profile. If more than one drum is sampled, the representative samples from each drum may be composited into one sample. The sample shall be analyzed for PCBs, and the results compared with the generator's waste profile. The results of the analysis shall be kept on file. The weight of each drum shall also be recorded, and the results kept on file. For drums containing only shredded PCB Capacitors, the PCB concentration shall be recorded as 35 percent of the total weight of the contents of each drum.

5. The PCB feed rate of liquids and/or solids shall not exceed 3,057 pounds per hour (on an hourly rolling average) as measured on a weight basis.

6. The flow of PCBs to the incinerator shall stop automatically under any of the following conditions:

    a) the temperature drops below 1008^{o}C (or 1846^{o}F) as measured by the thermocouple located in the "hot duct" leading to the wet scrubber;

    b) the combustion efficiency falls below 99.9% as calculated in 40 CFR § 761.70(a)(2). CO and CO_2 CEMs in the incinerator stack, shall be calibrated and maintained to

provide the data needed to calculate the combustion efficiency;

c) the excess oxygen (O_2) drops below three (3) percent (the monitor shall be calibrated once each 24-hour day by certified zero and span gas and there shall be a minimum of 18 hours between routine calibrations);

d) there is a loss of primary combustion air to the burner; or,

e) there is a loss of water to the quench.

7. The facility shall electronically submit the required notifications within 30 days of an automatic waste feed cutoff (AWFCO) event per 40 CFR § 761.180(c)(5).

8. The Facility shall operate the incinerator under negative pressure. Pressure in the combustion zone shall be monitored and recorded on a continuous basis. The PCB waste feed shall cut off automatically if the pressure remains positive for 10 consecutive seconds. PCBs shall not be re-introduced into the incinerator until the unit returns to negative pressure.

9. The Facility shall cease incineration of PCBs upon notification by the EPA or the Texas Commission on Environmental Quality (TCEQ) of an Ozone Alert for Houston, Texas, until an "all clear" is issued in accordance with the Texas State Implementation Plan (SIP).

10. Kiln ash from PCB incineration which contains less than 2.0 parts per million (ppm) PCBs shall be placed in a hazardous waste landfill approved by the appropriate agency to dispose of such wastes under the Resource Conservation and Recovery Act (RCRA) regulations. Kiln ash containing 2.0 ppm PCBs or greater shall be reintroduced into the kiln until the PCB concentration is less than 2.0 ppm or sent to an approved PCB landfill. The Facility shall sample and analyze 100 percent of the kiln ash containers receiving PCB ash each day PCB ash is generated. A sample shall consist of at least three (3) aliquots of ash composited into one sample for each ash container. Emissions from hot ash collection hoppers shall be channeled back into the incinerator combustion system.

11. While incinerating PCB wastes, the Facility shall comply with the total particulate emissions limits, chlorine feed rate limits and metals limits, including mercury, required by the effective RCRA permit and requirements under Hazardous Waste Combustion (HWC) MACT EEE.

12. The Facility shall have in place, before PCBs are fed to the incinerator, an operational system to monitor the British Thermal Unit (Btu) value of incinerator liquid waste feed containing PCBs. Liquid PCB wastes shall be fed to the incinerator only from feed lines that are controlled by the PCB automatic trip valves for temperature, excess oxygen and carbon monoxide (CO). Bulk feed tanks shall be designed to ensure a uniform

commingling of container material such that 4-hour feed stream sampling for each feed tank shall not vary in Btu or chlorine value (by weight) greater than ten (10) percent.

13. The Facility shall not exceed a stack gas flow rate of 48,892 dscfm on Hourly Rolling Average (HRA), as established during 2006 CPT. EPA considered the DRE results of the Train I 2006 CPT and residence time of 1.77 seconds in granting the waiver from 2 sec residence time (761.70 (d)(5))

14. Ash shall be removed from the rotary kiln using the deslagger on a continuous basis.

15. The Facility shall comply with its PCB Operators Manual for onsite handling of PCBs. The manual shall be updated as procedures are changed, and a copy of the revised manual shall be submitted to the EPA Region 6 PCB Coordinator, within ten (10) workdays.

16. The continuous carbon monoxide and excess oxygen monitors shall meet the certification requirements of 40 CFR Part 60, Appendix B. The temperature thermocouple shall have an accuracy range within three (3) percent.

17. The Facility shall implement the conditions of its "Housekeeping Plan" for the PCB shredder loading area and the shredded material repackaging area.

C. PCB STORAGE AREA OPERATING REQUIREMENTS

1. The Facility shall store PCBs and PCB Items only in the areas designated in condition II. B.

2. Adequate aisle space shall be maintained to allow for unobstructed access to all PCB items stored on-site by personnel, fire protection equipment and decontamination equipment.

3. The Facility shall not exceed the maximum storage inventory of PCBs indicated in condition II. B. Requests for increasing the maximum inventory shall be submitted and approved by EPA Region 6 in writing prior to storage of additional PCB inventory.

4. The Facility shall verify the PCB content of PCB Items before accepting the material for storage. Sampling and analytical methods shall conform to the EPA regulations and guidance. Results of all analyses shall be recorded and kept on file.

5. The Facility shall maintain a training manual for training its new employees on the proper management of PCB materials. New employees shall be trained, as specified in the manual, prior to entering the storage areas. The manual shall address the regulatory requirements of 40 CFR § 761.65. Also included in the training plan shall be the specifics of the Safety Plan, Contingency Plan and Emergency Procedure, as well as the Spill

Prevention Control and Countermeasure (SPCC) Plan. A signature sheet shall be included to verify personnel participation.

D. CLOSURE AND FINANCIAL ASSURANCE REQUIREMENTS

1. The Facility shall comply with the closure regulations pursuant to 40 CFR § 761.65 (d)-(g), except for any requirements that are specifically waived in this approval.

2. The Closure Cost Estimate shall be updated to adjust for inflation annually, or within 30 days after EPA approval of any modification to the Closure Plan that increases the expected costs of closure.

3. The Facility shall amend the Closure Plan and current Closure Cost Estimate whenever changes in operating plans or Facility design affect the Closure Plan or whenever there is a change in the expected year of closure. In the event Facility officials become aware of information that tends to show that the estimated costs associated with performing closure of the Facility may exceed the current Closure Cost Estimate approved by the EPA, the Closure Plan shall be modified and submitted to the EPA for approval.

4. Financial assurance, at least equivalent to that specified in 40 CFR § 761.65(g) and 40 CFR Part 264, Subpart H, shall be maintained by the Facility to provide funding for proper closure. The closure plan shall also provide for the decontamination and/or disposal of PCB-contaminated equipment and materials at an EPA-approved PCB disposal facility.

5. Any payment required to establish or continue the financial assurance mechanism used to satisfy the financial requirements shall be made when due. Written verification of the payments shall be furnished to the EPA Region 6 PCB Coordinator within 30 days of the payment due dates. The Facility shall also submit such documentation, as the EPA may require, to determine whether the financial assurance requirements for this approval have been met.

6. The Facility shall submit documentation of continued financial assurance annually to the EPA Region 6 PCB Coordinator.

7. The Facility shall notify the EPA Region 6 PCB Coordinator at least 60 days prior to the date closure is expected to begin.

8. Upon termination of PCB storage activities, the Facility shall proceed according to the provisions of the approved Closure Plan. The word "termination" means cessation of PCB storage operations required by expiration, termination or revocation of this approval.

IV. STANDARD APPROVAL CONDITIONS

A. SEVERABILITY

The conditions of this authorization are severable, and if any provision of this authorization, or any application of any provision is held invalid, the remainder of this authorization shall not be affected thereby.

B. DUTY TO COMPLY

During PCB incineration, the Facility shall comply with all Federal, State, and local regulations and agreements, including:

1. Permits for the incineration of solid and hazardous wastes during PCB incineration;

2. The applicable RCRA hazardous waste regulations; and,

3. The applicable HWC MACT EEE requirements.

C. PERSONNEL SAFETY

The Facility personnel safety requirements and procedures for PCB handling, storage, transport and disposal shall comply with Occupational Safety and Health Administration requirements.

D. DUTY TO MITIGATE

The Facility shall correct any adverse impact on the environment resulting from noncompliance with this approval.

E. DUTY TO PROVIDE INFORMATION

The Facility shall provide to the Regional Administrator (to the attention of the Director, Land, Chemicals and Redevelopment Division) within a reasonable time, any relevant information which may be requested to determine whether cause exists for modifying, revoking, reissuing, or terminating this approval or to determine compliance with this approval. The Facility shall also provide to the EPA, upon request, copies of records required to be kept under the TSCA PCB regulations.

F. INSPECTION AND ENTRY

The Facility shall allow the Regional Administrator, or an authorized representative, upon presentation of credentials and other documents as may be required by law to:

1. Enter the Facility where PCBs and PCB Items are being handled, stored, treated or disposed;

2. Have access to and copy, at reasonable times, any records that shall be kept under TSCA PCB regulations;

3. Inspect any units, equipment (including monitoring and control equipment), practices or operations required under this approval or the TSCA PCB regulations; and,

4. Sample or monitor for the purposes of assuring that the Facility is operating in compliance with the conditions of this approval and the TSCA PCB regulations.

G. MONITORING AND RECORDS

1. The Facility shall comply with all applicable monitoring and record keeping requirements, as specified in 40 CFR Part 761 for incinerators and commercial storers. All PCB records, documents and reports shall be maintained at the Facility and shall be made available for inspection by authorized EPA representatives. All records required by 40 CFR Part 761 and this approval shall be written in ink, typed or put into electronic format. Any modification or correction of the records shall be initialed and dated by the supervisor in charge.

2. The Facility shall verify the PCB content of the wastes received for storage and disposal. Sampling and analytical methods shall conform to EPA accepted practices, procedures, and methods. Results of all analyses shall be recorded and kept on file.

H. NOTICE OF TRANSFER OF OWNERSHIP

The Facility shall notify the Regional Administrator (to the attention of the Director, Land, Chemicals and Redevelopment Division) at least thirty (30) days before transferring ownership of the Facility. The Facility shall also submit to the Regional Administrator, at least thirty (30) days before such transfer, a notarized affidavit signed by the transferee stating that the transferee shall abide by all provisions of this PCB disposal and storage approval. After receiving such notification and affidavit and other such documents as the EPA may require, the EPA may issue an amended Approval substituting the transferee's name, or the EPA may require the transferee to apply for a new PCB commercial storage approval. The transferee shall not operate under the Approval until the Regional Administrator issues an Approval in the transferee's name. The transferor shall maintain financial assurance for the Facility until the transferee's application has been approved, and the transferee has demonstrated that it has established financial assurance for closure pursuant to 40 CFR § 761.65(g).

I. NON-COMPLIANCE

If at any time there is a departure from the conditions of this approval, the Facility shall notify the EPA Region 6 PCB Coordinator by telephone within 24 hours and shall submit a written report within five (5) working days.

J. OTHER INFORMATION

When Facility officials become aware that it has failed to submit any relevant facts in the PCB disposal or storage application or submitted incorrect information in any report to the EPA, these facts and information shall be promptly submitted to the EPA Region 6 PCB Coordinator.

K. EMERGENCY COORDINATOR AND EQUIPMENT

The Facility shall maintain an adequately trained emergency coordinator to direct emergency procedures which could result from fires, explosions or releases of PCB containing wastes at the Facility. The Facility shall maintain a list identifying the emergency coordinator(s) and their phone numbers on-site at all times. The Facility shall maintain in good working order any equipment required to deal with these emergencies.

L. SPILLS

Any PCB spills occurring at the Facility or from any Facility-owned PCB transport vehicle, shall be cleaned up according to the PCB Spill Cleanup Policy, 40 CFR Part 761, Subpart G.

M. ANNUAL RETESTING

The EPA may require annual testing or monitoring of the incinerator for PCBs, hydrochloric acid (HCl), metals, residual chlorinated organics, particulates and up to 3 specific organics identified by the EPA. Written reports discussing the results of the testing or monitoring shall be submitted to the EPA Region 6 PCB Coordinator within 120 days of this test.

N. DUTY TO NOTIFY

The Facility shall notify and electronically submit to the EPA Region 6 PCB Coordinator, at least thirty (30) days prior to any planned physical or operational changes to the incinerator which could alter the emissions of particulates, hydrochloric acid, metals, PCBs or chlorinated organics. Any changes to the approved units which may result in increased emissions or changes in types of emissions, may require additional testing, monitoring or a modification of the approval.

O. CERTIFICATES OF DISPOSAL

The Facility shall maintain copies of the Certificate of Disposal for all PCB Items which are disposed at the Facility. The Certificate of Disposal shall be provided to the generator within thirty (30) days of disposal of the generator's PCB item(s).

P. EFFECTIVE DATE

This approval becomes effective on the date of this approval letter and shall expire at midnight, the same day and month, five years later. Please apply for re-authorization at least twelve months before the expiration date. If your application for reauthorization is received before the expiration date of this approval and a final determination has not been made by the expiration date, this approval shall be administratively continued until a final decision is made on your re-authorization request.

Q. STATEMENT IN COMPLIANCE WITH 40 CFR 761.65(d)(4)

1. The United States Environmental Protection Agency, Region 6 (EPA) is renewing and modifying a Toxic Substances Control Act (TSCA) Approval issued to Clean Harbors Deer Park, LLC, to continue to operate a commercial storage and disposal facility for non-liquid and liquid polychlorinated biphenyls (PCB). Pursuant to 40 C.F.R. 761.65(d)(4)(i), EPA finds that Clean Harbors application satisfied the criteria at 40 C.F.R. § 761.65(d)(2):

(i) Clean Harbors, its principals, and its key employees responsible for the establishment or operation of the commercial storage facility are qualified to engage in the business of commercial storage of PCB waste. This finding is based on EPA's evaluation of key personnel and organizational chart information submitted with the Renewal Application.

(ii) Clean Harbors possesses the capacity to handle the quantity of PCB waste which the facility has estimated will be the maximum quantity of PCB waste that will be handled at any one time at the facility. This finding is based on the information and calculations in the submitted application and as shown in the Summary of Authorized Units hereby included in Appendix I.

(iii) Clean Harbors has certified compliance with the storage facility standards in 40C.F.R. § 761.65(b) as found in the information provided in the reviewed application and Compliance Certification Letter, Appendix VII.

(iv) Clean Harbors has developed a written closure plan for the facility that is deemed acceptable by the Land, Chemicals, and Redevelopment Director under the closure plan standards. This finding is based on EPA's evaluation of Section XX of the Renewal Application, the requirements of which are incorporated into this Approval.

(v) Clean Harbors has included in the application for final approval a demonstration of financial responsibility for closure that meets the financial responsibility standards in the form of an Insurance Policy that is based on closure cost estimates and inflation.

(vi) Clean Harbors' operation of the storage areas will not pose an unreasonable risk of injury to health or the environment. This finding is based on EPA's evaluation of the Renewal Application and all applicable regulations at 40 C.F.R. § 761, as set forth in this Approval.

(vii) The environmental compliance history of the applicant, its principals, and its key employees does not constitute a sufficient basis for denial of the application. This finding is based on EPA's evaluation of the information contained in the complete Renewal Application and a review of available compliance data. All available information demonstrates that the Facility is in compliance with its current Approval and the TSCA PCB regulations at 40 C.F.R. Section 761, and that the Facility's compliance history evinces no unwillingness or inability to achieve and maintain compliance with the regulations.

END OF CONDITIONS

Appendix I
Summary of
Authorized Units

Section I
Summary

Clean Harbors Deer Park, LLC (CHDP) located at 2027 Independence Parkway S. in La Porte, Texas is submitting this application for re-authorization approval for the commercial storage and high temperature incineration of liquid and solids PCBs in the Train 1 Incinerator pursuant to Section 6e of the Toxic Substances Control Act (TSCA). The first TSCA Letter of Authorization for CHDP was received in 1981.

The CHDP facility is a fully permitted RCRA Part B treatment, storage, and disposal facility which provides thermal treatment of hazardous and non-hazardous wastes by method of incineration. The facility is also a TSCA permitted facility.

PCB waste management is confined to the following authorized units:

Waste Management Unit	TCEQ N.O.R. Unit #	Status/Notes	Design Capacity
Train I Incinerator [1]	005	Active	216 MM BTU
T-1	084	Active	20,000 g
T-2	085	Closing (beginning closure activities) once done replacement in kind RCRA only	24,000 g
T18R	093	Closing (beginning closure activities) once done replacement in kind RCRA only	24,000 g
T-19	089	Active	20,000 g
T-31	094	Active RCRA/TSCA	27,000 g
T-32	095	Active RCRA/TSCA	27,000 g

T-60	096	Active RCRA/TSCA	100,000 g
T-61	097	Active RCRA/TSCA	200,000 g
V-109	102	Active RCRA/TSCA	21,000 g
T-29	109	Active RCRA/TSCA	6,400 g
T-30	110	Active RCRA/TSCA	6,400 g
T-70	111	Active RCRA/TSCA	22,200 g
T-71	112	Active RCRA /TSCA	22,000 g
T-75	116	Active RCRA/TSCA	22,000 g
DSP-4	039	Active	136,680 g
DSP-5	040	Active	151,800 g
DSP-7	042	Active	19,800 g
Transformer & Drum Handling Bldg.	034	Active	163,980 g
BSA-1 (ash bin storage)	069	Active	1500 cy
BSA-2 (ash Bin storage)	070	Active	4,650 cy
BSA-3 (ash bin storage)	071	Active	1,650 cy
Tank Truck Storage Pad	168	Active	71,000 g
Container Storage Area PCB Warehouse	034	Active	212,520 g
Tank T-201	176	Active	7,198 g
DSP-11 (Bulk Container storage area)	216	Active/new since last permit	305,795 g

1. The “Train 1” incinerator consisting of a shredder and shredded material repackaging area, bulk feed tank, bulk feed system, rotary kiln, afterburner, pollution control system, and related bulk liquid tanks.

Since the last TSCA permit application, the CHDP facility added a new container storage area. The DSP-11 container storage area is a 100,000 ft ^{2} concrete pad permitted to store 305,030 gallons of bulk and non-bulk DOT containers that contain a wide variety of

organic and inorganic wastes. Drawings that include containment calculations can be found in Appendix N.

PCB Incineration is limited to Train 1. The Kiln diameter is 3.6 meters, K-101R: 32 ft long, 11.8 ft wide, 11.8ft tall: 4455.68 cubic feet. Further, the afterburner (ABC) is K-103: 30 ft long, 10 ft wide, 10 ft tall: 3000 cubic feet. The ABC provides residence time at high temperature, to assure destruction of the organic constituents in all system feeds. The minimum residence time in the afterburner is related to maximum stack flow and DRE, as the ABC residence time is the minimum time that hazardous constituents in the gas stream are in contact with high temperature. Following are these calculations to show the minimum gas residence time in the hot zones (afterburner chamber or ABC) of Train I. Calculations are also shown for the residence that hazardous waste solids are in the kiln. While kiln residence time does not impact hazardous constituent destruction in the gas stream, (DRE), it does relate to the time that hazardous waste solids are in the kiln and the volatilization time for hazardous waste constituents to be removed from the solids so that they can be destroyed in the hot gas as it passes through the kiln and ABC. DRE is calculated by the conventional method, using the equation:

$$DRE\ (\%) = 100 \times (M_{in} - M_{out}) / M_{in}$$

M_{in} and M_{out} represent the mass feed rate and stack emission rate, respectively for the designated DRE compound.

TRAIN I - ABC

This volume is defined as the space downstream of the center plane vertically bisecting the Loddby burner in the ABC, to the plane in the exit hot duct where ABC temperature is measured.

ABC:

1. 6.75' x 12.5' = 84.4 sq ft
2. Triangle, therefore ½ x 3.5 x 12.5 = 21.9 sq ft
3. Second triangle, same as 2 = 21.9 sq ft
4. 27.083' x 12.5' =338.5 sq ft

Total Square Feet 466.7 sq ft

Afterburner floor to ceiling is 13.5'; maximum slag buildup on floor is 1', so use 12.5' as vertical height of the ABC space

Total ABC Volume 5834 ft^3

Hot Duct: 8.5' diameter, 41.4' equivalent length

Volume = $\pi \times (4.25)^2 \times 41.4$ = 2349 ft^3

TOTAL VOLUME for DRE = 8183 ft^3

Stack flow maximum = 48,892 dscfm less 1610 dscfm dilution air from WESP insulators, and the SCR heating system

Maximum "normal" operating temperature 2100°F

Water content, incinerator exhaust, at maximum rates = 16%

Operating pressure of –0.5 inwc does not materially change gas density

Hot duct exit flow = (48,892 – 1610) x (100/(100-16)) x (2100+460)/520 =
= 277,111 acfm = 4619 acfs

Residence time at this flow rate = 8183 ft^3 / 4619 acfs = 1.77 sec

The stack flow rate of 48,892 dscfm is the 2006 CPT demonstrated maximum hourly rolling average stack flow rate, based on the average of the three runs.

The 2006 CPT demonstrated DRE >99.9999% and low dioxin/furans at this maximum hourly rolling average stack flow of 48,892 dscfm.

The 2021 CPT demonstrated low dioxin/furans at a stack flow rate of 48,634 dscfm, which yields a residence time of 1.81 seconds.

Solids Residence Time - Train I 3.6 Meter Kiln

The solids residence time in the kiln is a function of kiln length, diameter, rotational speed, kiln slope, and material angle of repose. A kiln flow model was used to calculate the solids residence time.

Kiln Flow Model

TRAIN I 3.6 METER KILN CLEAN HARBORS DEER PARK

Parameter	Definition	Input Values	Calculated Values	Typical value
A	= Angle of repose of material (degrees)	10.00		
L	= Length of shell (feet)	32.75		
FACTOR	= Dimensionless factor	1.00		1.0 for rotary kilns

D	= Inside shell diameter (feet)	10.50		
S	= Slope of shell (degrees)	2.290		0.6-3.0 See Table 1
N	= Shell speed (rpm)	0.20		0.5-1.5 for rotary kilns
FILL	= Fill fraction	0.060		0.06 - 0.125 for rotary kilns
T	**= Retention time of solids (minutes)**		**38.1**	20-60

Table 1. Slope Conversion

Slope (in/ft)	Slope (%)	S (Degrees)
1/8"	1.0%	0.596
3/16"	1.6%	0.895
1/4"	2.1%	1.192
5/16"	2.6%	1.491
3/8"	3.1%	1.790
7/16"	3.6%	2.087
1/2"	4.2%	2.385
9/16"	4.7%	2.684
5/8"	5.2%	2.980

Solids Residence Time Formula:

T = (1.77 *(A^0.5)*L*FACTOR)/(S*D*N)

Reference:

Allis Mineral Systems Solids Flow Model

Kilns - Flow of Materials

Allis Chalmers Technical Bulletin 22b 1212-2

Perry's Chemical Engineers Handbook

Additionally, TSCA requires monitoring of combustion efficiency based on the stack gas CO and CO_2 concentrations as follows:

$$\text{Combustion efficiency} = [C_{CO2} / (C_{CO2} + C_{CO})]100$$

Where: C_{CO2} = Concentration of carbon dioxide

C_{CO} = Concentration of carbon monoxide.

Combustion efficiency must be maintained at least 99.9% when incinerating PCB. Train I is equipped with CO and CO_2 CEMS.

Train 1 waste feed rates and operating parameters are summarized in the following table.

Waste Feed Rates	**Units**	**Established Operating Limit**	**Basis for Operating Limit**	**Monitoring Basis**
Total Kiln Waste Feed Rate	pph	20,666(4)	2021 CPT	Max HRA
Total ABC Waste Feed Rate	pph	16,848(4)	2006 CPT DRE	Max HRA
Total Pumpable Waste Feed Rate	pph	23,025(4)	2006 CPT DRE	Max HRA
Ash feed rate	pph	10,961	2021 CPT	Max 12 HRA
Chlorine feed rate	pph	5,261	2021 CPT	Max 12 HRA
Total LVM feed rate	pph	79.7(2)	2021 CPT	Max 12 HRA
Pumpable LVM feed rate	pph	76.1(2)	2021 CPT	Max 12 HRA
SVM feed rate	pph	69.2(2)	2021 CPT	Max 12 HRA
Mercury feed rate	pph	0.136(2)	2021 CPT	Max 12 HRA
Operating Parameter Limits	**Units**			
Kiln Temperature	ºF	1,672(4)	2021 CPT	Min HRA
ABC Temperature	ºF	1,882(4)	2021 CPT	Min HRA
Stack Flow	dscfm	48,634(3)	2021 CPT	Max HRA
Condenser Flow	gpm	3,396	2021 CPT	Min HRA
Condenser Inlet pH	S.U.	5.6	2021 CPT	Min HRA
Calvert venturi pressure drop	inwc	33	2021 CPT	Min HRA
Calvert venturi water flow	gpm	151	2021 CPT	Min HRA
Calvert blowdown flow	gpm	175(6)	2021 CPT	Min HRA
Calvert tank level	%	23.0(6)	2021 CPT	Min HRA
WESP #1 Power	kVA	ON(5)	2021 CPT	Min HRA
WESP #2 Power	kVA	6.6	2021 CPT	Min HRA

(1) 2006 CPT performed to demonstrate operating parameters limits for DRE - approved as data-in-lieu-testing for DRE.

(2) Metals feed rates based on calculation/extrapolation from the 2021 test results; See Section 5.8 of the 2021 CPT Report.

(3) Maximum Stack Flow is an operating parameter for all emission limits, so lower of the 2006/2021 CPTs apply.

(4) Minimum combustion temperature and maximum feed rates apply to DRE and dioxin/furan, so lower of the 2006/2021 2-WESP CPTs apply.

(5) Actual limit is On/Off for the 1st WESP, numerical value selected for control, as On/Off cannot be used for monitoring HRA.

(6) Both Train I and II share a common blowdown tank, so level is the most stringent (highest) level, which was for Train II.

(7) waste feed rate limit values, in conjunction with the total chlorine feed rate limit jointly limit the maximum PCB feed rate within the test-demonstrated capabilities of Train I.

Additional details can be found in Sections III, V, VII, and VIII of the renewal application and include:

1. Minimum Temperature.
2. Analysis of each batch feed of PCBs from each liquid/sludge feed tank, or liquid sludge container of PCBs, for PCB concentration.
3. Take a representative's sample out of 10% of each shipment of PCB solids.
4. Maximum feed rate of liquids and/or solids in pounds per hour.
5. Measure percent carbon dioxide in the stack gas.
6. Automatic waste feed cutoff for the following conditions:

a. Temperature drops below the minimum temperature;

b. Carbon monoxide exceedance;

c. Oxygen drops below allowable percentage;

d. Loss of primary combustion air to the burner; or

e. Loss of water to the quench.

7. Operate the incinerator under negative pressure.
8. Cease incineration of PCBs upon notification by the EPA or State.
9. Manage by-product waste handling and disposal as required.
10. Comply with emissions limits as required by the effective RCRA permit and the HWC MACT EEE.
11. Comply with incinerator feed requirements for BTU value.
12. Measure and record combustion gas flow rate.
13. Comply with ash removal requirements.
14. Comply with PCB Operators Manual for handling of PCBs.
15. Comply with instrumentation and monitor requirements.
16. Comply with the Housekeeping Plan.

There have been no significant changes in operationsother than those noted above since the last re-authorization received on April 6, 2020.

Appendix II
Site Layout Plan

ROHM
AND
HAAS

N

ASPHALT ROAD

HEAVY EQUIP. REPAIR

RAMP

RAILCAR LOADING BUILDING

BIN PAD (RCRA EMPTY)

BSA #7
PHASE III
(RCRA EMPTY)

BSA #5
PHASE I
(RCRA EMPTY)

BSA #6
PHASE IVA
(RCRA EMPTY)

DPS-11
PHASE II
(RCRA FULL)

BSA #8
PHASE IVB
(RCRA EMPTY)

C-H (DP)
SOUTH LANDFILL

C-H (DP)
NORTH LANDFILL

C-H (DP)
PROCESS AREA

BSA

ITC

S&E FACILITY

I.T.C.

40' MITSUI EASEMENT

WEST ROAD

STORMWATER DRAINAGE CHANNEL

EAST LANDFILL

NEW EAST LANDFILL ROAD

ROADWAY

FAB SHOP

TRUCK SHOP

COVERED STORAGE

138 ELECTRICAL SUBSTATION

C-H (DP)

RECEIVING

RECEIVING WAREHOUSE

TRANSFORMER STATION

BIN RECEIVING
10 DAY HOLDING

SCALE

C-H INC

MATERIAL RECEIVING

ITC
TANK FARM

ITC

ITC
TANK FARM

ITC

40' ITC EASEMENT

CWA

TAG OFFICE

20' PIPELINE EASEMENT

STATE HIGHWAY NO. 134
BATTLEGROUND ROAD

GRAVEL ROAD

0 100 200 300 400
SCALE IN FEET

REFERENCE DRAWINGS

REV.	DESCRIPTION	DRAWN BY	DATE	APPR. BY
20	GENERAL REVISION	WDS	10/26/23	ME
19	GENERAL REVISION	WDS	6/11/21	ME
18	GENERAL REVISION	WDS	1/21/21	ME
17	GENERAL REVISION	WDS	4/1/20	ME
16	GENERAL REVISION	WDS	12/9/16	ME
15	GENERAL REVISION	WDS	2/3/15	ME

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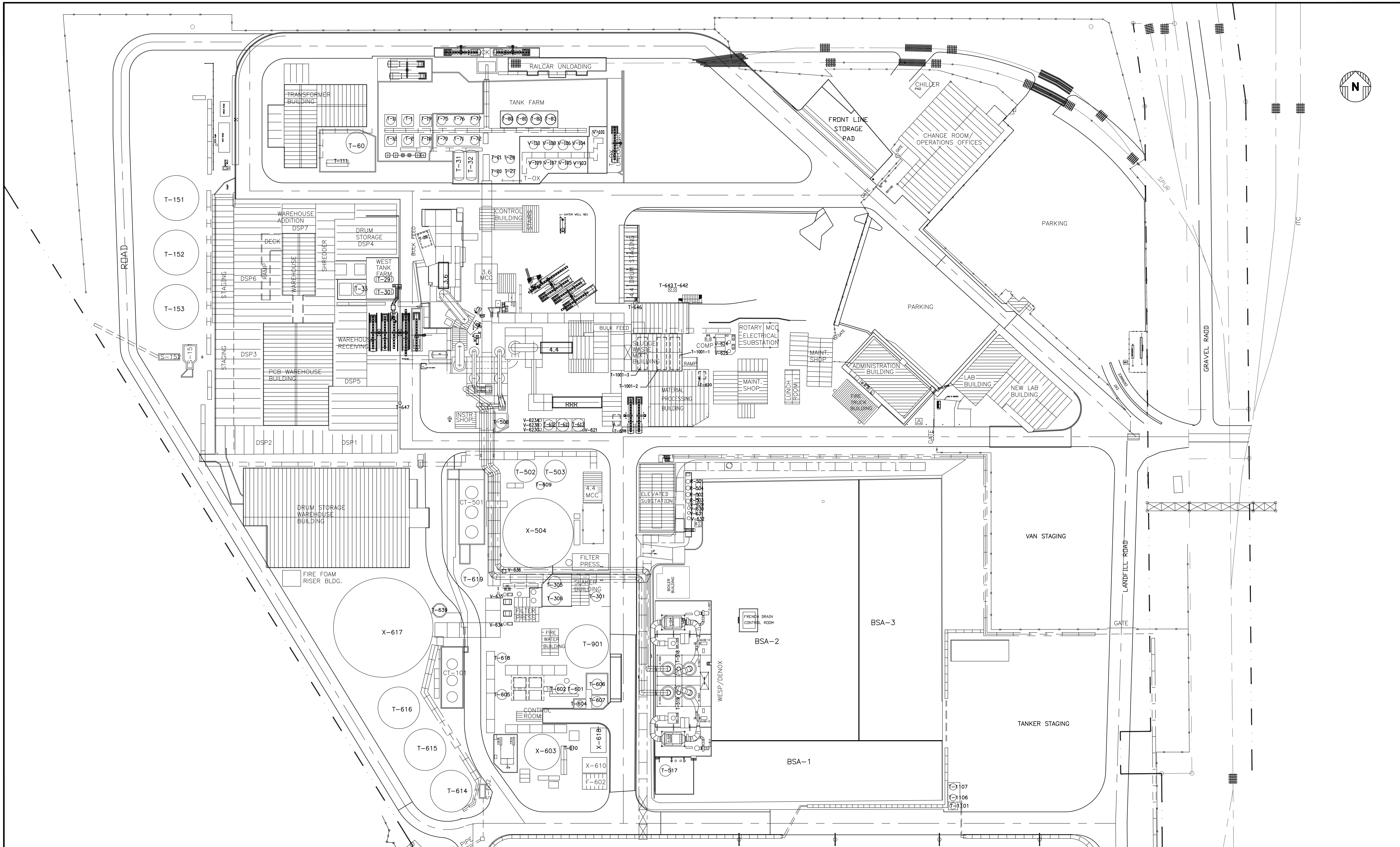
DRAWN	CHECKED	SCALE	DATE
WDS	ME	1"=120'	2/17/94

TITLE 010CC004

CLEAN HARBORS DEER PARK, LLC
FACILITY PLOT PLAN

DRAWING NO. H-010-CC-004-D

REV. 20



22	ADDED ADMIN. GEN.	WDS	8/2/24		
21	GENERAL REVISION	WDS	10/26/23		
20	GENERAL REVISION	WDS	9/30/21		
19	GENERAL REVISION	WDS	2/15/18		
18	ADDED WATER WELL NO. 1 & REVISED	WDS	12/8/16		
17	ADDED DIRECT BURN FALL PROTECTION	WDS	6/6/16		
REV.	DESCRIPTION	DRAWN BY	DATE	APPR. BY	

REFERENCE DRAWINGS

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DRAWN	CHECKED	SCALE	DATE
WDS	ME	1"=50'	10/30/91

TITLE
010CC009

CLEAN HARBORS
PROCESS AREA
SITE PLAN

DRAWING NO. H-010-CC-009-D
REV. 22

Appendix III
Waste Analysis Plan

WASTE ANALYSIS PLAN

Clean Harbors Deer Park, LLC
2027 Independence Parkway South
La Porte, TX 77571

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1. Clean Harbors Profile
2. Uniform Hazardous Waste Manifest and Bill of Lading (BOL)
3. Weight Ticket
4. Receiving Report
5. Clean Harbors Analytical Quality Assurance Program
6. Land Disposal Restriction (LDR) Notification/Certification Package

Above exhibits are updated periodically, where applicable. The updated exhibits will then become part of this Waste Analysis Plan but will not be resubmitted for agency approval.

1.0 Introduction

The Waste Analysis Plan (WAP) for the Clean Harbor Deer Park LLC (CHDP) facility is designed to meet the requirements of 40 CFR Part 264.13 and 30 TAC 335.152. The intent of the plan is to outline procedures to be utilized in order to accomplish the following four major objectives

- Waste Categorization Procedures, which distinguish the pertinent chemical and physical characteristics of the wastes.
- Waste approval (pre-acceptance) procedures, which determine the acceptability of a particular waste stream as required by applicable permit conditions and operating capabilities prior to receipt of that waste at the facility.
- Incoming load receiving, acceptance, and distribution procedures, which verify that the delivered waste matches the accompanying manifest, pre-acceptance documentation, and the conditions of the facility permit.
- Storage and processing procedures, which maintain safe and appropriate methods for storage, treatment, disposal or movement of wastes within the facility. This section also addresses the sampling and analysis Plan used by CHDP prior to landfilling incineration residues.
- Quality Assurance Procedures, which ensure proper sampling and analysis of the wastes.

It is the policy of CHDP that all off-site wastes received for treatment and disposal by this facility will be subjected to these procedures unless otherwise noted. This is to ensure that this facility will be in compliance with applicable permits and regulations. Where appropriate, some of these procedures will be applied to the wastes generated on-site also, if a specific procedure is not already established for that particular waste (e.g. incineration ash).

The forms shown within this Waste Analysis Plan in the Exhibits are examples of forms currently utilized by this facility. Alternative forms may be used, as needed. These forms may be updated periodically, based upon changes in regulations, operations, or business processes. The alternative forms would have comparable information as in the example forms.

1.1 Definitions

- CHDP means the Clean Harbors Deer Park, LLC facility, CHDP personnel or CHDP authorized personnel.
- QA/QC Officer is the person who is responsible for the facility Analytical QA program.

- Manager of Waste Acceptance is the manager who is responsible for overseeing the process of waste approval and acceptance at CHDP. This may be delegated to the Clean Harbors Central Profile Group (CPG).
- CHDP Approved Lab is a lab that has been evaluated and approved by the CHDP QA/QC Officer to perform analyses for CHDP. Waste Acceptance Staff are the personnel who perform the waste approval/acceptance process.

2.0 Waste Characterization Procedures

2.1 Offsite Generated Wastes

CHDP categorizes wastes received in accordance with the following general waste categories:

Waste Description	TCEQ Waste Class	Hazard Codes[1]	Example	Viscosity[2] (cps)
PCB wastes	1		Transformer oil PCB contaminated solvents	0-400 (if liquid)
Organic liquids	H,1,2	I,T,C,H,E,R	Spent solvents	0-400
Inorganic liquids	H,1,2	I,T,C,H,E,R	Chemical plant wastewater	0-400
Water based sludges	H,1,2	I,T,C,H,E,R	Pickle liquor, wastewater sludge	400-800
Organic sludges	H,1,2	I,T,C,H,E,R	API separator sludge, tank cleanout sludge	400-800
Organic solids	H,1,2	I,T,C,H,E,R	Chlordane, waste paint solids	NA
Inorganic solids	H,1,2	I,T,C,H,E,R	Contaminated dirt or concrete	NA
Containerized gases	H,1,2	I,T,C,H,E,R	Aerosols, methane	NA

[1] Hazard codes designate:
I – Ignitable
T – Toxic
C – Corrosive
H – Acute Hazardous Waste
E – Toxicity Characteristic
R – Reactive

[2]The viscosity of a waste stream largely determines the method which will be used to feed the waste material into the incinerator. Sludgy materials, which have higher viscosity than a liquid (i.e. >400 centipoise), will be fed through one of the sludge lines into the kiln. These lines are greater in diameter, have fewer turns and bends, and are often fed by a positive displacement pump. However, if sludges have a viscosity greater than 800 centipoise, the material is often solidified and repacked.

A more specific list of wastes handled at the facility is contained in Table IV.A. of the Part B Permit Application. EPA waste codes listed in the Part A are currently

permitted for receiving at CHDP by its Part B Permit although the facility waste acceptance guidelines may choose not to accept all of them for business reasons.

CHDP does not accept wastes prohibited by its Part B permit. Prohibited wastes include explosive material, as defined by the Department of Transportation (DOT) under 49 CFR 173, and radioactive or nuclear waste, as regulated by the Nuclear Regulatory Commission and the TCEQ.

2.2 On Site Generated Wastes

Waste Description	TCEQ Waste Class	Hazard Codes[1]	Example
Incineration residues	H,1	T,C,H,R,E	Ash
Others	H,1,2,3	I,T,C,H,E,R	Lab waste, leachate, spent carbon

[1] Hazard codes designate:
I – Ignitable
T – Toxic
C – Corrosive
H – Acute Hazardous Waste
E – Toxicity Characteristic
R – Reactive

A detailed list of On-Site generated wastes is contained in the Part B permit application, Table IV.A.

3.0 Waste Approval (Pre Acceptance) Procedures

Waste approval (pre-acceptance) procedures are used to determine the acceptability of specific waste streams for receipt at the facility. These pre-acceptance procedures establish the minimum level of information a generator is required to provide and the evaluation process of the waste which must be made to enable CHDP to determine the acceptability of the waste for storage, treatment, or disposal. Figure 3-1 illustrates the process flow of waste approval procedures.

3.1 Requirements for Waste Generators

For each new waste stream that is a candidate for delivery to the facility, the generator will be requested to provide:

- The chemical composition, physical properties and regulatory information listed on a Clean Harbors waste profile sheet (Material Profile or Waste Data Sheet), which has been reviewed and approved by an authorized agent of the company generating the waste (see examples in Exhibit 1),
- Other supporting documentation confirming the information supplied or referenced by the waste profile Sheet as requested by the Manager of Waste Acceptance or his/her designee, and
- A representative sample of the waste (at the discretion of the Manager of Waste Acceptance or his/her designee as stated in Section 3.2.2.1).

The generator will be requested to replace, recertify or update the above information:

- If the process generating the waste changes, or
- If the Manager of Waste Acceptance or his/her designee has reason to suspect that the waste is repeatedly in non-conformance with pre-acceptance documentation, or
- every two years.

3.2 Waste Approval Evaluation

CHDP will not accept any waste stream until the management of the facility is satisfied that the waste stream has been properly classified and the proper controls are in place to manage the waste in a manner that is protective of worker safety and the environment. CHDP will use all resources necessary to properly evaluate each waste stream prior to acceptance. These resources include but are not limited to the waste information provided by the generator and, if needed, analyses of a representative sample of the waste stream.

3.2.1 Document Review of Waste Information

CHDP will use a waste profile sheet to provide the chemical and physical data as well as regulatory compliance requirements of the waste. The information supplied by the waste profile sheet is necessary for CHDP to properly identify potential hazards and safely handle the waste. An example of a typical waste profile sheet (Material Profile) for regular waste streams is provided in Exhibit 1.

Supporting documents from the waste generator such as SDS (Safety Data Sheet) for the product or the operational process which generates the waste are useful information to help characterize a waste. Additional information, which is useful, includes generator's analytical

data, historical knowledge of a similar waste stream, or pictures of the waste. The supporting information often assists CHDP in the waste profile characterization, especially when a sample is not requested or is not available.

3.2.2 Sample Analysis

3.2.2.1 Sample Requirements

After reviewing the documents supplied by the generator for its waste, the Waste Acceptance Staff will decide if the information is sufficient to determine the acceptability and management method. A sample will not be requested unless additional data are necessary to complete the evaluation of this waste. The following are typical reasons for sample requests:

- When the generator has insufficient knowledge of its waste to fill out the waste profile sheet in its entirety.
- When a physical evaluation of a sample is needed to determine the handling/processing method (e.g. viscosity, particle size).
- When the volume of the waste stream is very large, a sample may be used to verify the information presented in the waste profile sheet (e.g. BTU for material to be burned in Rotary Reactor) for capacity planning.

A sample is requested only if a representative portion can be collected and transported safely. In general, samples are not requested for the types of wastes listed in Section 3.2.2.2.

3.2.2.2 Sample Exemptions

This section summarizes the types of waste streams for which samples are usually not requested. Rationales for the exemptions and their examples are listed below:

1. Sampling of these materials can present extraordinary health, safety or environmental hazards. Examples are:

    - Extremely toxic material
    - Pyrophoric material
    - Material highly reactive to air or moisture

- Material with very strong odor which can pose a public nuisance
- Infectious material and medical waste
- Material at elevated temperature
- Sharps or Materials posing a puncture hazard
- Asbestos-bearing or contaminated waste

2. A representative sample of the material cannot be obtained or it is impractical to sample this material. Examples are:

   - Filter cartridge
   - Contaminated equipment
   - Contaminated debris
   - Lab wastes or lab packs
   - Cylinders and contents
   - Highly volatile liquids and gases
   - Aerosol cans and contents
   - Used containers which are "RCRA" empty
   - Household wastes
   - Wastes from Small Quantity Generators (as defined in 40 CFR 261.5), small volume waste streams (<25 tons/yr) or small volume shipments (four drums or less per waste stream per shipment)

3. The compositions of wastes are known and analyses are not necessary. Examples are:

   - Commercial products or chemicals which are off-specification, outdated, contaminated or banned
   - Residue and debris from cleanup of spill of single chemical or commercial product
   - PCB wastes which are regulated by TSCA only, such as capacitors, transformers, PCB drainings and flushings removed from PCB articles, and debris generated from draining operations
   - Government seized drugs and controlled substances

4. Non-regulated Wastes - This would be wastes that are not regulated by Federal or Texas RCRA (30TAC 335) requirements.

For these exceptions, the generator will supply CHDP with sufficient chemical and physical information of the wastes, as described in section 3.2.1 for proper management.

3.2.2.3 Selection of Sample Analyses

CHDP will use a combination of Fingerprint Analysis, Process Parameters (Incineration or Landfill), and Supplemental analyses, if necessary, to support the waste information supplied by the waste profile sheet. In addition, special analyses required by the Part B Permit or TSCA Authorization for certain wastes are also performed for pre-acceptance, where appropriate. These analyses are performed either by the CHDP lab or a lab approved by CHDP. Analytical methods used under this plan are based on EPA methods, ASTM or other recognized sources. See References 1, 2 and 3 for EPA methods, Reference 4 for ASTM methods and Appendix A for other methods used by CHDP as guidelines.

If, upon reviewing the waste information provided by the generator, Waste Acceptance personnel determine that a sample is needed, the parameters listed below comprise the "Master List" with individual analyses selected, as necessary:

1. Fingerprint — Physical Description, pH and Water Reactivity Screen, Ignitability, Viscosity, Radioactivity Screen
2. Process (Incinerator or Landfill) Parameters — Heat of Combustion, Ash content, Chlorides and Metals for incineration; Paint Filter Liquid test, TCLP/Metals and organic screening for landfill
3. Supplemental Analysis and Testing — Specific Gravity/Bulk Density, Halogens (Br, F, I), Acid Scrub, TOC, Reactive Sulfides/Cyanides, Organic Screening by GC or GC/MS which may include volatile and semi-volatile organic compounds, PCBs, Pesticides, or Herbicides, etc.

Fingerprint is usually performed to verify the basic information presented on the Waste Profile.

Incineration Parameters are usually performed to project the need of incineration capacity and plan for the feed rate.

Landfill Parameters are usually performed to determine the suitability of the wastes for landfill.

Requirements for Supplemental Analysis and Testing are waste stream specific. One example of analysis is to perform Organic Screening to verify the organic composition if it is not clear on the Waste Profile sheet. Another example of analysis is to determine the Bromine content to clarify the conflict between what is shown in the chemical composition (containing high concentrations of bromine compounds) and what is shown in the Bromine content (low concentration) in the Waste Profile sheet. One example of Supplemental Testing is to determine the Temperature vs. Viscosity Curve for the waste to be brought in at high temperature to maintain liquid state. It is necessary to know the optimal temperature range to handle this waste in terms of flow ability and stability.

3.2.2.4 Specific Analysis for F039 Waste

In order to reduce the number of regulated constituents to be analyzed on residues from incineration of certain F039 wastes, the following waste analysis procedure for F039 wastes has been developed.

1. Determine which regulated constituents are not likely to be present in a F039 waste stream using all available information. The information includes sources of wastes generating the leachate and the analytical data of the F039 waste or the F039 source of a waste mixture.

2. Analysis of the constituents, which are considered for removal from the monitoring list, will be performed on this F039 waste or the F039 source. If not detected, or detected at or below treatment standards of F039, these constituents will be removed from the monitoring list for the incineration residues of this F039 waste.

3. Once a year, an analysis of the constituents which were initially removed from the regulated F039 monitoring list will be performed again on this F039 waste or the F039 source to confirm that their concentrations are not greater than the F039 treatment standards.

4. If confirmation cannot be achieved from the annual analysis, either the removed constituents will be restored to the monitoring list or this waste stream will not be accepted until the analyses of the next two batches confirm that the

constituents are no longer present in concentrations greater than the respective F039 standards.

3.2.3 Evaluation for Management Method and Documentation of Approval

After reviewing all the information available, the Waste Acceptance Staff determines the acceptability and the management method of this waste stream. Personnel from Operations, Environmental Affairs and Safety are often consulted prior to approval of a waste stream. The pre-acceptance evaluation is concluded with documentation of the decision regarding the acceptability of the waste, the proposed method of management and special safety precautions for handling each type of waste (including ignitable, reactive and incompatible wastes). The Waste Acceptance Staff may also establish requirements for the delivery of the waste. These requirements may include packaging criteria, heat content, metals levels, or viscosity limits. If the waste is delivered to CHDP in a form that does not match the established requirements, the waste is considered to be a non-conforming load. If a non-conforming load can be handled by alternative treatment methods it will be accepted based on supplemental information and/or analyses used to determine the alternative methods. Wastes for incineration may undergo a trial burn as part of the waste approval evaluation.

4.0 Incoming Load Receiving, Acceptance and Distribution Procedures

Once a waste stream from an off-site source has been approved for shipment into the CHDP facility using the pre-acceptance procedures, the waste may be scheduled into the plant. The waste stream is assigned a unique identification number that will be used to track that waste stream within the CHDP facility. A computer file for this waste stream will be set up for review prior to the arrival of the waste shipment.

At CHDP, the incoming load receiving, acceptance, and distribution procedures (see Figure 4-1) consist of the following steps:

1. Pre-arrival notification;
2. Document review and manifest verification;
3. Visual inspection and/or sampling and analysis of incoming loads;
4. Conformance Verification
5. Distribution of waste to specific treatment or storage area.

4.1 Pre-Arrival Notification

Generally, CHDP requests three days of advance notification prior to the arrival of the waste load from the generator. This is to allow scheduling for the waste.

4.2 Document Review and Manifest Verification

Upon arrival at the facility, the waste shipment is logged into the computer. The waste stream information in the computer file is checked against the shipping document. The following documents are reviewed:

- Uniform Hazardous Waste manifest (Exhibit 2) for hazardous or Class 1 wastes;
- Weight Tickets, if available (see example in Exhibit 3).
- Land Disposal Restriction (LDR) Notification/Certification for the first load of each hazardous waste (see example in Exhibit 6)

Upon receipt of the Manifest, Weight Ticket, and the LDR Notification/ Certification the waste load is sent to a holding or sampling area. The waste load and its accompanying documents are checked for discrepancies from the acceptance criteria of the original profile. If the waste cannot be managed at CHDP, the waste load is either rejected and returned to the generator with a written explanation of the action, or sent to another appropriate facility under the direction of the generator.

When a significant paperwork discrepancy is detected in the waste received, the shipment is directed to a holding area. Discrepancies in paperwork will be reconciled between CHDP and the generator. If no significant discrepancy in the paperwork is detected, the waste load is received and the manifest is signed by CHDP. The transportation copy of the manifest is returned to the driver.

4.3 Visual Inspection and Sampling

When a waste load arrives, the load is visually inspected for container integrity and count conformity with the manifest. Certain waste streams will not be inspected sampled as noted in Section 4.3.3. Waste loads received for storage only or transshipment will not be sampled unless requested by the Waste Acceptance Staff. If the waste is unloaded, the outer containers will be inspected for integrity

A load is visually inspected and/or sampled for several reasons:

1. To compare the actual waste characteristics with the acceptance criteria of the waste and its manifest information.

2. To confirm the validity of the information used to determine the proper disposition of the waste.

3. To ensure that the waste shipment complies with the permit.
4. To ensure that the waste shipment can be handled safely.

The sampling procedures used are dependent on both the physical property and chemical composition of the waste and the type of shipping container. In all cases, the receiving report (including safety data) must be thoroughly reviewed prior to sampling, with special attention given to the hazard codes, the physical and chemical properties outlined, and the personal protective equipment required.

4.3.1 Sampling Methods for Specific Waste Types

The methods utilized for specific waste types (liquid, solid or sludge) are consistent with those referenced in 40 CFR 261, Appendix I, which are summarized in Table 4-1. Descriptions of some of the sampling equipment which is most often used by CHDP are included in Appendix B.

For flowable materials (liquid or sludge), the sampling device of choice is either a Coliwasa®, or tubing to draw a vertical section; or weighted bottle or grab sampler to allow for sampling at various depths. Solids are sampled with a tube, auger, or similar device to obtain a vertical core; by scoop or shovel for grab samples. Tanker sediments are sampled by a dipper, or sampled from the bottom sampling valve when not readily sampled from the tanker top.

TABLE 4-1
SAMPLING METHODS AND EQUIPMENT
(40CFR 261, Appendix I)

Material	Method	Equipment
Extremely viscous liquid	ASTM D140-70[1]; SW 846	Tubing or thief
Crushed or powdered material	ASTM D346-75[1]; SW 846	Tubing, trier, scoop, or shovel
Solid or rock-like material	ASTM D420-69[1]; SW 846	Tubing, trier, auger, scoop, or shovel
Soil-like material	ASTM D1452-65[1]; SW 846	Tubing, trier, auger, scoop, or shovel
Fly ash-like material	ASTM D2234-76[1]; SW 846	Tubing, trier, auger, scoop, or shovel
Containerized liquids	SW-846[2]	Coliwasa® or tubing
Liquids in pits, ponds, lagoons or reservoirs	SW-846[2]	Pond sampler or weighted bottle

[1]American Society for Testing and Materials. 1982. "Annual Book of ASTM Standards." Philadelphia, PA
[2]U.S. Environmental Protection Agency. 2007. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." Office of Solid Waste, Washington, D.C.

4.3.2 Sampling Methods for Bulk and Non-Bulk Containers

In addition to the American Society for Testing and Materials (ASTM) methods and other EPA-approved sampling procedures, CHDP uses specific techniques for ensuring that samples taken from various types of drums, tankers and bins or dump trucks are representative. When possible and appropriate, several samples will be taken from locations displaced both vertically and horizontally. The number of samples required for representative sampling varies depending on the distribution of the waste in the container. If examination indicates stratification in the waste, then each layer may be composited in proportion to its estimated volume. In cases where the horizontal dimension is large relative to the vertical dimension (e.g., large end-dump trucks), multiple vertical sections will be sampled. When multiple drums of a single waste stream are received on the same shipment, at least ten (10) percent of the drums are randomly selected for sampling. For waste material requiring Level B protection for the sampling personnel, a maximum of ten (10) drums will be sampled. Individual samples are composited prior to analysis, providing they are similar in physical state. The following sampling procedures will be used depending on the type of container

a. Vacuum Truck, Tank Truck or Rail Road Tank Car

   Normally, the load will be sampled with a Coliwasa® since the waste transported in these containers is usually a liquid or thin sludge. The percentage of sludge in the waste stream is also estimated using this method. The Coliwasa® is inserted at such a rate that it descends through the liquid and/or sludge to obtain all phases and to fill the tube as it reaches the tank bottom.

b. Bin Truck or Dump Truck

   Most bin or dump truck material is thick sludge or solid, therefore a scoop, auger or shovel will be used for sampling. These trucks are also inspected for leaks and nonconforming material.

c. Liquid Petroleum Gas (LPG) Bulk Containers

   CHDP has not yet devised a safe method for sampling LPG bulk containers. The bulk containers are sent to or piped to the

incineration area for direct burning of the waste load after manifest verification.

d. Drums or Similar Containers

Drums are sampled by random sampling methods using a device suitable for the waste type to obtain a representative sample of the entire drum.

4.3.3 SAMPLING FREQUENCY AND EXEMPTIONS

Sampling and analysis of each shipment is required unless indicated below:

1. Sampling and analysis is not required, if

    - It can cause health, safety or environmental concerns,
    - It is impractical to sample, or
    - The compositions of wastes are known

    Examples are given in Section 3.2.2.2.

2. Sampling is required but only limited analyses (e.g. Fingerprint) are required, if

    - A representative sample cannot be obtained easily (e.g. debris from spill cleanup, contaminated PPE, etc.)
    - Small volume shipment (e.g. four drums or less per shipment)

3. Frequency for sampling and analysis can be reduced if analytical results are consistent from shipment to shipment, e.g.

    - Waste shipments are from a remediation project
    - Waste shipments are from one large storage tank
    - Waste shipments are chemical by-products of a consistent process

    One example that would meet the criteria for a reduction in sampling and analysis frequency is given below:

    A large remediation project results in CHDP receiving approximately 20 bins of the same waste stream in one week. CHDP samples and analyzes

the first 5 to 10 of the bins and the waste is determined to be conforming to the Waste Profile. CHDP would continue to visually inspect each waste shipment, but would only conduct random spot checks for sampling and analysis purposes.

4. CHDP may estimate the incineration parameters using a model based on the following:

    - An estimate of the percentage of each type of material in the waste stream (i.e., % glass, % plastic, % wood, etc.)
    - The corresponding incineration parameters (based on analytical data, literature, or process knowledge) for each of these materials

    Also as better information becomes available, the values for the incineration parameters will be replaced.

    An example to estimate the BTU value for a debris sample consisting of plastic and wood is given below:

% plastic = 60	BTU of plastic = 15,000	0.6 x 15,000 = 8,000
% wood = 40	BTU of wood = 10,000	0.4 x 10,000 = 4,000
	Estimated BTU	12,000

4.3.4 Sampling at an Alternate Location

Sampling of incoming loads may be performed at other Clean Harbors' facilities or generators' sites for the following reasons:

1. The waste loads are transported to a different Clean Harbors facility for bulking, repacking, or transshipping prior to delivery to CHDP for disposal. It is more convenient to sample these waste loads at that facility to minimize additional handling at CHDP, thereby reducing the safety and environmental hazard.
2. Pre-qualification is necessary for certain waste shipments due to a high probability of non-conformance. Obtaining pre-shipment samples taken at the generator's site can prevent the unnecessary transportation of a non-conforming hazardous waste.
3. For a Superfund site or similar remediation project, representative samples can best be obtained during the loading of the material.

4.4 Sample Analysis

Once a sample has been obtained using the correct sampling procedures, laboratory procedures are initiated. Laboratory procedures include fingerprint analyses, process (incineration or landfill) analyses, and any supplemental analyses specified by the Waste Acceptance Staff. Primary test methods used to measure the parameters discussed in this document are included in Table 4-2. CHDP will use SW-846 methods for the method-defined parameters (MDPs), incorporated by reference in the RCRA regulations at 40 CFR 260.11, that are required by our permits. SW-846 Methods (latest versions) or approved method modifications (previous WAP versions) to will be used for parameters required to demonstrate compliance to Maximum Achievable Control Technology (MACT) Standards.

If necessary CHDP will use additional methods included in EPA SW-846, American Society for Testing and Materials (ASTM), EPA Methods for Chemical Analysis of Water and Wastes, Standard Methods for Examination of Water and Wastewater, and 40 CFR 136, App. A Methods (See References in Section 7.0). Where such methods are not available or require modification, methods have been developed by CHDP or other Clean Harbors facilities and are included in Appendixes A and C of this document.

4.4.1 Fingerprint Analysis

Fingerprint analysis (see Table 4-3) includes a group of tests which can be done quickly to determine if the waste shipment matches the expected characteristics for that waste. Fingerprint analyses are used as indicators to:

- Identify wastes that are not permitted
- Determine whether the test results are within the acceptance criteria of designated management methods for the wastes
- Identify the potential ignitability, reactivity, or incompatibility of the wastes
- Indicate any changes in waste composition that may have happened during transportation or storage

4.4.2 Process (Incineration or Landfill) Parameters

Either Incineration or Landfill analyses (see Table 4-4) are conducted on the waste sample depending on the selected method of treatment or

disposal. Incineration or Landfill analyses help to ensure that the facility maintains compliance with site-specific waste feed restrictions or Federal LDR guidelines. They also aid in the waste characterization and verification process.

Incineration parameters are performed either on all waste shipments that are not excluded from sampling (as identified in Section 4.3.3) or on samples of blends or mixes of wastes. For example: Certain waste shipments will be blended in a batch. The batch will be sampled and analyzed for the incineration parameters prior to incineration, if not already analyzed before blending (see Table 4-5).

Landfill parameters are performed either on wastes designated for direct landfill or on the stabilized wastes after the process of stabilization as described in Section 5.3.

4.4.3 Supplemental Analysis

Supplemental analyses (see Table 4-6) may be performed to further characterize wastes. The basis for requiring these additional analyses includes:

- Experience and judgment of the Manager of Waste Acceptance or his/her designee or at the request of Plant Operations
- Waste Profile description of the chemical and physical properties of the waste
- Waste Profile description of the process generating the wastes, and
- Fingerprint, Incineration, or Landfill Analysis results

The results of these analyses provide the facility with another level of confidence concerning the proper means of waste treatment, storage and disposal.

4.5 Conformance Verification

4.5.1 Verification of Waste Profile Information

Following the visual inspection and/or sample analysis, the test results are reported in the Receiving Report (see example in Exhibit 4). The results of visual inspection and analysis are reviewed against the

acceptance criteria established during initial waste approval to determine if the waste is acceptable for the predetermined waste management method. The acceptance criteria for each waste management method are pre-established using the facility acceptance guidelines.

4.5.2 Load Acceptance and Handling of Discrepancies

After the test results are reviewed against the acceptance criteria and a positive decision is reached, the analytical data are recorded electronically in WIN. If discrepancies of waste type occur, one or more of the following actions will be taken to resolve the discrepancies:

- The sampling and analytical data are reviewed to verify that they are indeed correct.
- Additional analysis may be necessary in order to resolve discrepancies or to re-profile the waste.
- The generator is contacted by CHDP. The discrepancy is reviewed with the generator. If, based on generator information, and possibly additional analyses performed, the waste is amenable to treatment at the facility, the discrepancy is resolved between CHDP and the generator and may be accepted under a non-conforming state for an alternative treatment method. The resolution may also involve creating a new profile for the waste or updating the existing profile. The waste will be rejected if the discrepancies between actual waste analysis and pre-acceptance information are significant enough to render it inefficient for treatment, or make waste identification impossible without extensive analyses. If the waste stream composition renders it unmanageable by CHDP, it is either returned (i.e. rejected) to the generator using the original manifest with an explanation of the action, or sent to another appropriate facility under the direction of the generator.

4.5.3 Verification of Meeting LDR Treatment Standards

For a hazardous waste to be landfilled either directly or after stabilization, the LDR Notification/Certification form accompanying the first shipment must be thoroughly reviewed to ensure that the generator has certified that this shipment meets all the applicable LDR treatment standards required for the designated treatment and/or disposal method. In addition, waste shipments will be sampled and analyzed in a frequency as

described in Section 5.3 for all the applicable LDR constituents to verify compliance with applicable treatment standards. Due to the long turnaround time of certain analyses, CHDP may request a representative sample be sent to a CHDP approved lab prior to the shipment of the waste for this verification.

4.6 Distribution of Waste to Specific Treatment or Storage Areas

Following the visual inspection, sample analysis, and conformance verification, the waste is transferred to the appropriate storage or processing area.

5.0 Storage and Processing Procedures

Each movement of a waste within the facility, during which any change in its characteristics may occur, may make the waste subject to additional inspection, sampling and analysis to determine appropriate handling and management of the waste. Many of the analyses needed for the storage, treatment, and disposal functions are performed during incoming load identification. These analyses are not repeated unless it is known or believed that the waste characteristics may have significantly changed during storage or processing and/or such information is deemed necessary for the safe management of the waste.

5.1 Storage

5.1.1 Bulk Waste Shipments for Incineration

Liquid wastes which are transported by bulk containers for incineration are generally transferred into bulk storage tanks prior to further treatment unless designated for direct incineration. When a load of bulk liquid waste, designated for non-dedicated storage tanks, arrives at the site, it will be subjected to the Fingerprint analyses, (see Table 4-4) to identify the wastes, plus a liquid waste compatibility test (Appendix A), to ensure safe storage of the liquid in storage tanks. Known incompatible wastes (based on information obtained during the waste acceptance evaluation) will not be blended with other wastes, and do not require a compatibility test. If a bulk liquid load is exempted from sampling, as described in Section 4.3.3 the waste will be segregated from other types of waste materials. The waste may be stored in dedicated tanks for similar materials or fed directly to the designated treatment unit.

Once a blend or batch is complete in a blend tank, a representative sample is obtained and analyzed for incineration parameters.

Incineration analyses may not be required if the individual waste streams that comprise the batch or blend were analyzed for incineration parameters already. If verification is needed, one or two parameters will be used to determine the following:

- Whether the waste parameters are within the management unit's operational acceptance limits
- Reactivity, or incompatibility of the wastes
- Indicate any changes in waste composition that may have changed during blending or storage

5.1.2 Non-Bulk Waste Shipments

Stored drum wastes are segregated with respect to ignitability and compatibility based on the knowledge and/or analysis of the wastes. A compatibility test will be performed on liquid in drums of different waste streams to be bulked together in storage tanks. Processing of Pyrophoric material should begin within 24 hours of receipt but under no circumstances can storage of these materials exceed 30 days.

5.2 Incineration

The facility waste management process includes incineration. The following table notes the feed operating parameters*.

Operating Parameter	Units	Basis	2006 CPT data	2021 CPT data	Established Operating Limit
Kiln Total Waste Feed	pph	HRA	20,909	20,666	20,666
ABC Total Waste Feed	pph	HRA	16,848	19,846	16,848
Pumpable Waste Feed	pph	HRA	23,025	26,992	23,025

*Limits are adjusted off the most recent CPT and corresponding NOC.

The incineration process often generates residues - ash and scrubber sludge filter cake. These residues generated at CHDP will be stabilized, if necessary, then landfilled either on site or at an off-site permitted facility. If the wastes incinerated are regulated wastes under the Land Disposal Restrictions (40 CFR 268), the resulting residues are not permitted for landfill unless they are delisted or meet all the applicable LDR treatment standards. A detailed Sampling and Analysis Plan (SAP), included in Appendix C, has been developed to ensure that all the incineration residues, unless delisted, meet the treatment

standards prior to being landfilled. Incineration residues from off-site sources, which have been certified as meeting all applicable treatment standards based on an SAP similar to the one in Appendix C and implemented by a CHDP approved lab, will meet the analytical requirements for landfill.

5.3 Stabilization/ Landfill

Wastes from off-site sources to be disposed by landfill fall into two categories: wastes that qualify for direct landfill and wastes that require stabilization prior to landfill.

1) Direct Landfill

Prior to first receipt of Land Disposal Restricted (LDR) wastes stabilized off-site or wastes which do not require stabilization or treatment on-site, CHDP will perform corroborative sampling and analysis on those wastes for all applicable LDR constituents in accordance with 40 CFR Part 268. In lieu of corroborative sampling and analysis, the generator may provide a certification, including analytical results, to CHDP verifying the waste meets all applicable LDR standards. Such analysis by CHDP or certification by the generator shall be repeated annually if specified by the Permit or Attachment 1 Additionally, a minimum of 10% of the waste streams received during each calendar year shall be randomly sampled and analyzed for all LDR constituents applicable to that waste stream in accordance with 40 CFR Part 268. Records will be maintained demonstrating compliance with the above requirements and will be kept on site and available for review by TCEQ representatives.

When the waste arrives, all data and required forms (including LDR notification and certification for the first shipment) will be reviewed to verify meeting LDR requirements. A sample of the waste stream will be collected and analyzed for the Fingerprint Analysis (see Table 4-3) and Landfill Parameters (see Table 4-4). See Attachment 1 for additional requirements regarding waste received for direct landfill.

If chemical analyses and/or LDR certification confirm that the waste stream meets all applicable LDRs, passes the Free Liquids Test and other pertinent permit requirements, the waste will be accepted for disposal in the landfill. If the results of the analyses do not indicate that the waste stream meets the LDRs, the Free Liquids Test or other permit requirements, CHDP will either: determine if additional treatment, including but not limited to incineration and/or stabilization, can be

conducted by CHDP in order to allow landfill of the waste and make any necessary arrangements with the generator; or CHDP will reject the waste shipment and the waste shipment will be returned to the generator or transported to another authorized hazardous waste management facility.

2) Stabilization Prior to Landfill

During the pre-acceptance procedures, if the waste stream meets the applicable LDR treatment standards for the cyanide and organic constituents but not the metal constituents, the concentrations of metal constituents will be evaluated for stabilization requirements. The concentration of metal constituents, subject to LDRs, will be used to determine the capability of the CHDP stabilization process to reduce leachable metals concentrations to meet applicable LDR treatment standards. In addition, a sample may be obtained for laboratory stabilization study if necessary. The purpose of this study is to experimentally determine the ratio of reagent to waste, at which the stabilized material can meet all the applicable LDR metal treatment standards as well as the Paint Filter Liquids Test and/or the Unconfined Compressive Strength Test requirements. If CHDP determines that the waste stream can be successfully stabilized, in accordance with the applicable LDRs, the waste stream will be scheduled for receipt by CHDP for stabilization and landfill. The shipment receiving procedure as described above for direct landfill will be followed, except the TCLP/Metals analysis will not be performed until after the stabilization. Wastes from off-site sources that need to be treated only by stabilization, prior to landfill placement, will be stabilized in accordance with the mixture recipe determined by CHDP during the pre-acceptance procedure or prior experience with similar wastes. The stabilized waste will be sampled and analyzed for all TCLP/Metals concentrations as required by applicable LDRs and the Free Liquids Test (Paint Filter Liquids Test or visual determination of the presence/absence of free liquid) or Unconfined Compressive Strength Test (ASTM Test Method D 2166) if specified by the Permit. If the sampling and analysis results indicate conformance with the requirements of the LDRs and Permits, the stabilized waste will be disposed by landfill. At least one and if required additional samples will be collected and analyzed from each batch of stabilized waste. A batch is defined as one receiving pan of waste, which is approximately 100 yd^3. See Attachment 1 for additional requirements regarding waste stabilization.
Before mixing different off-site waste streams for stabilization, the chemical compositions of the waste streams to be mixed will be thoroughly reviewed for compatibility. If necessary, based on waste compositions, a compatibility test similar to the one included in Appendix A for tank farm

wastes will be employed to determine if the incoming load waste is compatible with the residues left in the receiving pan of the stabilization facility and/or other incoming load waste to be mixed together.

6.0 Quality Assurance Procedures

The CHDP laboratory has in place a comprehensive quality assurance program to ensure that all data collected in connection to this Waste Analysis Plan are meeting the quality for intended use. The CHDP laboratory will meet and in some cases exceed the minimum criteria described in the TCEQ RCRA/UIC QAPP and in SW-846 method 8000 for organic analyses and method 7000 for metals. In addition, The CHDP laboratory will maintain an up-to-date QAM which describes the QA practices of the laboratory. The main elements of the program are documented procedures, proficiency testing, staff training, and laboratory audits. Details of these various elements are presented in Exhibit 5.

7.0 References

1. "Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act", Environmental Protection Agency, Federal Register, Vol. 49, No. 209, October 26, 1984, and updates in 40 CFR 136, App. A.
2. "Methods for Chemical Analysis of Water and Wastes", U.S. EPA, 1979, 600/4-79-200, and updates.
3. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 6th Edition, U.S. Environmental Protection Agency, Office of Solid Waste, Washington, D.C. February 2007, and updates.
4. American Society for Testing and Materials (ASTM)
5. Standard Methods for the Examination of Water and Wastewater, APHA, WEF

Appendix IV
Site and Contingency Plan

CLEAN HARBORS DEER PARK, LLC

SITE SPECIFIC

EMERGENCY PROCEDURES &

CONTINGENCY PLAN

Version 6
April 2025

Contents

Introduction and Purpose

Clean Harbors Deer Park is committed to the safety and well-being of its staff, students and guests. Upholding this commitment requires planning and practice. This plan exists to satisfy those needs and to outline the steps to be taken to prepare for and respond to an emergency affecting the department or the College.

Goals

The goals of Clean Harbors Deer Park in responding to an emergency situation include:

- The safety of all employees and guests.
- The physical and emotional well-being of employees and guests.
- The timely stabilization of an emergency situation.
- The protection of Clean Harbors Deer Park facility, property, and the belongings of employees and guests.

Applicability and Scope

This plan applies to all employees of Clean Harbors Deer Park and any person occupying the physical plant of Clean Harbors Deer Park; employees, and guests.
The scope of this plan is intended to encompass all hazards. This plan may be consulted when responding to any and all emergencies. When encountering a situation which has not been expressly addressed in this plan, use good judgment and the guiding principles outlined below.

1. EMERGENCY PROCEDURES

The following procedures have been designed to establish guidelines for the orderly handling and reporting of major emergency situations that occur or could foreseeably develop at facility sites. The Clean Harbors Deer Park, LLC Contingency Plan (Section 1) of this manual incorporates these emergency procedures into the site's plan for evacuation, mitigation, mutual aid response, of-site notification (adjacent facilities and residential areas) and regulatory agency notification. The site SPCC (Spill Prevention Controls and Countermeasures Plan) provides additional information and procedures.

A Major Emergency is Defined As:

Any explosion, fire or natural disaster (hurricane, tornado, flood, etc.) which has destroyed the surrounding community; or resulted in a discharge of waste materials into the environment and is beyond the capability of on-duty personnel to control.

A major emergency may originate from in-plant events such as spills, fires, and equipment failure or from an off-plant incident such as a chemical release or fire from neighboring property, or a natural disaster, such as a hurricane.

A major emergency may occur at any time. Drills will be organized by the Safety Department and conducted as needed for each shift so that all personnel are thoroughly familiar with emergency procedures.

In the event of a major emergency, priority will always be given to protecting site personnel. Evacuation of the injured and all other non-emergency response personnel from the emergency zone to a safe area will always be a priority action. However, when severe destruction has occurred in an area (fire, explosion, etc.) it shall be the site management's priority to protect and notify personnel in adjacent facilities and neighborhoods. If the emergency has a potential to affect the community outside the plant site, the Deer Park LEPC (Local Emergency Plan Committee) will be the primary controlling agency for areas external to the facility.

The ERT Team:

The Emergency Response Team (ERT) at the Deer Park facility responds to numerous types of emergencies. The team is comprised of volunteers both hourly and supervision. The Fire Team will respond to various types of incidents; it can range from an incipient fire to a large industrial fire. The team has been trained to combat industry fires of all kinds to include the use of specialized tactics with foam application. The team will not perform any interior firefighting above the incipient phase. The Fire Team is an Emergency Response Team only. It is not a "Fire Brigade" as defined in NFPA 600. The Fire Team is trained in defensive and incipient firefighting only. It does not perform interior (beyond the incipient stage) or offensive firefighting. The local fire department would be called in to perform offensive firefighting of interior and exterior fires beyond the incipient stage.

1.1. SUMMARY OF EMERGENCY RESPONSE PROCEDURES

The following is a summary of the emergency response procedures to be followed in the event an emergency occurs within the Clean Harbors Deer Park, LLC facility during the times indicated.

1.1.1. EMERGENCY LEVELS

There are three levels of response to an emergency at Clean Harbors.

Level One; When the emergency is handled by on site personal
Level two; When emergency cannot be handled by on site personal and the Clean Harbors E.R.T has to be called out.
Level Three; When outside agencies are called out to assist in the emergency.
(incidental spills which are cleaned up by operations will not be seen as an emergency)

1.1.2. REPORTING AN EMERGENCY

The following actions shall be taken without delay. Any employee, upon observing or detecting a emergency, shall immediately warn others working nearby and notify his immediate Supervisor and the Plant Supervisor. If the plant Supervisor is not immediately available, an employee may request that the Operations Supervisor or board operator announce an emergency condition over the Whelan System, plant radio or telephone paging system.

Channel 1 on the plant radio, the plant telephones and the plant telephone paging systems are the primary means of communication for reporting plant emergencies and requesting assistance.

The employee should call "999" on Channel 1 of a plant radio. The call should indicate the location, the nature of the problem, and the assistance required.

The Plant Supervisor may also be reached at extension 2433. The Incineration Supervisor at extension 2387 is an alternate notification point. The plant telephone paging system can also be utilized.

The Plant Supervisor should immediately inform the General Manager or his alternate.

The Emergency Coordinator or his alternate will appraise the situation and determine whether to initiate the emergency contingency plan. If they are not available, the Incineration Supervisor assumes the Emergency Coordinator Position. He maintains that position until relieved by either the Primary or the Alternate Emergency Coordinators.

1.1.3. COMMUNICATION TO ON-SITE AND OFF-SITE PERSONNEL

The Emergency Coordinator will evaluate the information available and decide if the Whelan Emergency System should be activated. The Alarm Codes are shown here:

Situation	Type of Alarm	Exp. Of Sound
Emergency	Fog Horn	On-Off

Visitors & Contractors WALK to front gate. All permits are void. Clean Harbors personnel standby for instructions.

Situation	Type of Alarm	Exp. Of Sound
Evacuation	Siren	Rise & Fall

All personnel WALK to front gate. All permits are void.

Situation	Type of Alarm	Exp. Of Sound
Shelter-in-Place	Siren	Hi-Lo Tone

Go immediately inside if you are outside and remain inside during the incident and shut off all A/C units.

Situation	Type of Alarm	Exp. Of Sound
All Clear	Siren	Constant

All personnel return to work area and wait for permits to be updated.

Situation	Type of Alarm	Exp. Of Sound
Alert	Voice	Information

Potential emergency at Clean Harbors Deer Park, LLC or Neighbor information ONLY.

The alarms are supplemented by voice announcements over the Whelan System. Plant radios (Channel 1) and telephones can also be utilized. Plant Radio Channel 3 is reserved for the use of the ERT team. The Evacuation Plan is included in Section 1 (Contingency Plan).

Emergency Notification List			
Name	**Position**	**Office #**	**Cell Phone #**
William Simmons	General Manager*	281-930-2399	[redacted]

Mark Herzik	Incineration Manager*	281-930-2477	[redacted]
Steve Banister	Operations Manager**	281-930-2370	[redacted]

(*Emergency Coordinator) (**Alternate Emergency Coordinator)

1.1.4. NOTIFICATION OF OUTSIDE SUPPORT AGENCIES

If the Emergency Coordinator determines that a release, fire or explosion has occurred which could threaten life, property or the environment outside the facility, he will notify the designated outside support agencies by telephone or radio as follows:

- The primary response group for all site emergencies is Channel Industries Mutual Aid (CIMA). The Emergency Coordinator will request that the Operations Supervisor place CIMA on stand-by or on "first and/or second alarm" response.
- The Operations Supervisor contacts CIMA via telephone, Baytown Dispatch 281-837-9191, or via Channel 1 on the CIMA radio. CIMA radios are located at Transportation/Receiving Office, the Safety Managers Office, the Incineration Control Room, the Emergency Operations Center (920 Office), the First Aid Room, the ERT Response Truck and Foam #2 (Fire Truck).

The CIMA first alarm personnel listed here respond along with the CIMA Specialists.

Company	Telephone #	Zone Location	Equipment
I.T.C.	281-884-0340	3	Foam Engine
VOPAK	281-604-6045	3	Foam Engine
Shell Command	281-246-7301	3	Aerial, Foam Engine, Van, Ambulance
Total Petrochemicals	281-476-3700	3	Foam Engine
Deer Park Police	281-479-1511	3	Traffic Control
Deer Park Fire Dept.	281-479-1511	3	Ambulance
Harris County Sheriff (life flight)	713-221-6000	3	Traffic Control

The Deer Park Fire Department and Deer Park EMS (Ambulance) are CIMA members.

- The Deer Park Local Emergency Planning Committee is notified by calling 281-479-1511. This also notifies the Deer Park Police Department. The Deer Park LEPC will handle the notification of residents and adjoining facilities via their "CAN" telephone network and their citywide Whelan siren system.
- The Deer Park EMS (Ambulance) can also be reached via a "911" call.
- Law enforcement personnel can also be contacted by a "911" telephone call. The Harris County Sheriff is the primary law enforcement agency. Deer Park, La Porte and Precinct 8 Constable provide mutual aid back-up to the Sheriff's office.

1.1.5. MANAGEMENT OF INCIDENT AND RESPONDERS

To assure the emergency responders are properly informed of hazards, Clean Harbors Deer Park, LLC will follow its Hazard Communication Program and CIMA SOPs and Incident Command System. Waste Safety Profiles are available on the WIN WEB, or in the Laboratory and Waste Acceptance Departments.

The Clean Harbors Deer Park, LLC Emergency Coordinator is the Primary Incident Commander. The first arriving CIMA specialist will establish a Command Post with the Clean Harbors' Emergency Coordinator. Arriving CIMA members (including municipal fire, ambulance, and police) will be managed by the Emergency Coordinator and CIMA specialist via the Incident Command System (ICS) and the CIMA Standard Operating Procedures (SOP).

If the incident has actual or potential off-site impact, the Deer Park LEPC will activate its fixed or mobile EOC. This EOC coordinate off-site activities including notification, evacuation and traffic control. The Deer Park LEPC "Annex Q" EOC staffing chart is available through the Deer Park Public Library. Emergency Response Assignments for personnel are given in Attachment 1. More specific emergency instructions for operations personnel are given in the appropriate SOPs.

1.2. EVALUATION AND SIZE-UP OF EMERGENCY

Whenever there is a release, fire or explosion, the Emergency Coordinator is responsible for ensuring that the character, exact source, amount and extent of any released material is immediately identified. This will be accomplished by observation and by review of facility manifests and other facility records as required. This evaluation may be done concurrently with notification of employee, evacuation of employees, and request for outside assistance. The evaluation and size-up of the emergency would utilize the following resources:

- Operating records and logs — available in the Control Room.
- Waste Safety Profiles — available in the Receiving Lab or Waste Acceptance Department or on the web.
- Safety Data Sheets (for purchased chemicals) —available on share point, from win web, quick links, facility management, incinerators, Deer Park site, Material Safety Data.
- Waste Discharge Tickets (for individual trucks) — available in the Receiving Lab and the Incineration Supervisor's Office.
- Engineering records and equipment drawings — available in the Operations Building.
- Operating personnel who observed the incident.

1.3. ASSESSMENT OF POSSIBLE HAZARDS

Whenever there is a release, fire or explosion, the Emergency Coordinator will immediately assess hazards to human health or the environment that may result from a release, fire or

explosion. This assessment will incorporate both direct and indirect effects of the release, fire or explosion (e.g., the effects of any toxic, irritating or asphyxiating gases that are generated, or the effects of any hazardous surface water runoff from water or chemical agents used to control fire and heat induced explosions.

The assessment would be done by utilizing the following resources:

- Operating records and logs — available in the Control Room.
- Waste Safety Profiles — available in the Receiving Lab or Waste Acceptance.
- Safety Data Sheets (for purchased chemicals) — available on share point, from win web, quick links, facility management, incinerators, Deer Park site, Material Safety Data.
- Waste Discharge Tickets (for individual trucks) — available in the Receiving Lab and Incineration Supervisor's Office.
- Waste Data Sheets — the generator's original Waste Stream Profile contains physical, chemical and safety information. These sheets are available from the Waste Acceptance Department and the Plant Computer System (PIMS).
- Reference Materials — The Safety Department and Waste Acceptance Department have chemical and physical data reference manuals.
- The wind direction, speed, Relative Humidity and temperature are available on-line.
- The Health and Safety Department has direct reading instruments to measure instantaneous concentrations of many chemicals processed at the site. These include portable VOC monitor, and detector tube kits. The Plant Supervisors and Incinerator Supervisors have direct reading meters of 02, LEL and H2S.

1.4. NOTIFICATION TO LOCAL AUTHORITIES

If the Emergency Coordinator's assessment indicates that evacuation of local areas may be advisable, he will immediately contact State, County and City law enforcement and emergency authorities; (Deer Park LEPC EOC 281-479-1511);

- He will cooperate with appropriated officials in deciding whether the local area should be evacuated. The Deer Park LEPC is the primary coordinating agency for external

evacuations. Deer Park LEPC will activate their fixed or mobile command post to provide communication and coordination. The Deer Park Whelan siren system and the Deer Park E-Notify system will be utilized for communication to affected facilities and residential area. The CIMA radio system can also be utilized to notify adjacent facilities.

The Emergency Coordinator will notify the Texas Commission on Environmental Quality (TCEQ) office giving the following information:

- Name and telephone number of the reporter.
- The Clean Harbors Deer Park, LLC facility at 2027 Independence Parkway South, La Porte Texas facility as the location of the incident.
- State the time and type of incident (e.g., release, fire).
- The type and quantity of material(s) involved, to the extent known.
- The extent of injuries, if any.
- The possible hazards to human health or the environment outside the facility.

This notification shall be made to the TCEQ Spill Response Hotline @713-767-3563

or 1-800-832-8224.

The Emergency Coordinator may call the Compliance Manager and request that he notify the TCEQ and other regulatory agencies.

NOTE: When Warranted, The Emergency Coordinator also notify the National Response Center at 1-800-424-8802.

The Deer Park CAER (Community Awareness and Emergency Response) messaging system can also be utilized to at www.ehcma/caeronline.

1.5. CONTROL OF THE INCIDENT

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

The emergency incident will be contained, controlled and suppressed by the Clean Harbors Deer Park, LLC ERT and CIMA responders according to the specific procedures outlined in:

- The Clean Harbors Deer Park, LLC SPCC Plan.
- The Clean Harbors Deer Park, LLC ERT incident pre-plans.
- The CIMA SOP's
- The Waste Safety Profiles and Material Safety Data Sheets.

The Emergency Coordinator, CIMA Specialists and Officers appointed via the CIMA ICS system develop appropriate strategic and tactics to safely curtail the Emergency Incident while minimizing off-site health and environmental effects

1.6. MONITORING OF CONCURRENT OPERATIONS

If the facility (or a portion thereof) stops operations in response to a fire, explosion or release, the Emergency Coordinator will monitor for leaks, pressure build-up, gas generation or ruptures in valves, pipes or other equipment wherever appropriate.

The Incineration Supervisor and the Control Room "A" Operators do actual monitoring of the concurrent operations. They will notify the Emergency Coordinator of any significant status changes or trends.

1.7. CONTAINMENT AND DISPOSAL OF ASSOCIATED WASTES

Immediately after an emergency, the Emergency Coordinator will provide for treating, storing or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire of explosion at the facility. These measures are described below.
Liquid wastes of known composition collected in containment sumps will be pumped into suitable containers for prompt removal to a storage area (for subsequent disposal at an authorized facility) or for immediate disposal at an authorized facility. Liquid waste of unknown composition will be analyzed and then treated similarly. Contaminated fire and storm wastes collected in containment sumps be managed in accordance with procedures described below.

Liquid wastes, including contaminated storm or wash waters, which have been collected by means of emergency berms or excavations will be sampled and pumped into suitable containers or waste management units for disposal as described above. Contaminated non-liquids, including contaminated soils, will be placed in suitable containers and taken

directly to disposal or to a secure staging area for subsequent disposal in an authorized facility, soil sampling and analysis will be performed to conform completeness of removal of any wastes from the ground.

The Laboratory Manager, the Waste Acceptance staff, the Compliance Manager, the Laboratory Supervisor, and the Wastewater Treatment Manager will assist the Emergency Coordinator. The SPCC Plan provides model procedures for typical emergency scenarios.

1.8. RECOVERY OPERATIONS

1.8.1. The Emergency Coordinator will ensure that, in the affected area(s) of the facility, no waste that may be incompatible with the released material is treated, stored or disposed of until clean-up procedures are completed. The following paragraph describes the procedures for ensuring that no such treatment, storage, or disposal occurs.

The affected area(s) of the facility will be cordoned off by means of a tape barricade until clean-up procedures are completed. The barricade will be tagged with notices on all sides of the affected areas clearly specifying that no waste management activity may be performed within the barricaded area without specific authorization of the specific waste management activity by the Laboratory Manager. The Laboratory Manager will be responsible to the Emergency Coordinator for all determinations of capability with the released material being cleaned up.

1.8.2. The Emergency Coordinator will ensure that all emergency equipment listed in the Contingency Plan is either cleaned and fit for its intended use or replaced before operations are resumed. The following procedures describe methods employed to decontaminate affected equipment.

Contaminated emergency equipment used during the containment or clean-up operations will be taken to a wash down location for a completed inventory and inspection. (Any contaminated heavy equipment will be washed down with water prior to movement to other locations in the facility). The Emergency Coordinator willdesignate an individual trained in the use and care of emergency equipment to perform these inspections and to supervise the decontamination of those equipment items that are determined to be reusable upon successful decontamination.

Equipment will be decontaminated by:

- Wash down with water; or
- Steam-cleaned; or
- Scrubbing with a soap solution and water rinse; or
- Scrubbing with a suitable solvent material; or A combination of the above, as appropriate

Washed or rinsed material will flow to a collection sump at the wash down pad and will be pumped out for disposal.

The individual designated is responsible for; the inspection and decontamination of the emergency equipment and will report his final equipment inventory to the Emergency Coordinator. The Emergency Coordinator will not authorize the resumption of normal operations in the affected area(s) until the non-reusable emergency equipment items are replaced.

1.9 NOTIFICATION OF RESUMPTION OF OPERATIONS AND INCIDENT REPORT

. The Compliance Manager will notify the TCEQ Executive Director's representative and the TCEQ District Office that the facility follows the previous section before operations resume in the affected areas.

The Compliance Manager will document any incident in the facility's operating record (by noting the time, date and details of the incident) that required implementation of this Contingency Plan and will submit a written report on the incident to the Executive Director and the District Office within 15 days after the incident. The report will include:

- Name, address, and telephone of the Clean Harbors Deer Park, LLC facility.
- Date, time, and type of incident (e.g., fire, explosion).
- Name and quantity of material(s) involved.
- The extent of injuries, if any.
- An assessment of actual or potential hazards to human health or the environment, where applicable.
- Estimated quantity and disposition of recovered material that resulted from the incident.

2. CONTINGENCY PLAN

The Clean Harbors Deer Park, LLC Contingency Plan has been prepared in accordance with 40 CFR 264-50 thru 264.56. The Contingency Plan incorporates the Clean Harbors Deer Park, LLC SPCC Plan.

The Contingency Plan is designed to minimize potential hazards to personnel or the environment resulting from fires, explosions or unplanned release of hazardous materials.

Section 1, Section 9 and Section 10 of this Safety Manual contains the detailed Emergency Procedures to be applied in the event of a major emergency affecting the Clean Harbors Deer Park, LLC facility. In addition, it outlines the arrangements Clean Harbors Deer Park, LLC has made with local authorities concerning the type of waste handled at its facility and the potential need for the services of these organizations. The Plan also includes a list of persons qualified to act as Emergency Coordinator and a list of emergency equipment required and available at the Clean Harbors Deer Park, LLC facility.

The provisions of this plan will be carried out immediately whenever there is a fire, explosion or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment. The following plan describes the actions facility personnel will take in response to fires, explosions, or an unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil or surface water at the facility.

The plan will be amended if it fails during an emergency, the facility changes in a way that materially increases the potential for fire, explosions or releases, the list of emergency coordinators change and/or the list of emergency equipment changes.

3. EMERGENCY PROCEDURES

Section 10 (Medical Emergencies) and Section 1 (Emergency Procedures) provide the detailed steps to implement the Contingency Plan during an emergency (fire, explosion, unplanned release of hazardous waste to air, land or water). The Emergency Procedures detail the responsibilities of the Emergency Coordinator and facility personnel for:

a. Reporting an emergency
b. Communication to on-site and off-site Personnel
c. Notification of Outside Support Agencies
d. Notification of Clean Harbors Deer Park, LLC E.R.T.
e. Management of Incident and Responders
f. Evaluation and Size-up of Emergency
g. Assessment of Possible Hazards
h. Notification to Local Authorities
i. Control of the Incident
j. Monitoring of Concurrent Operations
k. Containment and Disposal of Associated Wastes
l. Recovery Operations
m. Notification of Resumptions of Operations and Incident Report

4. SPCC PIAN INCORPORATION

The Clean Harbors Deer Park, LLC Spill Prevention Counter Measures and Control Plan and Oil Spill Prevention and Response Action Plan, have been incorporated as part of this Contingency Plan. The Emergency Procedures (Section 1 of this manual) address

the specific waste handling and disposal procedures that are required by the hazardous waste regulations.

5. ARRANGEMENTS WITH LOCAL AUTHORITIES AND EMERGENCY RESPONSE SERVICES

Clean Harbors Deer Park, LLC has made the following arrangements as appropriate for the type of waste handled at its facility and the potential need for the services of these organizations.

Clean Harbors Deer Park, LLC has made arrangements to familiarize local fire and police departments, and local response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes.

Arrangements have been made with emergency response teams, emergency response contractors and equipment suppliers. These arrangements are briefly described here and in the SPCC Plan.

Arrangements have been made to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illness which could result from fires, explosions or releases at the facility.

Specified below are the agreements designating primary emergency authority to specific police and a specific fire department, in cases where more than one police and fire department might respond to an emergency. Also specified below are agreements with others to provide support to the primary emergency authority:

Police:	Harris County Sheriff
Central Office Address:	1301 Franklin, Houston, TX 77002
Local Office Address:	701 Baker Rd. Baytown, TX 77536
Person Contacted:	Dispatcher
Phone Number:	713-221-6000 (Dispatcher)
Agreed Arrangements:	Traffic Control
Fire and Ambulance:	Deer Park Fire Department
Address:	1302 Center St. Deer Park, TX 77536
Person Contacted:	Dispatcher
Phone Number:	281-479-1511
Agreed Arrangements:	Fire/Rescue (including transportation of injured persons)
Physician:	Noah Smith, PA
Address:	1009 South Broadway Street, La Porte, Texas 77571
Person Contacted:	Noah Smith, PA
Phone Number:	281-941-4174

Agreed Arrangements:	Treatment of injured person
Hospital (6-8 & weekends):	Houston Healthcare Southeast
Address:	4000 Spencer Hwy. Pasadena, TX
Phone Number:	281-359-2000
Agreed Arrangements:	Treatment of Injured Person
Other:	CIMA (Channel Industries Mutual Aid)
Address:	Participating Companies in table below
Person Contacted:	Representatives designated within CIMA
Phone Number:	281-837-9191 (Baytown CIMA Dispatcher)
Agreed Arrangements:	Primarily fires or spills; other emergencies at the discretion of the Emergency Coordinator

Company	Phone/CIMA call #
ITC	281-479-6024 / WRU-897
VOPAK	281-604-6045
Shell	713-246-7301
Total Petrochemicals	281-476-3700
Deer Park Police	281-479-1511
Deer Park Fire Dept.	281-479-1511
Harris County Sheriff	713-221-6000

6. COORDINATION WITH RESPONDER

Fire Suppression, Rescue and Haz-Mat services are provided through CIMA. CIMA conducts biennial site inspections and holds monthly meetings to facilitate reviews of individual facility hazards and the Incident Management System. CIMA Fire Responders meet with Clean Harbors Deer Park, LLC E.R.T. members and tour the site yearly.

The Deer Park Fire Department — E.M.S. provides ambulance, paramedic and rescue services. The Deer Park Fire Department — E.M.S. is represented on the Deer Park L.E.P.C. as Clean Harbors Deer Park, LLC. The Deer Park Fire Department -E.M.S. is also a CIMA member.

Dr. Ashby is the primary physician for the facility, has toured the facility so he is familiar with the personnel and potential health hazards at the site.

Dr. Sanders and the Pasadena Bayshore Emergency Room provide secondary off-site medical service. Dr. Sanders and the Bayshore Emergency Room Coordinators have toured the Clean Harbors Deer Park, LLC facility. They all have been provided information to familiarize them with the facility and work tasks.

The Harris County Sheriff is the primary law enforcement agency for the facility area. Deer Park Police Department, La Porte Police Department and the Precinct 8 Constable provides backup. All the above police agencies are members of CIMA and/or the Deer Park LEPC.

7. EMERGENCY COORDINATOR'S LIST

Persons qualified to act as Emergency Coordinator are listed below. The alternates are listed in the order in which they will assume responsibility. The Emergency Coordinator will be on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time), with the responsibility for coordinating all emergency response measures. The Emergency Coordinator is thoroughly familiar with all aspects of the facility's contingency plan, all hazardous waste operations and activities at the facility, the location and characteristics of hazardous waste handled the location of all hazardous waste records within the facility, and the facility layout. In addition, this person has the authority to commit the resources needed to carry out the Contingency Plan. The list including names of the individuals who fill the positions at the time the Contingency Plan is submitted to the TCEQ and the EPA as updated.

The General Manager is the Primary Emergency Coordinator. The Incineration Manager, the Senior Process Engineer, the Health & Safety Manager and the on-site Incineration Supervisor are the alternate Emergency Coordinators.

As there is always and on-site Incinerator Supervisor, they will normally assume the position of Emergency Coordinator. They will be relieved by one of the other coordinators as they become available. The addresses and phone numbers of the Emergency Coordinators are given in Attachment 1.

The Emergency Coordinator will manage all incidents and responders from the Field Command Post (FCP) per the discussions in other parts of this section and in Section 3 per ICS. The Clean Harbors Deer Park, LLC E.R.T. officers and CIMA personnel will be the division and Safety Officers as given in the CIMA ICS and SOP's. The Clean Harbors Deer Park, LLC General Manager will oversee the Emergency
Operations Center (E.O.C.) located in the common area upstairs in the administration building. Clean Harbors Deer Park, LLC managerial and technical personnel will fill the staff support positions indicated on the CIMA ICS staffing chart (Section 2). These support position would include media relations, Engineering, Technical, Environmental, and Logistic functions.

(See Attachment 1 for the listing of home addresses, home phone numbers, cell phone numbers, plant phone number and plant radio call numbers of the primary and alternate Emergency Coordinators).

8. EMERGENCY EQUIPMENT LIST

Included below is a list of emergency equipment required and available at various locations in the facility. The list includes the location and a physical description of each item on the list and a brief outline of its capabilities (where required). Clean Harbors Deer Park, LLC may elect to replace listed equipment with a different brand or type of equipment with the same or greater capacity or capability.

8.1. EMERGENCY EQUIPMENT USE

Provisions are made for rapid replacement of emergency equipment including portable fire extinguishers, self-contained breathing apparatus, etc.

Immediately following use of any of the above (discharged portable fire extinguishers, self-container breathing air bottles) an Incident Report by the appropriate Supervisor should be prepared. The discharged portable fire extinguishers should be returned to the spare extinguisher storage location and a replacement put in place. Self-contained breathing air bottles that are used shall be changed out and the vendor called to pick bottles up for refill.

On the off-shifts, the Compliance System Inspector (Asst. Fire Chief) shall be responsible for ensuring that any used cylinders are refilled in a timely fashion.

If, at any time, an incident involves injury of a worker requiring outside medical attention, the Safety and Health Manager should be informed (or appropriated Department Head in the former's absence).

In the case of extensive property damage or theft, the Operations Manager or General Manager should be timely informed.

8.2. FIRE EXTINGUISHERS, SCBA'S, SAFETY SHOWERS

The equipment is listed by location in Attachment 8. The SCBA's are positive pressure units. The fire extinguishers are C02 Halon of 20# stored purple K pressure dry chemical units. The safety showers and eye washes are standard units supplied by potable water from Well #1.

8.3.FIRE SUPPRESSION SYSTEMS

The fire suppression system components are listed on Attachment 2. The firewater system, hydrants and monitors are shown on Attachment 3. The fire systems are connected to a public water supply with adequate pressure and volume.

8.4. MEDICAL EQUIPMENT

The Clean Harbors Deer Park, LLC emergency medical equipment is listed on

Attachment 8

8.5 EMERGENCY RESPONSE TEAM VEHICLES AND EQUIPMENT

A listing and capabilities are given on Attachment 5.

9.0. REQUESTING EMERGENCY MEDICAL ASSISTANCE

A medical emergency is handled in the same manner as any other Plant emergency. Channel 1 on the Clean Harbors Deer Park, LLC site radios, the site phones, the site phone paging system, and the CIMA radio are the primary means of communications for requesting onsite and off-site assistance.

9.1 ASSISTANCE FROM ON-SITE PERSONNEL

a. For significant medical emergencies, call "999" on Channel 1 of a Plant radio. Indicate your location, the nature of the problem and the assistance required.

b. For minor problems or if a radio is not available, call the Plant Supervisor at ext. 2433, Incinerator Supervisor at 2387, Safety at ext. 2412, or use the Plant paging system at 880 to find one of these personnel.

9.2 ASSISTANCE FROM OUTSIDE THE PLANT

If the Emergency Coordinator or his designee determines that assistance from off-site is required, the following resources are available:

a. Medical — Deer Park EMS via site phone 911 or 281-479-2394 or Channel Industries Mutual Aid via Channel 1 on CIMA Radio or via phone at 281-837-9191 CIMA Dispatch Baytown.

b. LIFEFLIGHT - coordinated through Deer Park EMS

c. ERT — The off-site Clean Harbors Deer Park, LLC ERT members may be summoned via the OneCall by the General Manager or his designee. The Operations Supervisor will initiate the page the ERT as needed.

9.3. INITIAL EVALUATION, TREATMENT & STABILIZATION

The Emergency Coordinator, the General Manager, Health & Safety or their designee will dispatch EMT and or ERT personnel to the problem site. These personnel will complete a patient evaluation. The Emergency Coordinator will provide additional assistance as required to control any associated emergencies, assist with rescue and retrieval or safely secure the area of the problem. The level of treatment required be determined by the EMT (ERT) personnel doing the initial patient evaluation and observation.

9.4. ON-SITE FIRST AID

First aid will be provided at the scene or at the First Aid Room on the first floor of the Operations Building.

9.5. OFF-SITE TREATMENT MEDICAL FACILITIES

If it is determined that off-site treatment is required, the site's designated physician, the designated emergency room or an area trauma center may give it.

A. PHYSICIAN (Primary)
Texas Industrial Medical
1009 south Broadway Street
La Porte, TX 77571 281-941-4174

A1. PHYSICIAN (Secondary)
Dr. James Stanton @ U.S. Health Works
Phone: 281-470-0543
Address: 1309 W. Fairmont Pkwy, Suite X, La Porte, TX 77571
Location: HWY 146 @ Fairmont Parkway

The primary company physician is the initial contact for all medical emergencies requiring treatment outside the Clean Harbors Deer Park, LLC facility.

B. EMERGENCY ROOM
HCA Houston Healthcare Southeast
Phone: 713-329-2000 (Main Number) or 713-359-1440
(Emergency Room)

Address: 4000 Spencer Highway, Pasadena Texas
Location: At the intersection of Spencer and Burke

C. TRAUMA CENTER (severe burns, severe respiratory distress or head or cervical spine trauma) (Transport via LIFEFLIGHT)
Hermann Hospital
Phone: 713-704-4357
Address: 6411 Fannin
Location: Texas Medical Center

9.6. TRANSPORTATION

Transportation to the designated off-site facility may be by Clean Harbors' vehicle, ground ambulance or helicopter. The EMT personnel evaluating the patient and the Emergency Coordinator will decide which transportation mode is appropriate.

9.6.1 CLEAN HARBORS DEER PARK, 11 C, VEHICLE

Clean Harbors Deer Park, LLC vehicles should be used only for patients who are not in a life-threatening mode. The driver should be an EMT or ERT who can aid if the patient's condition worsens. The Safety pick-up truck is the primary transportation vehicle. The ERT truck is the secondary vehicle. The patient should never be allowed to drive himself.

9.6.2 GROUND AMBULANCE

The primary ground ambulance transportation service is Deer Park EMS— Phone — 911 (from a site phone) or 281-479-2394. The Deer Park EMS response will normally be an ambulance 2 EMT's (usually one Paramedic), a rescue truck with a 2-man crew and a Supervisor. The ambulance should be used when the patient’s condition is life threatening or requires Paramedic level medical intervention procedures such as I.V.'s, tracheal intubation, cardiac monitoring or defibrillation.

9.6.3 HELICOPTER

For extreme trauma - LIFEFLIGHT may be summoned- LIFEFLIGHT must coordinated through the Deer Park EMS. Communications with LIFEFLIGHT is via the HAHERN system through Deer Park EMS or on the State Fire Mutual Aid frequency that is Channel 4 on the Clean Harbors radios in all three Clean Harbors Deer Park, LLC emergency vehicles. (Direct call to LIFEFLIGHT is 713-704-4357). The LIFEFLIGHT Landing Zone will be the North parking lot at CET. The alternate landing site is at Total Petrochemicals — Coordinated through Deer Park EMS and Total Petrochemicals (formerly known as ATOFINA).

9.7. CHANNEL INDUSTRIES MUTUAL AID MASS CASUALTY INCIDENT SYSTEM (CIMA MCI)

When off-site responders are summoned, the Clean Harbors Deer Park, LLC Emergency Coordinator will manage the incident as detailed in SECTION 2 of this manual. The incident will be managed via the CIMA MCI protocols and the Incident Command System. (CIMA ICS).

The CIMA ICS directs that the Clean Harbors Emergency Coordinator have overall command. All CIMA responders including Deer Park EMS will report to the Clean Harbors Deer Park, LLC Command Post.

9.8. NOTIFICATION

Notification of the incident will be made to the Clean Harbors' personnel via the procedures given in SECTION 1 of this manual. Notification to the "employees designate emergency contact" will be made by the Department Manager.

9.9. ADDITIONAL INSTRUCTIONS FOR CHEMICAL EXPOSURE

A. Obtain Waste Profile from Laboratory or Waste Acceptance Department if not already available.

B. Determine PPE requirements for responders

c. Determine DECON requirements for responders and patients.

D. Patient must be deconned before transport.

E. Provide hard copy of Waste Profile or SDS for off-site medical facilities.

10. MEDICAL EMERGENCY EQUIPMENT

10.1. FIRST AID ROOM

A complete TRAUMA kit (bandaging supplies, splints, cold packs, air way devices), 2 oxygen delivery systems with AMBU masks and 4 spare bottles, non-prescription medication and ointments, neutralizing and washing solutions, blood borne pathogen disposal boxes, one scoop stretcher, 2 backboards, one Miller SPI, one half backboard, and one Stokes basket.

10.2 RESPONSE ONE (1), FOAM ENGINE ONE (1)

A complete TRAUMA kit (bandaging supplies, splints, air way devices and cold packs) and an Oxygen delivery system

11. EVACUATION PIAN

The primary evacuation routes for personnel in each area of the plant are indicated on the attached map. The decision to evacuate the plant is the responsibility of the Emergency Coordinator.

Evacuation of personnel from Clean Harbors Deer Park, LLC or adjoining facilities may be necessary to prevent undue exposure of personnel to hazardous or potentially hazardous circumstances, either originating in the Clean Harbors Deer Park, LLC facility or in the adjoining plants. The Emergency Coordinator is authorized to deviate from the established procedures whenever his judgment indicates that an alternative evacuation plan will be more effective.

11.1. EVACUATION PROCEDURES

The Emergency Coordinator shall notify all plant personnel of the decision to evacuate the plant via the Whelan siren system. (The plant paging system is activated along with the Whelan; plant radios are the alternative).

The Emergency Coordinator can initiate a partial evacuation by designating plant zone number (Attachment 9) areas or job functions to be evacuated via the Whelan Emergency Tone and the Whelan Voice page. The Emergency Coordinator will then indicate what person or areas should evacuate by the route, evacuation points and assembly points he specifies. To facilitate partial evacuations, the attached evacuation maps have been divided into eight (8) areas: Zone 1 through 8 (Attachment 9). The Emergency Coordinator may sound the plant emergency tone (fog horn) causing all contractors to follow the evacuation procedures given here.

When a total plant evacuation is announced, all personnel (employee, contractors, and visitors) must leave the facility promptly. All personnel should promptly proceed to the Primary Assembly Point location (shown on Attachment 6). WALK — Do Not Run. The Emergency Coordinator or his designee should make a Whelan voice announcement indicating the type of emergency, wind direction, evacuation routes and assembly point. For a partial evacuation, personnel will follow the specific instructions of the Emergency Coordinator.

All managers (or designees) will report (once they have arrived at assembly point) their head count and names of unaccounted personnel to the Operations Supervisor (ext. 2461 or 2462). (Building captains will indicate that their assigned areas have been evacuated).

All designated personnel shall cooperate with and assist the Operations Supervisor in establishing a head count and in accounting for missing persons. Operations Supervisor

or designee will do head count for visitors and contractors. Construction Manager, Staff Accountant, Payroll Administrator and Employee Benefits Coordinator will assist.

The Operations Supervisor or designee reports to the Emergency Coordinator as soon as all personnel are accounted for and those not accounted (via radio). The Emergency Coordinator will assign an ERT to find missing personnel.

The Emergency Coordinator will decide when it is safe to return to the facility and will announce the ALL CLEAR over the Whelan siren system (Plant radios are the alternate).

Emergency codes, Instruction card and Evacuation map are attached with evacuation map. (The evacuation map is divided into eight (8 areas to facilitate communication and evacuation).

11.2. EVACUATION ROUTES

The primary evacuation routes are to be followed as indicated. Alternate routes will be followed only if specifically directed by the Emergency Coordinator via Whelan. All personnel will check wind direction via wind socks and evacuate cross-wind accordingly. Emergency Coordinator will announce location of incident and wind direction, evacuation route, and assembly point via the Whelan Voice System. If only a partial evacuation is required, the Emergency Coordinator will indicate which of the four (4) areas should evacuate.

Route maps for the evacuation of the Administration building are strategically located throughout the building.

Primary assembly point is at the Receiving Warehouse. Alternate assembly points are E Fence, S. Landfill, W fence near outfall 002 and S&E Building. Alternate emergency exits are indicated on map. (Alternate assembly points and exits are used only when directed to do so by Emergency Coordinator via Whelan system).

STAY CALM! THINK! DO NOT PANIC!

11.3. EMERGENCY PRECAUTIONS

Each individual should be prepared for properly responding to an Evacuation order by being thoroughly familiar with the following guidelines:

Periodically review all exit locations primary and alternate routes.

DO NOT close or lock office doors when vacating the facility. The Emergency Coordinator and emergency support personnel must have access to all areas to ensure that the facility is clear of personnel.

Promptly follow evacuation instructions.

DO NOT assist in fire control or rescue operations unless requested.

DO NOT use the voice paging system or radio for non-emergency information.

DO NOT use telephones.

DO NOT drive your car.

When evacuating the facility, WALK (Do Not Run) to the nearest designated emergency exit. Report to the designated assembly point and wait for further instructions. Watch for emergency equipment that may be responding and avoid their path.

DO NOT ASSUME ANYTHING. Follow these guidelines or instructions from authorized personnel (i.e., Supervisors or Safety Department Representatives) on site.

DO NOT block emergency equipment coming to the facility or moving in the facility.

DO NOT talk to the press or any non-Clean Harbors Deer Park, LLC persons regarding the emergency.

DO NOT re-enter the facility until instructed by the Emergency Coordinator.

11.4. BUILDING CAPTAINS

Operations Building (3)
S & E building 1st/ 2nd

CET front and Back

North Hall
Center Hall and East Hall
South and West Halls

Administration Building (4)

1st Floor — East/1st Floor — West
2nd Floor — East/2nd Floor — West
Laboratory Building (2)

Duties/Responsibilities

Verify that people in their sector have evacuated. Leave office doors open.

Proceed to primary evacuation point. Assemble personnel under designated sign posted on the North side of the parts warehouse building.

Report to Operations Supervisor or designee that all personnel have been evacuated or that assistance is needed.

Operations Supervisor or designee will notify Emergency Coordinator via radio of personnel who need assistance.

11.5. ALTERNATE EVACUATION POINTS

East Fence — South Landfill — (S & E Building)

West fence at 002 Outfall — rain tanks

Procedure to get the key to open alternate evacuation gates:

Use striker to break glass in lock box located on red plate.
Use key to unlock gate
Proceed around plant (cross-wind) to primary assembly point at front gate or alternate assembly points at 002 outfall and S&E.

11.6. SHUTDOWN PLAN

If the emergency signal is sounded, the Emergency Coordinator will indicate which area should be shutdown. The Emergency Coordinator will also decide which areas need to be evacuated or sheltered in place.

11.7. EMERGENCY MEDICAL PROCEDURES

The prompt and effective management and medical treatment of injuries, illnesses or exposures to hazardous chemicals or environmental factors is critical to minimizing the severity and duration of the problem. Medical Emergencies are managed via the same procedures specified or all site emergencies are covered in this plan. The Emergency Coordinators are the General Manager/Facility Manager, Incinerator Manager, Senior Process Engineer, Health & Safety and the on-site Incinerator Supervisor and Plant Supervisor.

12.0 DETAILED EMPLOYEE EMERGENCY RESPONSE GUIDE

12.1 EMERGENCY SCENARIO: FIRE

(NOTE) at any time if you do not understand the employee response guide training of what you are to do in an emergency contact the health & safety manager or a safety committee member so we can insure your safety is number one.

ANY FIRE THAT IS DISCOVERED MUST BE IMMEDIATELY REPORTED

- Using any plant radio, announce “999, fire at (location of plant)” to activate the emergency response team.

- If no radio is available, proceed immediately to nearest supervisor or other plant personnel with a radio.
- If necessary, find a telephone or use cell phone to call control room (2357/2356/2355 from any in-plant phone number, otherwise 281-930-2357/2356/2355) to have a board operator alert the emergency response team. Make sure to state where the fire is located. All radio communication that is not involved with the fire is to immediately cease, including supervisors and management. The radio must be clear for ERT members and operators involved with the fire. Wait for the all-clear to be announced to resume radio communication.

INCIPIENT FIRES

Incipient fires (fires that are just beginning) can sometimes be extinguished with a fire extinguisher. Operators who come across an incipient fire and feel comfortable with it are encouraged to attempt to extinguish the fire, provided the following:

- The fire is small enough that one 20-pound fire extinguisher can reasonably be inferred to extinguish it.
- The operator has been trained in the use of fire extinguishers.
- The operator knows and employs the PASS method for using the fire extinguisher.
- The fire extinguisher is in working condition.
- The operator feels confident about extinguishing the fire.
- The operator has a clear escape route directly behind them as they use the extinguisher.
- If any of the above are not correct, employee must immediately evacuate the area.
- They must have done step one

ESTABLISHED FIRES

Once a fire is past the incipient stage and is uncontrolled, the ERT must be activated to respond. ERT members are trained in industrial firefighting and equipped with bunker gear to fight established fires.

- When the ERT team has to respond to a fire, the Whelan alarm system must be activated. Control room operators or the incineration supervisor will activate the emergency alarm and announce the fire to the site.
- ERT members will immediately report to the fire house to don bunker gear and respond with the response truck and/or the fire truck.
- The supervisor of the area is the incident commander unless they are unavailable, otherwise the highest ranking ERT member will assume incident commander duties.

- **All visitors, contractors and any Clean harbors Employees not specially named in this procedure are to evacuate the plant immediately following established evacuation procedures**. All permits are void upon activation of the Whelan system and/or an emergency is declared. Note that visitors and contractors are to evacuate during any emergency that the ERT team is activated.

- Nonessential personnel are to remain clear of the fire area. Driving by to "see the action" puts more people in danger and can block ERT members from performing their duties. The area of the fire is off limits to all non-emergency response personnel until the all-clear is given.

SPECIFIC PROCEDURES FOR EACH AREA

- **Operations Area (3.6 Kiln, 4.4 Kiln, Rotary Reactor)**
    - If a fire occurs in the units, that unit will cease all waste feeds (solid and liquid waste).
    - If the fire is on one of the elevators in the units (4.4 Shredder, 4.4 North, 4.4 South, 3.6 elevator), the operator shall activate the relevant manual activation fire suppression system if able to safely do so. For detailed instructions on the activation of these fire suppression systems, refer to SOP 01-026: "C" Operator procedures.
    - All personnel will evacuate unit to shelter in place location (upstairs control room lunchroom).
    - If operators are aware of personnel down/trapped, they must report this to incineration supervisor or ERT member.
    - ERT personnel may communicate with local operators to determine any special hazards present where the fire is located (impingements, gas lines, cylinders, etc).
    - If the fire grows past the size that the ERT team is unable to control it, evacuation guidelines for the plant will be implemented.
    - Operators not involved with the response will wait until the all-clear is given before reporting back to area.
    - Operators will confer with supervisor to determine when area is safe to resume production (depends on extent of damage and location of fire).

- **Warehouse (DSP1, 2, 3, 5, 6, PCB Warehouse, RCRA Warehouse, Oxidizer/Transformer Building)**
    - If fire occurs operator can choose to attempt to extinguish using fire extinguisher following above guidelines.
        - If fire is in Oxidizer warehouse, Purple-K fire extinguisher must be used due to material.
    - If fire is too big for handheld fire extinguisher, operators must evacuate warehouse. Alert ERT team using plant radio.
    - Special care must be utilized by ERT team when fighting fires in warehouse due to risk of incompatible materials and locations of highly hazardous material.
    - Warehouse operators will evacuate to shelter in place location (upstairs control room lunchroom).
    - If operators are aware of personnel down/trapped, they must report this to warehouse supervisor or ERT member.

- ERT personnel may communicate with operators to determine any special hazards present where the fire is located (impingements, reactive/high hazard drums, cylinders, etc.).
- If the fire grows past the size that the ERT team is unable to control it, evacuation guidelines for the plant will be implemented.
- Operators not involved with the response will wait until the all-clear is given before reporting back to area.
- Operators will confer with supervisor to determine when area is safe to resume work (depends on extent of damage, spilled/damaged drums, location of fire, etc).

- **Tank Farm**
  - If a fire occurs in the tank farm, the control room will stop all feeds from tank farm to the units. All fill and discharge valves will immediately be closed as well.
  - If fire occurs operator can choose to attempt to extinguish using fire extinguisher following above guidelines.
  - If a fire occurs personnel must evacuate to area outside receiving gate (primary plant evacuation location).
  - If operators are aware of personnel down/trapped, they must report this to the plant supervisor or ERT member.
  - ERT personnel may communicate with local operators to determine any special hazards present where the fire is located (impingements, high hazard tanks, high hazard trailers, proximity to chlorosilane railcar, etc).
  - If foam is to be deployed to extinguish a dike fire, calculations to ensure a sufficient supply of foam must be performed prior to deployment.
  - If the fire grows past the size that the ERT team is unable to control it, evacuation guidelines for the plant will be implemented.
  - Operators not involved with the response will wait until the all-clear is given before reporting back to area.
  - Operators will confer with supervisor to determine when area is safe to resume production (depends on extent of damage and location of fire).

- **Wastewater**
  - If a fire occurs personnel must evacuate to area outside receiving gate (primary plant evacuation location).
  - If fire occurs operator can choose to attempt to extinguish using fire extinguisher following above guidelines.
  - If operators are aware of personnel down/trapped, they must report this to incineration supervisor or ERT member.
  - ERT personnel may communicate with local operators to determine any special hazards present where the fire is located (impingements, welding gas cylinders, etc.).
  - If the fire grows past the size that the ERT team is unable to control it, evacuation guidelines for the plant will be implemented.

- Operators not involved with the response will wait until the all-clear is given before reporting back to area.
- Operators will confer with supervisor to determine when area is safe to resume work (depends on extent of damage and location of fire).

- **Sample Rack/CET**
  - If fire occurs operator can choose to attempt to extinguish using fire extinguisher following above guidelines.
  - If a fire occurs personnel must evacuate to area outside receiving gate (primary plant evacuation location).
  - One operator will close entry gate so outside drivers are not able to enter emergency area.
  - If outside driver is near fire in tractor, they are to immediately exit their tractor and proceed to the plant receiving office to shelter in place.
  - If operators are aware of personnel down/trapped, they must report this to the plant supervisor or ERT member.
  - ERT personnel may communicate with local operators to determine any special hazards present where the fire is located (impingements, material in potentially open tanker at sample rack, etc.).
  - If the fire grows past the size that the ERT team is unable to control it, evacuation guidelines for the plant will be implemented.
  - Operators not involved with the response will wait until the all-clear is given before reporting back to area.
  - Operators will confer with supervisor to determine when area is safe to resume duties (depends on extent of damage and location of fire).

- **Receiving/Maintenance/Fabrication Shop/I&E Shop**
  - If a fire occurs personnel must evacuate to area outside receiving gate (primary plant evacuation location).
  - If fire occurs operator can choose to attempt to extinguish using fire extinguisher following above guidelines.
  - If operators are aware of personnel down/trapped, they must report this to incineration supervisor or ERT member.
  - ERT personnel may communicate with local operators to determine any special hazards present where the fire is located (impingements, welding gas cylinders, etc).
  - If the fire grows past the size that the ERT team is unable to control it, evacuation guidelines for the plant will be implemented.
  - Operators not involved with the response will wait until the all-clear is given before reporting back to area.
  - Operators will confer with supervisor to determine when area is safe to resume work (depends on extent of damage and location of fire).

- **Landfill/ S&E Building**
    - If a fire occurs personnel must evacuate to area outside receiving gate (primary plant evacuation location).
    - If fire occurs operator can choose to attempt to extinguish using fire extinguisher following above guidelines.
    - If operators are aware of personnel down/trapped, they must report this to incineration supervisor or ERT member.
    - ERT personnel may communicate with local operators to determine any special hazards present where the fire is located (impingements, welding gas cylinders, hazardous waste locations, etc).
    - If the fire grows past the size that the ERT team is unable to control it, evacuation guidelines for the plant will be implemented.
    - Operators not involved with the response will wait until the all-clear is given before reporting back to area.
    - Operators will confer with supervisor to determine when area is safe to resume work (depends on extent of damage and location of fire).

- **Mix Building/Materials Processing Building**
    - If fire occurs operator can choose to attempt to extinguish using fire extinguisher following above guidelines.
    - If the fire is too big for a handheld fire extinguisher, operators must evacuate mix building. Alert ERT team using plant radio. Mix building control room operator will remain in control room (BATCAVE) to operate fire suppression controls for mix building. If the operator feels that they are in danger, however, they can escape through the back door or emergency exits of the mix building control room and press the emergency deluge button located on the west wall.
    - The mix building is equipped with a water deluge system, a foam suppression and a dry chemical fire suppression system inside the processing area (mix building). There is also a deluge system in the outer materials processing building, also known as the “southside”. For operational instructions for these systems, refer to SOP 09-025: Mix Building Operator/HEO Grappler Operator.
    - Mix building and HEO Grappler operators will evacuate to shelter in place location (in-plant break room).
    - If operators are aware of personnel down/trapped, they must report this to the plant supervisor or ERT member immediately.
    - ERT personnel may communicate with operators to determine any special hazards present where the fire is located (high hazard shred drums, high hazard mixes such as aniline, etc.).
    - If the fire grows past the size that the ERT team is unable to control it, evacuation guidelines for the plant will be implemented.
    - Operators not involved with the response will wait until the all-clear is given before reporting back to area.

- Operators will confer with supervisor to determine when area is safe to resume work (depends on extent of damage, spilled/damaged drums, location of fire, etc).

- **Laboratory**
  - If a fire occurs personnel must evacuate to area outside receiving gate (primary plant evacuation location).
  - If fire occurs operator can choose to attempt to extinguish using fire extinguisher following above guidelines.
  - If operators are aware of personnel down/trapped, they must report this to incineration supervisor or ERT member.
  - ERT personnel may communicate with local operators to determine any special hazards present where the fire is located (impingements, sampling gas cylinders, etc).
  - If the fire grows past the size that the ERT team is unable to control it, evacuation guidelines for the plant will be implemented.
  - Operators not involved with the response will wait until the all-clear is given before reporting back to area.
  - Operators will confer with supervisor to determine when area is safe to resume work (depends on extent of damage and location of fire).

- **Administration/operations BLD**
  - If a fire occurs personnel must evacuate to area outside receiving gate (primary plant evacuation location).
  - If fire occurs operator can choose to attempt to extinguish using fire extinguisher following above guidelines.
  - If operators are aware of personnel down/trapped, they must report this to incineration supervisor or ERT member.
  - Once fire is past incipient stage, the Deer Park Fire Department must be called by utilizing the 911 system. Any structural firefighting shall be performed by Deer Park Personnel.
  - The Clean Harbors Deer Park ERT is not trained in interior structural firefighting. Response actions performed by CHDP ERT shall be primarily rescue of personnel.
  - Operators not involved with the response will wait until the all-clear is given before reporting back to area.
  - Operators will confer with municipal personnel and supervisors to determine when area is safe to resume work (depends on extent of damage and location of fire).

12.2 EMERGENCY SCENARIO: SPILL RESPONSE

Spill response procedures will be for all Clean Harbors employees. The plant response may be different as based on the list below. **All visitors, contractors and any Clean**

harbors Employees not Hazwoper Trained must evacuate the Area immediately following established evacuation procedures. All permits are void upon activation of the Whelan system and/or an emergency is declared. Note that visitors and contractors are to evacuate during any emergency that the ERT team is activated.

- Any spill volume of 250 gallons and below shall be cleaned by local operators. If not, HAZWOPER trained then ERT will be called to respond.
- Any spill volume over 250 gallons shall be responded to by ERT personnel along with local operators.
- Any spill is to be reported immediately to the area supervisor. Any employee who sees a spill in any other area is to report the spill immediately.
- If spill occurs in any of the warehouses, DSP's, or 4.4 Shred shed, care must be taken to move pallets in the vicinity of the spill to clean material that seeped under them.
- If the spill is an unknown material, level "B" PPE will be donned to respond to the spill.
- If the spilled material is known, the level of PPE will be determined by the relevant SDS.
- Operators of the area will respond to reported spill with backup from the Mix Building if needed.
- Any storm drains in the vicinity of the spill where product could seep to shall be blocked off by sand, absorbent booms, oil-dry material, or special drain covers.
- Once appropriate PPE is donned, operators shall pour oil-dry absorbent material around body of spill to initially contain seepage to adjacent areas.
- Enough oil-dry shall be placed onto the entirety of the spill to absorb the material. This material shall be allowed to remain on the material to give the oil-dry time to absorb the material.
- Operators shall proceed to sweep the material and deposit material-laden oil dry into steel 85-gallon drums or lined cardboard cubic yard boxes for direct disposal.
- Supervision shall coordinate with burn planners to determine the appropriate disposal unit (3.6 kiln, 4.4 kiln, mix building bulk feed, etc.).
- Once appropriate disposal method is determined, all contaminated material shall be immediately disposed.
- Depending on the material being cleaned, contaminated brooms/shovels/boots/etc. may have to be destroyed as well.

PCB and APHIS regulated material have specific procedures that must be followed. Refer to the following SOP's for the relevant procedures:

- SOP 09-060: PCB/RCRA Spill Procedures
- SOP 10-031-01: APHIS Regulated Material

12.3 EMERGENCY SCENARIO: EVACUATION/SHELTER-IN-PLACE

When there is an incident that requires the evacuation of plant personnel, the following procedures must be followed to ensure safe and efficient evacuation personnel to the appropriate muster points. Plant evacuations can be partial or total depending on the severity of the emergency and the risk for escalation of the event. Three levels of emergency will dictate the extent of the evacuation.

- **Level 1**: When the emergency is deemed to be contained in one area or at the time not expected to be catastrophic non-essential personnel will be evacuated from the area using the area evacuation system
- **Level 2:** When the emergency is of a level that the entire site could be impacted, the general evacuation order will be given, and all nonessential personnel will be evacuated from the plant.
- **Level 3:** When the emergency is deemed to have the likely potential for a catastrophic event, all personnel will be evacuated from the premises.

All visitors, contractors and any Clean harbors Employees not specially named in this procedure are to evacuate the plant immediately following established evacuation procedures. All permits are void upon activation of the Whelan system and/or an emergency is declared. Note that visitors and contractors are to evacuate during any emergency that the ERT team is activated. Clean Harbors personnel must reissue any permits after the all-clear is sounded before work can resume.

EMERGENCY ALERT SIGN

When any level of evacuation/shelter in place is done the shift supervisor will have the responsibility of having the emergency entrance sign changed to the level of the emergency

EVACUATION PROCEDURES

Evacuation routes, shelter in place locations, and evacuation muster points are in the Clean Harbors Contingency Plan/Contractor and visitor orientation.

Level 1 Evacuation Procedure:

- Upon identification of an evacuation level emergency, the control room will sound the evacuation alarm on the Whelan plant notification system.
- The specific zone(s) to be evacuated shall be announced on the Whelan voice notification system and on plant radios.
- All personnel not in the specified zones shall immediately proceed to the nearest shelter in place location.
- All work is to be immediately stopped. All permits are deemed void during any emergency.
- If the incineration area is included in the evacuation zone, A-Operators will immediately don supplied air respirators and plug into the provided breathing air ports located at each board station in the control room. The incineration supervisor will don a supplied air

respirator connected to the control room breathing air system to facilitate and direct operations to attempt to bring the emergency under control.

- No further entry of visitors, contractors, or trucks will be permitted. All vehicle traffic within the plant will cease to allow safe exit of personnel and movement of emergency equipment.
- ERT members will assemble at the fire house to bunker up and begin emergency operations, which will be dictated by the type and location of the emergency. The senior ERT member at the time of the emergency will assume the Incident Command position to further analyze situation for possible deployment of Emergency Response Teams that are staged at fire house.
- All zone personnel, visitors, and contractors will immediately proceed to the primary muster point located across the railroad tracks at the receiving warehouse. Note that the wind direction and location of the emergency may dictate alternate muster points, including the S&E building in the landfill area and the 002 outfall behind the warehouse.
- Upon arrival at the muster point, employees must report to their supervisor at the area to check in and/or badge into the electronic muster point (paper sign in sheets will be used until electronic muster points are installed).
- Supervisors at each shelter in place location shall take a head count of all personnel in the building. Supervisors and management shall communicate with other shelter in place locations and the evacuation muster points to establish that all personnel are accounted for. Any unaccounted personnel shall be immediately reported to management and the ERT team.
- No persons will be allowed to leave the muster point until the all clear signal has been broadcast over the plant Whelan system.
- The names of the ERT members involved in emergency response will be reported to supervision.
- Only authorized management and ERT members will be permitted to enter emergency areas to find persons not accounted for.
- Re-entry into the evacuated area will be made only after the “all clear” signal is broadcast over the Whelan system.
- For all questions of accountability, immediate supervisors will be held responsible for those persons reporting to them. Visitors will be the responsibility of those employees they are seeing. Contractors are the responsibility of their plant management contact.

Level 2 Evacuation Procedure

- Upon identification of an evacuation level emergency, the control room will sound the evacuation alarm on the Whelan plant notification system.
- All work is to be immediately stopped. All permits are deemed void during any emergency.
- A-Operators will immediately don supplied air respirators and plug into the provided breathing air ports located at each board station in the control room. The incineration

supervisor will don a supplied air respirator connected to the control room breathing air system to facilitate and direct operations to attempt to bring the emergency under control.

- No further entry of visitors, contractors, or trucks will be permitted. All vehicle traffic within the plant will cease to allow safe exit of personnel and movement of emergency equipment.
- ERT members will assemble at the fire house to bunker up and begin emergency operations, which will be dictated by the type and location of the emergency. The senior ERT member at the time of the emergency will assume the Incident Command position to further analyze situation for possible deployment of Emergency Response Teams that are staged at fire house.
- All personnel, visitors, and contractors will immediately proceed to the primary muster point located across the railroad tracks at the receiving warehouse. Note that the wind direction and location of the emergency may dictate alternate muster points, including the S&E building in the landfill area and the 002 outfall behind the warehouse.
- Immediately upon exit through the gate, each supervisor will prepare a list of the personnel that they are accountable for, and as soon as possible notify the acting senior ERT member (OPS Chief) of any missing personnel. This will be done by any means of communication, ideally except plant radio to ensure ability of responding ERT members is not compromised by lack of communication ability.
- Upon arrival at the muster point, employees must report to their supervisor at the area to check in and/or badge into the electronic muster point (paper sign in sheets will be used until electronic muster points are installed).
- No persons will be allowed to leave the muster point until the all clear signal has been broadcast over the plant Whelan system.
- The names of the ERT members involved in emergency response will be reported to supervision.
- Only authorized management and ERT members will be permitted to enter emergency areas to find persons not accounted for.
- Re-entry into the evacuated area will be made only after the “all clear” signal is broadcast over the Whelan system.
- For all questions of accountability, immediate supervisors will be held responsible for those persons reporting to them. Visitors will be the responsibility of those employees they are seeing. Contractors are the responsibility of their plant management contact.

Level 3 Evacuation Procedure

Level 3 evacuation is for scenarios where a catastrophic incident is likely to occur that would result in severe injury or death to any person who remains. In this case, the following procedure would be followed alongside the level 2 procedure.

- A voice announcement will be broadcast over the Whelan system that a full evacuation of all personnel is required.

- A-Operators will set controls to prepare for their abandonment, including but not limited to the opening of emergency hatches on incinerators and engaging of ESD's.
- ERT members will secure fire water (fire monitors, portable monitors, quick attack truck, and fire truck) to provide maximum protection for escaping personnel.
- A-Operators and the incineration supervisor will switch from supplied air at their stations to escape packs as soon as possible after controls are set.
- A-Operators and the incineration supervisor will immediately leave the control room and go to the appropriate muster point.
- ERT members will immediately head for the appropriate muster points.
- A-Operators, the incineration supervisor, and the ERT members will check in with the supervisors at the muster point to be accounted for and /or badge into the electronic muster point.

Evacuation Drill Procedure:

- To start the evacuation drill, the control room will sound the evacuation alarm on the Whelan plant notification system.
- All personnel shall immediately proceed to the nearest shelter in place location. **A operators and Shift supervisor will not evacuate during a Drill.** A-Operators and shift supervisors shall perform individual evacuation drills at other times to not impact operations.
- All work is to be immediately stopped. All permits are deemed void during any emergency. This includes evacuation drills.
- A-Operators will immediately don supplied air respirators and plug into the provided breathing air ports located at each board station in the control room. The incineration supervisor will don a supplied air respirator connected to the control room breathing air system to facilitate and direct operations to simulate the attempt to bring the emergency under control.
- No further entry of visitors, contractors, or trucks will be permitted. All vehicle traffic within the plant will cease to allow safe exit of personnel and movement of emergency equipment.
- ERT members will evacuate to the primary muster point with all other personnel.
- All zone personnel, visitors, and contractors will immediately proceed to the primary muster point located across the railroad tracks at the receiving warehouse.
- Upon arrival at the muster point, employees must report to their supervisor at the area to check in and/or badge into the electronic muster point (paper sign in sheets will be used until electronic muster points are installed).
- Supervisors at each shelter in place location shall take a head count of all personnel in the building. Supervisors and management shall communicate with other shelter in place locations and the evacuation muster points to establish that all personnel are accounted

for. Any unaccounted personnel shall be immediately reported to management and the ERT team.

- No persons will be allowed to leave the muster point until the all clear signal has been broadcast over the plant Whelan system.
- The names of the ERT members involved in emergency response will be reported to supervision.
- Only authorized management and ERT members will be permitted to enter emergency areas to find persons not accounted for.
- Re-entry into the evacuated area will be made only after the "all clear" signal is broadcast over the Whelan system.
- For all questions of accountability, immediate supervisors will be held responsible for those persons reporting to them. Visitors will be the responsibility of those employees they are seeing. Contractors are the responsibility of their plant management contact.

SHELTER-IN-PLACE

When there is an incident that requires the shelter in place of plant personnel, the following procedures must be followed to ensure safe and efficient sheltering of personnel to the appropriate shelter points.

All visitors, contractors and Clean harbors Employees are to report to the closes designated shelter in place immediately. All permits are void upon activation of the Whelan system and/or an emergency is declared. Note that visitors and contractors are to evacuate during any emergency that the ERT team is activated. Clean Harbors personnel must reissue any permits after the all-clear is sounded before work can resume.

Outside entrance into the plant:

When any level of evacuation/shelter in place is done the shift supervisor will have the responsibility of having the emergency entrance sign changed to the level of the emergency.

12.4 EMERGENCY SCENARIO: PANDEMIC

This policy applies to all employees working at Clean Harbors Deer Park.

The Company reserves the right to terminate or modify this policy in accordance with applicable law and the latest guidance from the CDC at any time and at management's discretion.

In accordance with applicable law and duly issued executive directives, the Company will identify every employee by Department. Depending on business needs and other factors, the Company will decide which of these three categories employees will fall under:

- Employees work in the office or work location full-time.

- Department uses a rotating schedule, based on staffing needs and physical layout of the work space(s). Such a schedule could include 4-day work weeks, staggered hours, weekend work or other shift variation.
- Employees work full or part time from home, if it is feasible to perform work remotely and the work can be performed with measurable KPI's.

The intent is to engage with each employee and determine what works best for the employee and the Department. The Company reserves the right to select the manner in which the employee remains or returns to work in order to ensure the safety of all employees and to operate the business in an efficient manner.

The Employee's Responsibility at the office or work location:

- Do not come into work if you are not feeling well, have a fever or a member of your family or a household member is sick, has a fever or is exhibiting flu-like symptoms.
- Do not come into work if you have been told to self-quarantine by the company or a government entity.
- Always maintain 6 feet of social distance from others when on company property.
- Clean your work area surfaces with wipes and disinfectant regularly and at the beginning and end of each workday.
- Wash your hands regularly or after touching surfaces outside your workspace
- Avoid touching your face.
- If your location has an elevator, please observe the following rules: a. Only one person per elevator. b. Use a mask if you are unable to maintain appropriate social distancing (e.g. using an elevator at non-company owned locations).
- Do not shake visitors' or other employees' hands or otherwise come into direct contact with them.
- Avoid close contact with other employees or visitors when possible. Close contact is defined as being less than 6 feet apart for more than 10 minutes. Each day be mindful of your close contacts with employees. This is in case an employee becomes infected with the virus and we need to trace who had close contact
- Do not let anyone into the building you do not know to be an employee. Inform the person they need to wait outside, and that they will need an escort

The Company will implement the following guidelines to ensure appropriate social distancing and to reduce the risk of virus transmission:

- The Company will reorganize the offices and work stations to ensure appropriate social distancing with a minimum of 6 feet between seats. If the Company is unable to move furniture or organize work stations to accommodate appropriate social distancing, the Company will attempt to stagger employee shifts to maintain appropriate social distancing. The Company reserves the right to require employees to wear masks in common areas or where appropriate social distancing is not otherwise possible or where required by law.

- The Company reserves the right to take temperatures of employees each day entering the buildings, and the employee acknowledges and agrees to have their temperature taken by no touch thermometers.
- The Company will take reasonable measures to limit the amount of high touch surfaces employees will be required to encounter and will prop all doors open whenever possible. If you touch a handle or other high touch surface, use a wipe or paper towel, then wash your hands or use hand sanitizer.
    - Handles or high touch areas to be concerned about include stairway handrails, washrooms, refrigerators, coffee machines, microwaves, cabinets, copy machines, office supply rooms, light switches, white boards, phones, etc.
- No visitors allowed unless by appointment, and only when necessary.
- For locations that have cafeterias or dining areas, those areas will be open when conditions permit, but hours may be limited. Seating in dining areas will be limited and allowed only when such seating allows employees to practice appropriate social distancing.
- Masks are allowed and encouraged but are not mandatory if social distancing guidelines can be maintained.
- If an employee tests positive for the virus or is presumed to be infected, the Company will decontaminate the area the employee was in. All employees that were in close contact with the individual who tests positive shall self-quarantine as directed by the Employee Care Team. As a general rule, buildings will remain open after a positive test unless the Company determines otherwise.
- Only curbside delivery of food from restaurants is allowed. No entry by food vendors is permitted.
- Any vendor doing services in the building will need an escort, have a mask given to them or be required to wear one including Iron Mountain, Cintas, Aramark and Cafeteria workers.
- For the foreseeable future, Guests are allowed only when there is an important business reason for the visit. Guest initiated meeting requests such as sales calls, informational meetings and visits from friends and family are not allowed. Employees will be required to sign in the guest with employee's own pen, not letting the guest sign in.
- Driving in vehicles - if more than one employee is in a vehicle, each occupant needs to wear a mask.

Skeleton Crew

In the event that a mass breakout of infections affects the entire site, the following levels of skeleton crews have been established. Each skeleton crew is designed to work the same 4-on 4-off rotating schedule that is usually followed during normal operation. When the company is unable to fill vacancies due to infections and preventative quarantining, using both on call and off call personnel, the skeleton crew will be implemented until such time as enough workers are able to return to staff full shifts. The one-unit skeleton crew allows one unit to still process waste and for the plant to run at a reduced capacity. The idling all unit's

skeleton crew allows for the units to maintain flame under natural gas to reduce the amount of time it would take for resumption of processing. Finally, with no units running, the plant only requires a supervisor and 4 employees to ensure all waste and equipment is secure.

One Unit Skeleton Crew

Operations	**Materials Processing**	**Wastewater Treatment**	**Maintenance/I&E**	**Day Shift Only**
1 Supervisor	1 Heavy Equipment Operator	1 Wastewater Operator	1 Shift Maintenance Mechanic	1 Wash Bay Operator
1 A-Operator	1 Driver	1 Filter Press Operator	1 I&E Shift Electrician	2 Maintenance Mechanics
1 B-Operator	1 Mix Building Operator			1 Sample Rack Operator
1 C-Operator	1 Tank Farm Operator			1 CET Receiving Clerk
1 Aspirator				

Idling all Units Skeleton Crew

- 1 Supervisor
- 1 A-Operator
- 1 B-Operator
- 1 Waste Water Operator
- 1 Tank Farm Operator
- 1 Driver

No Units Running Skeleton Crew

- 1 Supervisor
- 4 Employees

12.5 EMERGENCY SCENARIO: BOMB THREAT

It is vital that any employee who receives a bomb threat remain calm while following the procedure below.

- Remain pleasant and engaging toward the caller. It is essential to keep the suspect talking if possible.
- Obtain as much information as possible:
    - Write down the number from where the call is coming.
    - Write down the exact time of the call.

    - Write down as accurately as possible the statements made.
    - Listen to the voice to determine the sex, age, accents, lisps, tone, etc. (Note any distinguishing feature).
    - Listen for background noises.
    - Try to signal for someone else to also listen on the telephone line, if possible.
    - Do not hang up and stay on the line if possible; wait for the caller to hang up.
- Keep the suspect talking, and ask as many questions of the caller as you can:
    - When will the bomb go off? How much time remains?
    - Where is the bomb located?
    - What does it look like?
    - What kind of bomb is it?
    - How do you know about this bomb?
    - Why was it placed here?
    - Who are you?
    - What is your name?
- Once the suspect has hung up, immediately call 911 to report the threat. Make sure to have your notes from the call, as well as any bomb threat checklist you had while taking the call.
- Inform a supervisor or manager immediately as well. Contact information for managers are included in the Clean Harbors Deer Park contingency plan.

If a suspicious package is discovered at the facility, do not touch or disturb it. Immediately contact a supervisor or manager. Considering the work that occurs at the facility (waste processing), it is likely that some legitimate waste can share characteristics of suspicious packages. Good judgment is needed in this scenario. However, if an operator is suspicious about any package or object, they are encouraged to implement this procedure

- DO NOT touch the package or object.
- DO NOT tamper with the package or object.
- DO NOT attempt to move the package or object.
- DO NOT open the package or object.
- DO NOT put the package or object in water or an enclosed space, such as a drawer or box.
- Isolate the package or object and evacuate the immediate area.
- Immediately contact area supervisor or manager.

Characteristics of a suspicious package (not exhaustive)

- Special deliveries, foreign mail, or air mail
- Restrictive markings such as “Confidential” or “Personal”
- Excessive postage.
- Handwritten or poorly typed addresses
- Incorrect titles

- Misspelled words
- Stains or discoloration on the package
- Excessive weight
- Rigid, lopsided, or uneven envelopes
- Protruding wires or aluminum foil
- Excessive tape or string
- Visual distractions such as illustrations
- No return address

12.6. EMERGENCY SCENARIO: ACTIVE SHOOTER

All employees must be notified and should review the document listing all relevant emergency numbers for their work location(s).

MT1150 DHS Active Shooter Training is mandatory and must be completed by all employees.

Local FBI Office Telephone Number: 713-936-5000

Response options during an active shooter event:

- Run – As a first option, you should always try to evacuate the premises.

- Hide – If evacuation is not possible, find a place to hide for protection.

- Fight – As a last resort and when your life is in imminent danger, prepare to fight in self-defense.

Response actions once law enforcement arrives:

- Be aware that the first officers to arrive on scene will not stop to help you or the injured. They are there to stop the shooter. Rescue teams will follow the initial officers to treat and remove the injured.

- As officers arrive, they are trained to observe people's hands to look for weapons. Therefore, make sure you put down any items in your hands. Raise your hands and spread your fingers. Keep your hands visible at all times.

- Don't panic and rush at or grab officers. Remain calm and follow the officers' instructions.

- Don't stop to ask officers for help or directions when evacuating. Just proceed in the direction from which the officers are entering.

- Be aware that officers may shout commands at you. You may be frisked or even pushed to the ground for your safety.

- Once you have reached a safe area, you will likely be held there by law enforcement. Do not leave the area until authorities instruct you to do so.

Proactive Recommendations for Employees and Management

- Employees can use the Integrity Hotline to identify potential issues that could turn violent (hostile work environments, threats received, etc.). This will put into action appropriate mitigation steps before a situation can turn violent

- Site-specific access controls (keys, badges, etc.), floor plans, staff rosters and authorized employee lists must be made available to appropriate personnel

- All visitors must sign-in and sign-out, and are to be accompanied through any restricted areas or areas where an escort is required.

12.7 EMERGENCY SCENARIO: HURRICANE

Refer to Hurricane Action Plan, SOP 10-020.

Attachment 1

Table III.E.2. – Emergency Coordinators

NAME	HOME ADDRESS	OFFICE PHONE	CELL PHONE
PRIMARY			
WILLIAM SIMMONS GENERAL MANAGER	[redacted]	281.930.2399	[redacted]
ALTERNATES			
MARK HERZIK INCINERATION MANAGER	[redacted]	281.930.2477	[redacted]
STEVE BANISTER OPERATIONS MANAGER	[redacted]	281.930.2370	[redacted]
PLANT FOREMAN (920)	2027 INDEPENDENCE PARKWAY SOUTH LA PORTE, TX 77571	281.930.2433	469.540.8141
SHIFT SUPERVISOR (905)	2027 INDEPENDENCE PARKWAY SOUTH LA PORTE, TX 77571	281.930.2387	281.739.2310

ATTACHMENT 2

DESCRIPTION OF PLANT FIRE SUPPRESSION SYSTEMS

1. FIREWATER

a. 750,000-gallon dedicated firewater tank.

b. Two diesel firewater pumps — 2000 GPM & 1000 GPM with two electric jockey pressure maintenance pumps (pumps are tested weekly by maintenance personnel — as attached).

c. Firewater loop piping to all areas of the plant with fifteen monitor hydrants.

d. Approximately 250 portable fire extinguishers ranging from 5 lbs. Two 150 lbs. (inspected monthly by site and annually by external organization).

Hard piped permanent connection to neighboring I.T.C. facility firewater system.

f. Deluge system for Mix Building facility with UV and gas detection systems.

g. C02 deluge systems for three drum elevators and shredder systems operated Manual Pull. Dry Chemical FIKE system for one drum shredder, activated by UV detectors.

h. System for main plant computer.

i. Fire detection system for Operations and Administration buildings.

j. The firewater system has a hard piped 8" tie-in to the I.T.C. firewater system.

k. Hydrant and monitor locations are shown on Attachment 4.

1. Water-based fire protection system (sprinkler system) for 4-4 Feed Tower facility.

m. Dry standpipe 6" for 4-4 Feed Tower facility.

n. 3.6 Burn Line sprinkler deluge

o. 4-4 Burn Line sprinkler deluge (See VPP plan)

p. All MCC's fire detection systems

q. Drum Storage warehouse fire detection system

r. Receiving warehouse fire detection system

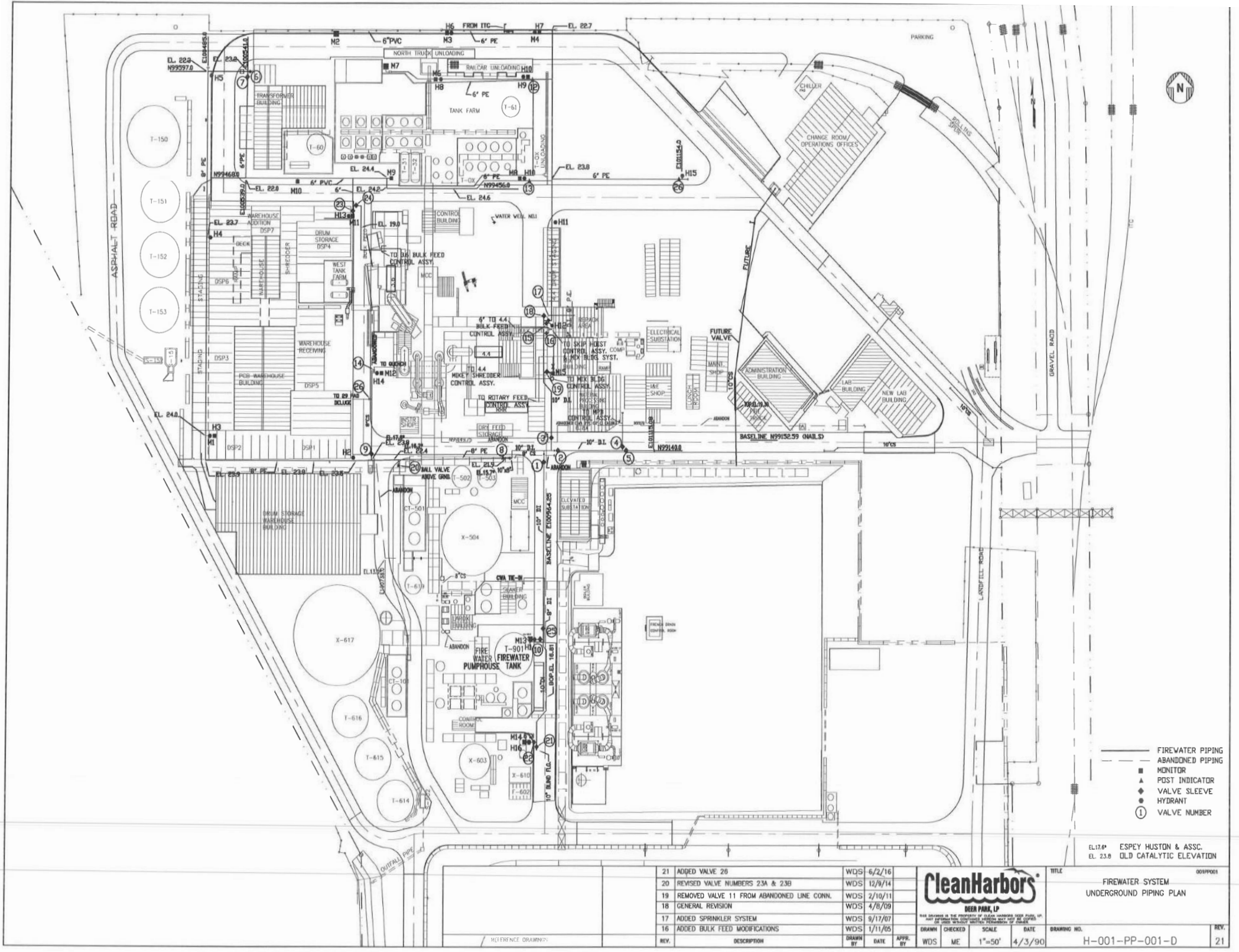
s. Control room fire detection system

t. Computer rooms fire detection system

u. S&E building fire detection system

v. PCB warehouse Dry Chemical system activated by UV/IR detectors

ATTACHMENT 3
FIREWATER SYSTEM: DRAWING
H-001-PP-001-D



REV.	DESCRIPTION	DRAWN BY	DATE	APPR. BY
21	ADDED VALVE 26	WDS	6/2/16	
20	REVISED VALVE NUMBERS 23A & 23B	WDS	12/9/14	
19	REMOVED VALVE 11 FROM ABANDONED LINE CONN.	WDS	2/10/11	
18	GENERAL REVISION	WDS	4/8/09	
17	ADDED SPRINKLER SYSTEM	WDS	9/17/07	
16	ADDED BULK FEED MODIFICATIONS	WDS	1/11/05	

REFERENCE DRAWINGS:

CleanHarbors®
DEER PARK, LP

THIS DRAWING IS THE PROPERTY OF CLEAN HARBORS DEER PARK, LP. ANY INFORMATION CONTAINED HEREIN MAY NOT BE COPIED OR USED WITHOUT WRITTEN PERMISSION OF OWNER.

TITLE 001PP001
FIREWATER SYSTEM
UNDERGROUND PIPING PLAN

DRAWN	CHECKED	SCALE	DATE	DRAWING NO.	REV.
WDS	ME	1"=50'	4/3/90	H-001-PP-001-D	21

Attachment 4

1. FIRST AID ROOM

a. A complete TRAUMA Kit (bandaging supplies, splints, cold packs, air way devices), two oxygen delivery systems with AMBU Masks and four spare bottles, non-prescription medications and ointments, neutralizing and washing solutions, Blood Borne Pathogen Disposal Boxes, one scoop stretcher, two backboards, one Miller SPI, one half backboard, and one Stokes basket.

b. Rescue One (1), Foam Engine One (1), Safety Truck One (1) — A complete TRAUMA Kit (bandaging supplies, splints, airway devices and cold packs) and an Oxygen Delivery System.

ATTACHMENT 5

Clean Harbors DEER PARK, LLC. EMERGENCY RESPONSE TEAM EQUIPMENT & VEHICLES

FOAM ENGINE ONE (1)

Six-Passenger Cab National Foam 1993 Foam —
H20 Pumper W1550 GPM — 500 Gallon Foam — 500 Gallon H^20
1250 GPM Deck Gun — 1000 feet of 5" Hose
750 GPM Portable Monitor
Six SCBAs and Six Spare Bottles
CIMA and Plant Radios Trauma

RESPONSE ONE (1)

Six Passenger Pick-ups
19914-Wheel Drive
CIMA and Plant Radios

SCBAs with Six Spare Bottles

SAFETY ONE (1)

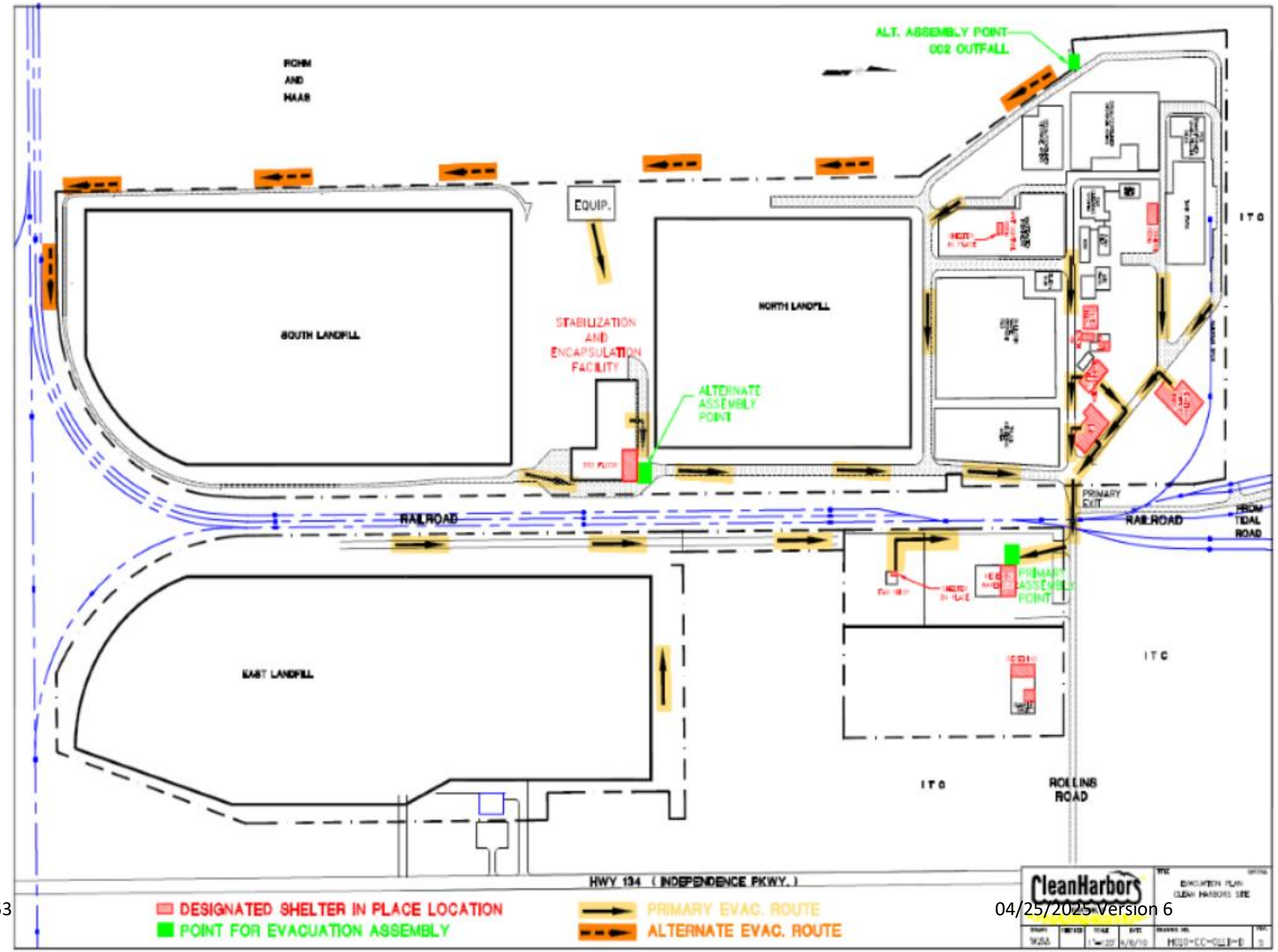
2006 Six passenger Pick-up

ERT EQUIPMENT

NOMEX Bunker Gear for Each Member
Twelve SCBAs and Bottles
2000 Feet of 5" Hose
Two 750 GPM Portable Monitors

ATTACHMENT 6

Evacuation Route Map
H-010-CC-011-D


ALT. ASSEMBLY POINT
002 OUTFALL
ROHM
AND
HAAS
EQUIP.
SOUTH LANDFILL
NORTH LANDFILL
STABILIZATION
AND
ENCAPSULATION
FACILITY
ALTERNATE
ASSEMBLY
POINT
ITC
PRIMARY
EXIT
RAILROAD
RAILROAD
FROM
TIDAL
ROAD
PRIMARY
ASSEMBLY
POINT
EAST LANDFILL
ITC
ITC
ROLLINS
ROAD
HWY 134 (INDEPENDENCE PKWY.)
DESIGNATED SHELTER IN PLACE LOCATION
POINT FOR EVACUATION ASSEMBLY
PRIMARY EVAC. ROUTE
ALTERNATE EVAC. ROUTE
CleanHarbors

Attachment 7

Table Ill.E.1. - Arrangements with Local Authorities

Police: Harris County Sheriff/ Deer Park Police
Address: 701 Baker Rd Baytown TX 77536 (Central 1301 Franklin, Houston TX)
Person Contacted: Dispatch Phone: 911 (direct # 713-221-6000)
Agreed Arrangements: The Deer Park Local Emergency Planning Committee is notified by calling 281-479-1511. This also notifies the Deer Park Police Department. The Deer Park LEPC will handle the notification of residents and adjoining facilities via their "CAN" telephone network and their citywide Whelan siren system. The Deer Park EMS (Ambulance) can also be reached via a "911" call. Law enforcement personnel can also be contacted by a "911" telephone call. The Harris County Sheriff is the primary law enforcement agency. Deer Park, La Porte and Precinct 8 Constable provide mutual aid back-up to the Sheriff's office.
Fire: Deer Park Fire Dept.
Address: 1302 Center St Deer Park, TX 77536
Person Contacted: Dispatch Phone: 911 (Direct line to Fire Dept 281-479-1511)
Agreed Arrangements: Respond as required
Hospital: Best Available as directed by EMS/ Fire Dept. Closest Emergency Roon
Address: HCA Houston Healthcare 4000 Spencer Hwy Pasadena Texas
Person Contacted: Dispatch Phone: 911 (Direct line ER #- 713-329-2000)
Agreed Arrangements:

Other: CIMA
Address: NA
Person Contacted: CIMA Phone: 281-837-9191, or via Channel 1 on the CIMA radio

Agreed Arrangements: The primary response group for all site emergencies is Channel Industries Mutual Aid (CIMA). The Emergency Coordinator will request that the Operations Supervisor place CIMA on stand-by or on "first and/or second alarm" response. The Operations Supervisor contacts CIMA via telephone, Baytown Dispatch 281-837-9191, or via Channel 1 on the CIMA radio. CIMA radios are located at the Guard House, the Safety Managers Office, the Incineration Control Room, the Emergency Operations Center, the Field Command Post, the Response Truck and Foam #2 Fire Truck.

Attachment 8

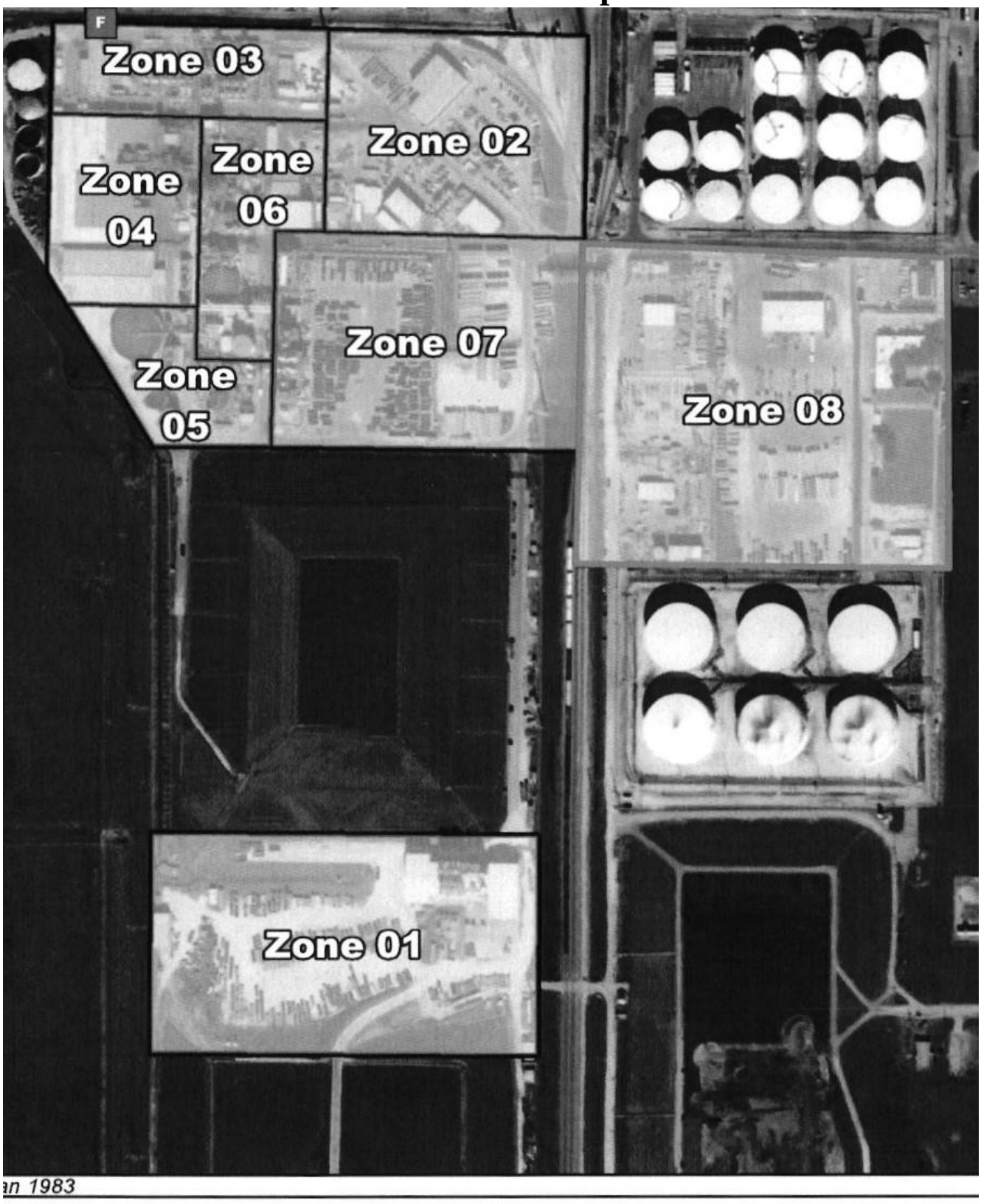
Table 111.E.3. -Emergency Equipment

Equipment	Location	Physical Description	Capabilities
Fire Extinguishers	Landfill	10 0 30# Class ABC	Extinguish small fires
Safety shower/eye wash station	Landfill	Emergency shower and eye wash station	Personnel decontamination
Fire Extinguishers	Administration Building	10 20 Class ABC	Extinguish small fires
Fire Extinguishers	Laboratory	10,20 Class ABC	Extinguish small fires
Safety shower/eye wash station	Laboratory	Emergency shower and eye wash station	Personnel decontamination
SCBA	Laboratory	30-minute air cylinder	Entry into specific area
5 min. esca ack	Laboratory	5-minute unit	Escape
Fire Extinguishers	S&E Building	10 20 Class ABC	Extinguish small fires
Safety shower/eye wash station	S&E Building	Emergency shower and eye wash station	Personnel decontamination
Fire Extinguishers	Process Area	10 20 Class ABC	Extinguish small fires
Safety shower/eye wash station	Process Area	Emergency shower and eye wash station	Personnel decontamination
SCBA	Process Area	30 minute air cylinder	Entry into specific area
5 min. esc pack	Process Area	5-minute unit	Escape
Spill response kit	Process Area	Varies	Contain & clean s ills
Pumper truck	On-site	Foam/water pumper — 5-man cab	1500 gpm pump, 1250 deck gun, 500-gal foam, 1000-gal water, 1000' 5" hose
Emergency response truck	On-site	4-wheel drive Truck	6-person cab, front winch, rear hoist, 6 SCBA and 6 spare bottles, first aid ear
Emergency response truck	On-site	4 passenger pickup truck	CIMA, SK, mutual aid radio
First aid room	On-site		Trauma kit

Table 111. E.3. -Emergency Equipment

Fire Extinguishers	Plant wide	10 20 Class ABC	Extinguish small fires
Safety shower/eye wash station	Plant wide	Emergency shower and eye wash station	Personnel decontamination
SCBA	Plant wide	30-minute air cylinder	Entry into specific area
Emergency communication s stem	Plant wide		Alert personnel about fire or spill
Plant radio	Plant wide		Communicate with personnel
Portable hand-held radios	Plant wide		Communicate with personnel
Intercom	Plant wide	Phones/ speakers	Communicate with personnel
Fire Extinguishers	Operations Building	10 20 Class ABC	Extinguish small fires
SCBA	Operations Building	30-minute air cylinder	Entry into specific area
Fire extinguisher	Mix Building	Class d	Extinguish small metal fires

Attachment 9- Zone Map



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Appendix V
Training Plan

Section XIII
Training Plan

Clean Harbors Deer Park (CHDP) has in-house training programs for all employees. All employees receive a general orientation training. When personnel are assigned to their respective groups, they receive specific job-related training. Until an employee is a qualified duty area operator, he/she must work under the supervision of a qualified area operator. All employees must successfully complete the courses prior to working unsupervised in the job title indicated.

Each department manager is responsible for the training and qualification of the individuals reporting to him/her. Overall coordination of the training program is the responsibility of the Health and Safety Manager.

All required training occurs within six months of date of hire or six months of assignment to Deer Park or within six months of a new position at CHDP, whichever is applicable.

Departmental qualification programs are not required to be completed within the six months of hire or six months after assignment, but the operator must have completed the applicable part of the departmental qualification program to work a duty area unsupervised. All training topics and training timelines can be found in Table 1.

The contingency plan is the basis for onsite emergency response training. This plan as well as the Spill Prevention, Control and Countermeasure Plan include the proper PCB Spill Cleanup per Policy 40 CFR 761 subpart G. Training is coordinated by the Health and Safety Manager or other qualified persons.

Other specific PCB training includes:

- type of PCBs treated and the upper PCB concentration limits which may be treated, including the dangers PCBs present
- The handling and/or PCB waste disposal requirements as described in the approval for process waste, and other materials generated during operations;

The employees are trained to the standard of the SOP's which can be found in Appendix L. Each of the attached SOP's contain a quiz which the employees must pass to test their proficiency of the material.

Additionally, other personnel at the site will be required to receive a level of training consistent with their purpose at the site. These persons include contractors, Clean Harbors employees from corporate offices or from other facilities, visitors, and any others for whom training would be necessary. The following outlines the training required for these persons.

Visitors who may be in areas where hazardous waste handling occurs are not required to have the training outlined above, provided they are constantly escorted by an appropriately trained CHDP employee. Other persons not working in areas where hazardous waste handling occurs will have training consistent with their task. The minimum training required for each person will be determined on a case-by-case basis. At a minimum, all contractors, visitors, and other non-CHDP personnel will be required to receive basic orientation on the site, potential hazards and safety precautions, and evacuation procedures, prior to entering the site. This will be accomplished with an orientation film and documentation will be maintained on-site.

Some courses require an annual or biennial refresher, such as First Aid and CPR. Annual refresher courses must be taken in the same quarter of the following year of the initial training. The OSHA 29 CFR 1910.120 Refresher (Monthly Modules) will be completed on a calendar year basis. PCB management and Safety training must be completed before an employee handles PCB related material. Refresher training for all topics on Table 1 occurs as noted.

Records will be kept in an electronic records training management system (i.e., LMS or equivalent program) or in a file accessible at the facility for examination by the State of Texas and the EPA. Included in these individual employee training records will be:

- Attendance record at training sessions
- Qualification cards and examinations
- Training received (Summary with title of course and date. Cross-indexed to course content file)
- Previous training and education, i.e., certifications, certificates The minimum training record documentation.

Also, available on-site, but not in each training folder, are the duty area rosters by day, the work orders for the Maintenance Department, the organization chart, and the course content files. Training records on current personnel must be kept until closure of the facility; training records on former employees must be kept for at least three years from the date the employee last worked at the facility.

The training coordinators for the CHDP facility are the department managers, or their designees, who report to the facility general manager.

To ensure that the training program is effective, and people are properly trained, exams or other measures of competency are used. If a person fails the exams or otherwise does not meet the minimum requirements of the training course, additional training will be required before the person is considered to have completed the course.

Table 1 - List of Courses

Course Title	Duration	Frequency
OSHA 29 CFR 1910.120	24 hr	Initial
OSHA 29 CFR 1910.120 Refresher	7 - 8 hr	Annual
OSHA 29 CFR 1910.120 Refresher (Monthly Modules)	0.5 - 1 hr each	Monthly
CPR and First Aid (for ERT and Supervisors)	3.5 - 4 hr	Biennial
Permit Training	9 - 10 hr	Initial
Permit Training Refresher	0.5 - 1 hr	Annual
General Employee Training		
• Site Orientation	1 - 1.5 hr	Initial
• Industrial Safety	1 - 1.5 hr	Initial
• Fire Prevention	1 - 1.5 hr	Initial
• Contingency Plan	1 - 1.5 hr	Initial

• SPCC	1 - 1.5 hr	Initial
• PCB (40CFR 761)		Initial and annual
Annual Refresher		
• Site Orientation Refresher	≈ 0.25 hr	Annual
• Industrial Safety Refresher	≈ 0.25 hr	Annual
• Fire Prevention Refresher	≈ 0.25 hr	Annual
• Contingency Plan Refresher	≈ 0.25 hr	Annual
• Compressed Gases	≈ 0.5 hr	Initial
• Venting Lines	≈ 0.5 hr	Initial
• Standard/Dual Wheel Forklift	6 – 8 hr	Initial
• Standard/Dual Wheel Forklift Refresher	≈ 1 hr	Annual
• Confined Space	2 - 2.5 hr	Initial & Refresher
• Laboratory QC	2 hr	Initial
• Laboratory Safety	2 hr	Initial
• Incineration Qualification Program	-	Initial
• Receiving Qualification Program	-	Initial
• Maintenance Qualification Program	-	Initial

• Production Qualification Program	-	Initial

Appendix VI
Closure and
Post Closure Plan

Section XX
Closure Plan

Clean Harbors Deer Park (CHDP) developed a closure and post-closure plan which is incorporated in their RCRA Permit. These plans consist of all active below and above grade landfills, two industrial incinerator trains, container storage and processing facilities, tank storage and processing facilities, rail car unloading areas, staging pads and direct burn areas. All areas storing, processing or being used for the disposal of hazardous wastes and/or PCBs are subject to closure cost analysis and included in the abovementioned closure plan.

The facility also has a Compliance Plan which includes groundwater monitoring and corrective action requirements noted in Section XI of the RCRA permit. This document is included in Appendix P the cost summary is contained within that appendix. The financial assurance for the cost estimate can be found in Appendix M -CHTX Deer Park inflation policy renewal July 2024 and is noted as Corrective Action.

The closure plans include provisions for a worst-case scenario closure of the CHDP facility and would be carried out by a third party. It also includes closure financial assurance backed by an insurance policy issued by Great American Insurance Company or another acceptable vendor.

The closure plan notes that it will be executed by an independent, registered, professional engineer during the closure of a unit or all the units. The independent engineer will ensure that each step of the closure plan is followed. The independent engineer will also determine the location of all soil borings based upon their assessment of the unit. The engineer will oversee the collection of all samples and will ultimately certify that the closure meets all regulatory requirements.

A copy of the Closure and Post Closure Plans, their respective Closure Cost Spreadsheets and the current financial assurance can be found in Appendix M. The closure cost spreadsheet notes TSCA units for reference. Upon approval of this permit, the financial assurance with be updated and forwarded to the appropriate agencies.

CLOSURE PLAN
TABLE OF CONTENTS

1.0 INTRODUCTION

This document presents closure and post-closure plans and the worst-case cost estimates for the Clean Harbors Deer Park, LP facility located in Deer Park, Texas [CH (Deer Park)].

CH (Deer Park) will comply with the requirements of 30 TAC 350 (Risk Reduction Program) when undertaking the remediation of property used for the storage, processing or disposal of industrial solid waste, or for the remediation of environmental media containing chemicals of concern (COC's) resulting from releases from waste management facility components (e.g., tank, container storage area, landfill, etc.), either as part of closure or at any time before or after closure. CH (Deer Park) will close each waste management facility component in a manner that minimizes or eliminates the need for further maintenance and controls. The manner of closure will also minimize or eliminate, to the extent necessary to protect human health and the environment, the post-closure escape of waste, contaminants, leachate, run-off, or decomposition products to the surrounding environmental media. Waste management facility components undergoing closure for which the facility can demonstrate that no release of COC's to surrounding environmental media has occurred are subject to 30 TAC 350 only with regard to this closure performance standard and the removal, decontamination or control requirements for waste as specified in Subchapter B (relating to Remedy Standards). In the event a release of COC's to surrounding environmental media has occurred, then the facility will comply with this chapter for response to the release. The facility will comply with §335.118(b) of this title (relating to Closure Plan; Submission and Approval of Plan), as amended, or applicable permit provisions regarding requirements for public participation in the corrective action process for permitted hazardous waste facilities. The facility will also comply with the requirements of paragraphs (1) - (3) of 30 TAC 335, as applicable.

CH (Deer Park) will, unless specifically modified by other order of the commission, close the facility in accordance with the closing provisions of the permit. The CH (Deer Park) permitted units are also subject to the applicable provisions relating to closure and post-closure in 30 TAC 335, Subchapters E and F (relating to Interim Standards for owners and operators of Hazardous Waste Storage, Processing, or Disposal Facilities; and Permitting Standards for Owners and Operators of Hazardous Waste Storage, Processing, or Disposal Facilities, respectively), as amended.

CH (Deer Park) may utilize 30 TAC 350 to determine if COC's, specifically listed hazardous waste or hazardous constituents, exceed concentrations protective of human health and the environment when making "contained-in" determinations for environmental media being managed as wastes (e.g., excavated soils, investigation derived wastes such as

monitor well purge water, etc.) for purposes of treatment or disposal in a different location. In such cases, the facility will perform a waste classification in response to 30 TAC 335, Subchapters A and R (relating to Industrial Solid Waste and Municipal Hazardous Waste Management in General; and Waste Classification, respectively), as amended.

CH (Deer Park) may propose a facility operations area (FOA) to address multiple sources of COC's within an active facility that is required to perform corrective action for releases pursuant to a permit or commission corrective action order. The requirements for establishing a FOA are specified in 30 TAC 350, Subchapter G (relating to Establishing a Facility Operations Area).

Facility components which are subject to closure and closure cost analysis include landfills, storage tanks and storage areas, treatment tanks and equipment, container storage areas, incinerators, and appurtenant structures (e.g., dikes and levees). Table 1 presents a list of facility components and the permitted maximum allowable capacities for storage, treatment and disposal of hazardous and non-hazardous wastes. The table also indicates which units have been constructed, which units have already been closed and which units are permitted but not yet constructed. This closure plan and worst-case cost estimate does not include those units that have been previously closed and certified by a professional engineer registered in the state of Texas.

2.0 FACILITY DESCRIPTION

The CH (Deer Park) facility consists of active below and above grade landfills, two industrial incinerator trains, container storage and processing facilities, tank storage and processing facilities, rail car unloading areas, staging pads and direct burn areas. All areas storing, processing or being used for the disposal of hazardous wastes and/or PCB's are subject to closure cost analysis.

The closure will be fully monitored by an independent, registered, professional engineer. The independent engineer will ensure that each step of this closure plan is followed. The independent engineer will also determine the location of all soil borings based upon his assessment of the unit. The engineer will oversee the collection of all samples and will ultimately certify that the closure meets the requirements of 30 TAC 335 and 350.

Table 1
Facility Components

Facility Components Permit Unit No. II.B.	Maximum Capacity	Existing	Permitted Not Built	New to Permit
North Landfill (Units No. 2a -f)	700,000 CY	X		
Incinerator Train I (Unit No. 3)	216 MBTU/HR	X		
Incinerator Train II (Unit No. 4)	153.5 MMBTU/HR	X		
Storage Tank T-1 (Unit No. 9)	24,750 gallons	X		
Storage Tank T-2 (Unit No. 10)	28,500 gallons	X		
Storage Tank T-11 (Unit No. 11)	15,800 gallons	X		
Storage Tank T-12 (Unit No. 12)	15,800 gallons	X		
Storage Tank T-18 (Unit No. 13)	28,500 gallons	X		
Storage Tank T-19 (Unit No. 14)	24,750 gallons	X		
Storage Tank T-20 (Unit No. 15)	7,400 gallons	X		
Storage Tank T-21 (Unit No. 16)	7,400 gallons	X		
Storage Tank T-27 (Unit No. 17)	15,400 gallons	X		
Storage Tank T-28 (Unit No. 18)	15,400 gallons	X		
Storage Tank T-31 (Unit No. 19)	30,000 gallons	X		
Storage Tank T-32 (Unit No. 20)	30,000 gallons	X		
Storage Tank T-60 (Unit No. 21)	100,000 gallons	X		
Storage Tank T-61 (Unit No. 22)	200,000 gallons	X		
Storage Tank V-101 (Unit No. 23)	11,400 gallons	X		
Storage Tank V-103 (Unit No. 24)	11,400 gallons	X		
Storage Tank V-104 (Unit No. 25)	24,750 gallons	X		
Storage Tank V-105 (Unit No. 26)	24,750 gallons	X		
Storage Tank V-106 (Unit No. 27)	24,750 gallons	X		

Table 1
Facility Components

Facility Components Permit Unit No. II.B.	Maximum Capacity	Existing	Permitted Not Built	New to Permit
Storage Tank V-107 (Unit No. 28)	24,750 gallons	X		
Storage Tank V-108 (Unit No. 29)	24,750 gallons	X		
Storage Tank V-109 (Unit No. 30)	21,800 gallons	X		
Storage Tank V-110 (Unit No. 31)	21,800 gallons	X		
Storage Tank T-29 (Unit No. 37)	6,500 gallons	X		
Storage Tank T-30 (Unit No. 38)	6,500 gallons	X		
Storage Tank T-70 (Unit No. 39)	22,200 gallons	X		
Storage Tank T-71 (Unit No. 40)	22,200 gallons	X		
Storage Tank T-72 (Unit No. 41)	22,200 gallons	X		
Storage Tank T-75 (Unit No. 44)	22,200 gallons	X		
Storage Tank T-76 (Unit No. 45)	22,200 gallons	X		
Storage Tank T-77 (Unit No. 46)	22,200 gallons	X		
Container Storage Area DSP-1 (Unit No. 76a)	30,250 gallons	X		
Container Storage Area DSP-2 (Unit No. 76b)	37,060 gallons	X		
Container Storage Area DSP-3 (Unit No. 76c)	159,120 gallons	X		
Container Storage Area DSP-4 (Unit No. 76d)	136,680 gallons	X		
Container Storage Area DSP-5 (Unit No. 76e)	151,800 gallons	X		
Container Storage Area DSP-6 (Unit No. 76f)	214,200 gallons	X		
Container Storage Area DSP-7 (Unit No. 76g)	19,800 gallons	X		
Container Storage Area PCB Warehouse (Unit No. 76h)	212,520 gallons	X		
Container Storage Area Transformer and Drum Handling Building (Unit No. 77)	163,980 gallons	X		

Table 1
Facility Components

Facility Components Permit Unit No. II.B.	Maximum Capacity	Existing	Permitted Not Built	New to Permit
Container Storage Area RCRA Warehouse (Unit No. 78)	587,520 gallons	X		
Tank Truck Storage Pad (Unit No. 79)	55,000 gallons	X		
Mixing Hoppers T-1001-1 (Unit No. 87)	20,250 gallons	X		
Mixing Hoppers T-1001-2 (Unit No. 88)	20,250 gallons	X		
Mixing Hoppers T-1001-3 (Unit No. 89)	20,250 gallons	X		
Bin Storage Area BSA-1 (Unit No. 90)	1,500 cubic yards	X		
Bin Storage Area BSA-2 (Unit No. 91)	4,650 cubic yards	X		
Bin Storage Area BSA-3 (Unit No. 92)	1,650 cubic yards	X		
Storage Tank V-1204 (Unit No. 93)	13,500 gallons	X		
Stabilization Tank T-1202 (Unit No. 94)	25,312 gallons	X		
Stabilization Tank T-1203 (Unit No. 95)	25,312 gallons	X		
Stabilization Tank T-1204 (Unit No. 96)	70,875 gallons	X		
Stabilization Tank B-1203 (Unit No. 97)	22 cubic yards	X		
East Landfill (Units No. 98a-d)	557,400 cubic yards	X		
Rail Car Unloading Area (Unit No. 99)	50,000 gallons	X		
Rotary Reactor Feed Tank (T-638) (Unit No. 100)	8,230 gallons	X		
DSP-8 (*aka* 4.4 Meter Kiln Container Staging Pad) (Unit No. 101)	26,520 gallons	X		

Table 1
Facility Components

Facility Components Permit Unit No. II.B.	Maximum Capacity	Existing	Permitted Not Built	New to Permit
This unit split between DSP-3 and DSP-6 Container Storage Area QC Area (Unit No. 102)	NA	X		
Direct Burn Area (Unit No. 103)	44,000 gallons	X		
Front Line Storage Pad (Unit No. 104)	60,500 gallons	X		
PCB Shredder (Unit No. 105)	3,945 gallons	X		
Waste Receiving Pad (Unit No. 106)	212,100 gallons	X		
T-201 (Unit 107)	7,198 gallons	X		
RCRA Shredder (Unit No. 114)	400 g	X		
DSP-9 Oxidizer Building (Unit 115)	10,560 gallons			X
Tank 18R (Unit 116)	23,200 gallons	X		
Tank T-141 (Unit 117)	170 yd^3			X
Tank T-142 (Unit 118)	170 yd^3			X
DSP-10 (Unit 119)	22,000 g			X
DSP-11 (Unit 120)	305,030 g			X

3.0 PARTIAL CLOSURE

If at any time during the active life of the facility, it is necessary to close any individual hazardous waste facility component, CH (Deer Park) will notify the TCEQ at least ninety (90) days prior to initiating closure activities. For TSCA regulated units, CH (Deer Park) will notify the EPA Region 6 administrator 60 days prior to the date on which the specific unit is expected to be closed [40CFR 761.65 (e)(6)(i)]. The partial closure of any component will be conducted according to the procedures described in the general closure plan for the type of facility being closed.

Any structure used to store, treat or dispose of hazardous waste closed during the active life of the facility will be certified by a professional engineer registered in the state of Texas in order to facilitate certification at the time of closure.

4.0 FACILITY PLAN FOR CLOSURE ACTIONS

Given below is a listing for each key closure step. The order given for the steps is typical, however, the facility may change the order of the steps so as to more efficiently clean and close the site. Additionally, due to the complexity of the facility and its large number of total units, it is fully expected that different steps of closure activities will occur concurrently from unit to unit. The listing is followed by a brief description of each closure step.

Closure of the Deer Park facility anticipates the following key steps:

1. Notification of closure to TCEQ (EPA Region 6 Administrator for TSCA Units)
2. Removal of all waste inventory for off-site disposal
3. Cleaning of all above-ground units typically via hydroblasting
4. Sampling and analysis of rinseates for each unit to verify cleanliness
5. Additional washing, sampling and analysis as necessary
6. Drill background soil borings
7. Drill confirmatory soil borings per unit
8. Analyze soil borings
9. Independent Engineer review and approval of closure

4.1 NOTIFICATION OF TCEQ/EPA Region 6

The TCEQ Regional Office will be notified in writing of the plan to close the facility at least ninety (90) days in advance of the implementation of closure. Additionally, the EPA Region 6 Administrator will be notified sixty (60) days prior to the date on which final closure of the facility is expected. This will allow TCEQ or EPA representatives opportunity to plan

for monitoring the closure and its milestone dates.

4.2 WASTE SHIPMENTS TO TSDF'S

The next step in closure is the removal of all waste from the facility units. This removal of waste will be done by shipping all wastes to permitted, off-site disposal facilities. Appropriate transportation equipment (tankers, box vans, vacuum trucks, roll-offs, etc.) will be used for this purpose. This activity will continue until all on-site wastes have been shipped off-site. Similarly, wastes generated during closure activities such as decontamination residues, kiln bricks, debris, PPE, etc. will be shipped off-site to permitted TSDF's for proper disposal.

4.3 CLEANING OF UNITS

Each separate unit will be first scraped of any dried residues. Next, the independent engineer will review each unit's spill history; this will be followed by the engineer's visual inspection of each unit looking for any evidence of open cracks or gaps as area indicators of possible soil contamination. Such areas will be noted by the engineer in his/her log. These noted areas will then be repaired to minimize the possibility of further contamination during the unit's cleaning process.

When repairs are complete and cured, as determined by the independent engineer, each unit will be hydroblasted at least once. While the hydroblasting may use a suitable solvent to enhance the cleaning process, the final rinse of the unit will be done neat.

4.4 SAMPLING OF UNIT'S RINSEATES

After hydroblasting is believed to be complete, a rinse sample will be taken. This determination and sampling will be done under the direction of the engineer. Rinse samples will be analyzed for TOC, TOX, metals and wipe samples for PCB constituents (as applicable) using EPA-approved methods and quality control procedures. In regard to decontamination levels, with respect to organics, decontamination will be continued until TOC, TOX, and PCBs are not detected; with respect to inorganics (i.e., metals), decontamination will be continued until these constituents are either not detected or background concentrations are reached as documented by the independent engineer. The background contaminant levels may be adjusted to account for variances in constituent levels inherently present in an uncontaminated "blank" rinseate sample or the media that is being decontaminated (i.e., any compounds found to be naturally occurring in the concrete used for floors and berms, or coatings used for crack repair). This adjustment will be done with the knowledge and prior approval of the TCEQ.

4.5 BACKGROUND SOIL SAMPLING

To establish background levels of TOC, TOX and metals constituents, the facility will collect at least twelve soil samples from areas the site known to have been unaffected by

site operations. The locations of each background sample will be at the discretion of the independent engineer. One common set of background samples will be taken for all site units (tanks, pads, etc.). The samples will be analyzed for TOC, TOX, metals and PCB constituents using EPA-approved methods and quality control procedures. The average constituent concentrations found shall be considered the background levels for the site. A constituent non-detect in a background sample shall be defined as equaling zero.

4.6 CONFIRMATORY SOIL SAMPLING

Each containment unit (e.g., DSP, tank farm) will have at least one confirmatory soil sample taken to determine if contamination in the underlying soil is present. The soil sample locations will be at the discretion of the independent engineer, using knowledge of each unit's spill history, crack repairs and sloping. The soil sampling will be advanced to the depth of the water table, penetrating concrete as required. All soil samples will be analyzed for TOC, TOX, metals and PCB constituents using EPA-approved methods and quality control procedures. The analysis for each unit's soil will be compared to the detection limits established for each chemical constituent in the analysis. Soil underlying a given unit will be considered uncontaminated if the chemical constituents in a given soil sample are at the non-detect level, as documented by the independent engineer. The background contaminant levels (when compared to the detection limits for a specific chemical constituent) for the soil may be adjusted to account for variances in constituent levels inherently present, as calculated in the mean of the background soil samples. Such an adjustment would be done with the knowledge and prior approval of the TCEQ.

Detectable concentrations of TOC, TOX, or PCBs in affected soils will be considered as evidence of a release from a unit. With respect to inorganics (i.e., metals), the presence of these constituents at or above the detection limits or background concentrations in affected areas will be considered as evidence of a release from a unit.

Sampling and statistical analysis procedures to establish background soil concentrations will be conducted per "Methods for Evaluating the Attainment of Cleanup Standards, Volume 1: Soils and Solid Media," EPA Document 230/02-89-042, or similar document, as approved by TCEQ.

TABLE 2
CONTAMINANTS REASONABLY EXPECTED TO BE PRESENT

Physical State	Method Description	Method Code	Analyte Description	MDL	Units
liquid	Volatile Organic Compounds (GC/MS)	8260B	2-Butanone (MEK)	0.002	mg/L
			Benzene	0.00016	mg/L
			Chlorobenzene	0.00017	mg/L
			Carbon tetrachloride	0.00019	mg/L
			Chloroform	0.00016	mg/L
			Trichloroethene	0.00016	mg/L
			Vinyl chloride	0.0001	mg/L
			Tetrachloroethene	0.0002	mg/L
			1,1-Dichloroethene	0.00023	mg/L
			1,2-Dichloroethane	0.00013	mg/L
			1,2-Dichloroethane-d4 (Surr)	0.0002	mg/L
			Toluene-d8 (Surr)	0.0005	mg/L
			4-Bromofluorobenzene (Surr)	0.0005	mg/L
			Dibromofluoromethane (Surr)	0.0005	mg/L
liquid	Semivolatile Organic Compounds (GC/MS)	8270C	1,4-Dichlorobenzene	0.00032	mg/L
			2,4,6-Trichlorophenol	0.00029	mg/L
			2,4,5-Trichlorophenol	0.00045	mg/L
			2,4-Dinitrotoluene	0.00166	mg/L
			Pyridine	0.0017	mg/L
			o-Cresol	0.00098	mg/L
			4-Methylphenol	0.00025	mg/L
			m-Cresol	0.00025	mg/L
			Hexachlorobenzene	0.00066	mg/L
			Hexachlorobutadiene	0.0033	mg/L
			Hexachloroethane	0.0021	mg/L
			Nitrobenzene	0.00081	mg/L
			Pentachlorophenol	0.02	mg/L

			Cresols, Total	0.00025	mg/L
			2-Fluorophenol	0.001	mg/L
			Phenol-d5	0.003	mg/L
			2,4,6-Tribromophenol	0.001	mg/L
			2-Fluorobiphenyl	0.001	mg/L
			Nitrobenzene-d5	0.001	mg/L
			Terphenyl-d14	0.001	mg/L
liquid	Herbicides (GC)	8151A	Silvex (2,4,5-TP)	0.00017	mg/L
			2,4-D	0.00021	mg/L
			2,4-Dichlorophenylacetic acid	0.00014	mg/L
liquid	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	8082A	PCB-1221	0.00018	mg/L
			PCB-1016	0.00017	mg/L
			PCB-1232	0.00013	mg/L
			PCB-1242	0.000104	mg/L
			PCB-1248	0.00017	mg/L
			PCB-1254	0.00014	mg/L
			PCB-1260	0.000089	mg/L
			PCB-1262	0.000094	mg/L
			PCB-1268	0.00018	mg/L
			Polychlorinated biphenyls, Total	0.000073	mg/L
			Tetrachloro-m-xylene	0.00005	mg/L

			DCB Decachlorobiphenyl	0.00005	mg/L
liquid	Organochlorine Pesticides (GC)	8081A	gamma-BHC (Lindane)	3.6E-06	mg/L
			Chlordane (n.o.s.)	0.00012	mg/L
			Heptachlor	0.00001	mg/L
			Methoxychlor	0.000014	mg/L
			Toxaphene	0.00042	mg/L
			DCB Decachlorobiphenyl	0.000015	mg/L
			Tetrachloro-m-xylene	0.000012	mg/L
liquid	Metals (ICP)	6010B	Arsenic	0.00441	mg/L
			Barium	0.00082	mg/L
			Cadmium	0.000452	mg/L
			Chromium	0.000663	mg/L
			Lead	0.00274	mg/L
			Selenium	0.00486	mg/L
			Silver	0.000933	mg/L
liquid	Mercury (CVAA)	7470A	Mercury	0.000027	mg/L
liquid	Ignitability, Pensky-Martens Closed-Cup Method	1010A	Flashpoint		Degrees F
liquid	Cyanide, Total and/or Amenable	9012A	Cyanide, Total	0.002	mg/L

liquid	Sulfide, Acid Soluble and Insoluble (Titrimetric)	9034	Sulfide	0.793	mg/L
liquid	pH	9040B	corrosivity by pH		SU
			Temperature		Degrees C
liquid	Dioxins and Furans (HRGC/LRMS)	8280A	2,3,7,8-TCDD	1	ng/L
			2,3,7,8-TCDF	1	ng/L
			1,2,3,7,8-PeCDD	2.64	ng/L
			1,2,3,7,8-PeCDF	2.29	ng/L
			2,3,4,7,8-PeCDF	2.5	ng/L
			1,2,3,4,7,8-HxCDD	2.61	ng/L
			1,2,3,6,7,8-HxCDD	3.53	ng/L
			1,2,3,7,8,9-HxCDD	5.2	ng/L
			1,2,3,4,7,8-HxCDF	2.5	ng/L
			1,2,3,6,7,8-HxCDF	3.73	ng/L
			1,2,3,7,8,9-HxCDF	5.2	ng/L
			2,3,4,6,7,8-HxCDF	3.62	ng/L
			1,2,3,4,6,7,8-HpCDD	3.07	ng/L
			1,2,3,4,6,7,8-HpCDF	2.5	ng/L
			1,2,3,4,7,8,9-HpCDF	5.51	ng/L
			OCDD	5	ng/L

			OCDF	5	ng/L
			13C-2,3,7,8-TCDD	.5	ng/L
			13C-2,3,7,8-TCDF	.25	ng/L
			13C-1,2,3,6,7,8-HxCDD	1.3	ng/L
			13C-1,2,3,4,6,7,8-HpCDF	1.3	ng/L
			13C-OCDD	5	ng/L
			Total TCDD	1	ng/L
			Total PeCDD	2.64	ng/L
			Total HxCDD	2.61	ng/L
			Total HpCDD	3.07	ng/L
			Total TCDF	1	ng/L
			Total PeCDF	1.44	ng/L
			Total HxCDF	1.44	ng/L
			Total HpCDF	1.25	ng/L
			37Cl4-2,3,7,8-TCDD	2.5	ng/L
solid	Volatile Organic Compounds (GC/MS)	8260B	Benzene	0.47	ug/Kg
			2-Butanone (MEK)	1.83	ug/Kg
			Carbon tetrachloride	0.63	ug/Kg
			Chlorobenzene	0.54	ug/Kg
			Chloroform	0.29	ug/Kg
			1,2-Dichloroethane	0.7	ug/Kg
			1,1-Dichloroethene	0.59	ug/Kg
			Tetrachloroethene	0.59	ug/Kg
			Trichloroethene	0.23	ug/Kg

			Vinyl chloride	1.34	ug/Kg
			1,2-Dichloroethane-d4 (Surr)	1	ug/Kg
			Toluene-d8 (Surr)	1	ug/Kg
			4-Bromofluorobenzene (Surr)	1	ug/Kg
			Dibromofluoromethane (Surr)	1	ug/Kg
solid	Semivolatile Organic Compounds (GC/MS)	8270C	Pyridine	130	ug/Kg
			1,4-Dichlorobenzene	13.6	ug/Kg
			o-Cresol	13	ug/Kg
			4-Methylphenol	33	ug/Kg
			m-Cresol	33	ug/Kg
			Hexachloroethane	21.3	ug/Kg
			Nitrobenzene	22	ug/Kg
			Hexachlorobutadiene	10	ug/Kg
			2,4,6-Trichlorophenol	10	ug/Kg
			2,4,5-Trichlorophenol	10	ug/Kg
			2,4-Dinitrotoluene	66	ug/Kg
			Hexachlorobenzene	29	ug/Kg
			Pentachlorophenol	330	ug/Kg
			Cresols, Total	13	ug/Kg
			2-Fluorophenol	20	ug/Kg
			Phenol-d5	28	ug/Kg
			Nitrobenzene-d5	16	ug/Kg
			2-Fluorobiphenyl	20	ug/Kg
			2,4,6-Tribromophenol	16	ug/Kg
			Terphenyl-d14	16	ug/Kg
solid	Herbicides (GC)	8151A	2,4-D	14	ug/Kg
			Silvex (2,4,5-TP)	1.4	ug/Kg

			2,4-Dichlorophenylacetic acid	4.5	ug/Kg
solid	Organochlorine Pesticides (GC)	8081A	Chlordane (n.o.s.)	7.79	ug/Kg
			gamma-BHC (Lindane)	0.464	ug/Kg
			Heptachlor	0.214	ug/Kg
			Methoxychlor	0.45	ug/Kg
			Toxaphene	15.8	ug/Kg
			DCB Decachlorobiphenyl	0.05	ug/Kg
			Tetrachloro-m-xylene	0.05	ug/Kg
solid	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	8082A	PCB-1221	15.6	ug/Kg
			PCB-1016	5.09	ug/Kg
			PCB-1232	5.12	ug/Kg
			PCB-1242	9.12	ug/Kg
			PCB-1248	5.61	ug/Kg
			PCB-1254	5.52	ug/Kg
			PCB-1260	2.65	ug/Kg
			PCB-1262	11.6	ug/Kg
			PCB-1268	3.95	ug/Kg
			Polychlorinated biphenyls, Total	2.65	ug/Kg
			Tetrachloro-m-xylene	1.06	ug/Kg
			DCB Decachlorobiphenyl	0.619	ug/Kg

solid	Metals (ICP)	6010B	Arsenic	0.665	mg/Kg
			Barium	0.104	mg/Kg
			Cadmium	0.041	mg/Kg
			Chromium	0.058	mg/Kg
			Lead	0.31	mg/Kg
			Selenium	0.86	mg/Kg
			Silver	0.16	mg/Kg
solid	Mercury (CVAA)	7471A	Mercury	5.53	ug/Kg
solid	Cyanide, Total and/or Amenable	9012A	Cyanide, Total	0.103	mg/Kg
solid	Sulfide, Acid Soluble and Insoluble (Titrimetric)	9034	Sulfide	2.4	mg/Kg
solid	pH	9045C	corrosivity by pH		SU
			Temperature		Degrees C
solid	Dioxins and Furans (HRGC/LRMS)	8280A	2,3,7,8-TCDD	0.1	ng/g
			2,3,7,8-TCDF	0.13	ng/g
			1,2,3,7,8-PeCDD	0.29	ng/g
			1,2,3,7,8-PeCDF	0.32	ng/g
			2,3,4,7,8-PeCDF	0.39	ng/g

			1,2,3,4,7,8-HxCDD	0.61	ng/g
			1,2,3,6,7,8-HxCDD	0.83	ng/g
			1,2,3,7,8,9-HxCDD	0.48	ng/g
			1,2,3,4,7,8-HxCDF	0.5	ng/g
			1,2,3,6,7,8-HxCDF	0.63	ng/g
			1,2,3,7,8,9-HxCDF	0.28	ng/g
			2,3,4,6,7,8-HxCDF	0.74	ng/g
			1,2,3,4,6,7,8-HpCDD	0.25	ng/g
			1,2,3,4,6,7,8-HpCDF	0.2	ng/g
			1,2,3,4,7,8,9-HpCDF	0.35	ng/g
			OCDD	0.5	ng/g
			OCDF	0.5	ng/g
			13C-2,3,7,8-TCDD	2.5	ng/g
			13C-2,3,7,8-TCDF	2.5	ng/g
			13C-1,2,3,6,7,8-HxCDD	2.5	ng/g
			13C-1,2,3,4,6,7,8-HpCDF	1.25	ng/g
			13C-OCDD	5	ng/g
			Total TCDD	0.1	ng/g
			Total PeCDD	0.29	ng/g
			Total HxCDD	0.48	ng/g
			Total HpCDD	0.25	ng/g

			Total TCDF	0.13	ng/g
			Total PeCDF	0.32	ng/g
			Total HxCDF	0.28	ng/g
			Total HpCDF	0.16	ng/g
			37Cl4-2,3,7,8-TCDD	.5	ng/g
solid	Ignitability, Setaflash Closed-Cup Method	1020A	Flashpoint	50	Degrees F

4.7 AMENDMENT OF CLOSURE PLAN

CH (Deer Park) will amend this closure plan should contamination be found in confirmatory soil samples. This amended closure plan will be submitted to TCEQ in the form of a Permit Modification for review and approval before implementation.

4.8 INDEPENDENT ENGINEER'S CERTIFICATION

Upon completion of facility or unit closure, the independent engineer shall certify that the closure plan and its steps were properly implemented. This certification shall be supplied in a closure report submitted to TCEQ at the end of the closure process and will meet the requirements of 40 CFR 264.115. This certificate will also be sent to the EPA Region 6 Administrator within 60 days of the completion of the TSCA unit closure or facility closure [40 CFR 761.65 (e)(8)].

Each of the above steps is described in greater detail below, with emphasis on activities or specific types of units. The closure steps as they relate to specific units and systems are provided with specific descriptions.

4.9 GROUNDWATER MONITORING

All groundwater monitoring will be analyzed for the parameters given in Appendix 1 to this plan. This is the same list of parameters given in the Groundwater Detection Monitoring Plan in Section VI.

5.0 DISPOSAL OF WASTE AND CONTAMINATED MATERIALS

As shown on Table 1, the total capacity of all waste storage and treatment areas currently in operation is 3,504,114 gallons and 7,822 cubic yards in solids areas. Upon cessation of

site operations, all wastes stored on-site will be hauled to a permitted off-site waste facility for disposal. Contaminated stormwater and decontamination rinsewater will be disposed off-site at a permitted disposal facility.

Contaminated materials such as tanks and process equipment will be decontaminated and sold, recycled or disposed of off-site as described in the following sections.

6.0 SAFETY PROCEDURES

Personnel protective equipment will be provided for all cleaning crews to ensure their safety during decontamination operations. This equipment will include steel-toe boots, rubber gloves and splash suits with hoods. Wrists and ankles will be taped to protect against splashes. It is assumed that positive-pressure self-contained breathing apparatus with full-face gas masks will be necessary for initial entry and decontamination procedures, although organic vapor/acid gas respirators with hard hat splash shields may be used for later stages of the decontamination. Facilities will be provided for personnel decontamination at the end of each day. As required by OSHA, there will be at least a two-man crew working at any time on tank decontamination, with at least one man outside the tank to assist in the event of an emergency.

Unnecessary sources of ignition will be kept away from tanks or other areas that have contained organic materials. Necessary equipment with potential ignition sources, such as vacuum trucks and hydroblast equipment will be stationed upwind of the tank or area being decontaminated. Equipment will be grounded when necessary.

Prior to the initiation of decontamination and several times during the course of decontamination, the atmosphere around and within each tank will be tested for toxic vapors (H_2S and HCN in particular), for explosive vapors, and for percent oxygen.

7.0 CLOSURE PROCEDURES

CH (Deer Park) has grouped it units by type. The following sections describe their closure procedures.

7.1 CLOSURE OF WASTE STORAGE TANKS AND PROCESS EQUIPMENT

Hazardous waste storage tanks at the CH (Deer Park) facility are segregated into the North Tankfarm and West Tankfarm, the Rotary Reactor Feed Tank, the Stabilization Tanks, and the Mixing Hoppers. The tank units are used to store or process combustible and solid industrial wastes and contaminated water scheduled to be incinerated or landfilled.

The Rotary Reactor Feed Tank is a below-grade, reinforced concrete tank used to store bulk solid wastes prior to processing through the rotary reactor. The inside dimensions of the feed tank are 12 feet long by 9 feet wide by 9.5 feet deep, and has a capacity of 37.5 cubic yards. The unit has a sump that is 3.5 cubic yards in capacity.

All bulk solid wastes remaining in the stabilization (mix) tanks at the time of closure will be removed and placed into roll-off bins and disposed of off-site at an approved treatment and disposal facility.

The Mixing Hoppers are used to mixed dry incineration residues and are located in the S&E Building.

Engineering design plans detailing the construction and design of each of these tanks systems, including a detailed description of tank capacities, are contained in Sections V.C (Tank Systems and Secondary Containment) of the permit application.

After the removal and incineration of the hazardous waste inventory, the storage and treatment tanks will be prepared for decontamination and removal as discussed below.

7.1.1 Decontamination of Tanks

Closure of the tank storage and waste processing areas shall proceed in accordance with the steps outlined below. The steps are presented in approximate chronological order. The order of precedence may vary and some steps may occur concurrently.

1. All tanks will be emptied into suitable containers for transport to off-site disposal. Suitable containers for transport will include tanker trucks, railcars, portable tanks or drums depending on the type and quantity of waste. The equipment normally used by facility personnel will be used to empty the tanks. CH (Deer Park) will prevent the mixing of incompatible materials during this process. The waste will be transported off-site to permitted disposal facilities utilizing trailers and/or railcars.

2. The interiors of the tanks will be stripped or scraped to remove any sludge or visible residues. The residues will be collected into suitable containers and transported off-site for disposal as hazardous waste.

3. The floors, walls and berms of the secondary containment areas for all of the tanks, processing areas and loading and unloading areas will be stripped to remove any visible signs of contamination. Any cracks or gaps found in these areas will be repaired and sealed. The residues generated will be collected and placed in appropriate containers for off-site disposal.

4. A qualified cleaning contractor specializing in hydroblasting or equivalent cleaning methods will be used to clean all surfaces that have or may have come in contact with waste materials. These surfaces will include all tanks and processing equipment interiors and the floors, walls and berms of all secondary containment and loading and unloading areas. When possible, tank rinseates will be flushed through existing piping to remove any contaminants from the pipes. The contractor will take measures necessary to ensure that all rinseates will be contained to prevent runoff.

5. All piping, valves and processing equipment will be disassembled and washed with an appropriate solvent or cleaning solution to remove any contamination. If upon

disassembly it is found that decontamination is infeasible or impracticable, the piping or equipment will be managed as hazardous waste and disposed off-site at a permitted facility.

6. After hydroblasting is believed to be complete, a rinse sample for each unit will be taken. This activity will be done under the direction of the engineer. Rinse samples will be analyzed for TOC, TOX, metals and wipe samples for PCBs (as applicable) constituents using EPA-approved methods and quality control procedures. In regard to decontamination levels, with respect to organics, decontamination will be continued until TOC, TOX, and PCBs are not detected; with respect to inorganics (i.e., metals), decontamination will be continued until these constituents are either not detected or background concentrations are reached, as documented by the independent engineer. The background contaminant levels may be adjusted to account for variances in constituent levels inherently present in an uncontaminated "blank" rinseate sample or the media that is being decontaminated (i.e., any compounds found to be naturally occurring in the concrete used for floors and berms, or coatings used for crack repair). This adjustment will be done with the knowledge and prior approval of the TCEQ.

7. If any constituents are present at or above the limits of quantification in the final rinse water, the storage area will be cleaned again. The rinse water will be sampled again for the constituents previously identified. If any constituents are still present after the second cleaning, the storage area will either be cleaned using an alternative method and the cleaning agent sampled and analyzed or the closure plan will be amended to provide for a more effective means of removal.

8. If contaminants are still present, the area will either be cleaned by alternative methods and the cleaning agent sampled and analyzed again or the closure plan will be amended to provide for a more effective means of removal.

9. All washwaters and residues generated from closure activities will be collected and transported by truck or railcar to permitted off-site facilities for disposal.

10. Once decontamination of the secondary containment area is completed, at least one boring will be made per tank unit in the flooring of each secondary containment area. Particular attention will be paid to penetrating cracks and stains. The boring location will be determined by the independent engineer. The engineer will make this determination by personally examining the area in question looking for any existing/repaired cracks, gaps, or other areas where a leak could have penetrated, as well as any slopes or trenches in the area. This physical examination will be combined with the independent engineer's review of spill history in the unit. Using all parts of this information, the independent engineer will make the determination as to the location of the boring.

11. The soil sampling will be advanced to the depth of the water table, penetrating concrete as required. All soil samples will be analyzed for TOC, TOX, metals and PCB constituents using EPA-approved methods and quality control procedures. The

analysis for each unit's soil will be compared to the detection limits established for each chemical constituent in the analysis.

Soil underlying a given unit will be considered uncontaminated if the chemical constituents in a given soil sample are at the non-detect level, as documented by the independent engineer. The background contaminant levels (when compared to the detection limits for a specific chemical constituent) for the soil may be adjusted to account for variances in constituent levels inherently present, as calculated in the mean of the background soil samples. Such an adjustment would be done with the knowledge and prior approval of the TCEQ.

Detectable concentrations of TOC, TOX, or PCBs in affected soils will be considered as evidence of a release from a unit. With respect to inorganics (i.e., metals), the presence of these constituents at or above the detection limits or background concentrations in affected areas will be considered as evidence of a release from a unit.

Sampling and statistical analysis procedures to establish background soil concentrations will be conducted per "Methods for Evaluating the Attainment of Cleanup Standards, Volume 1: Soils and Solid Media," EPA Document 230/02-89-042, or similar document, as approved by TCEQ.

12. If soil contamination is found in any area, CH (Deer Park) will submit a revised closure plan to TCEQ to propose a sampling plan that will fully define the extent of contamination in the soil.

7.2 Closure of Container Storage Areas

The container storage areas function as temporary storage for containerized wastes prior to processing by incineration. Industrial wastes are stored in containers on the Drum Storage Pads (DSP) 1-11, Transformer / Drum Handling Building, Container Storage Warehouse, Bin Storage Areas, Oxidizer Building, and S&E area Storage.

Bulk solid wastes stored in Bin Storage Areas 1-3 at the time of closure will be stabilized as necessary to meet LDR requirements and disposed of in an approved off-site landfill at an authorized treatment and disposal facility.

Engineering design plans detailing the construction and design of the container storage areas including a description of storage capacities are contained in Section V.B (Container Storage Areas) of the permit application. Closure will consist of the activities described below.

Waste containers will be loaded onto either trucks or railcars for transport to permitted off-site disposal facilities. The equipment normally used by facility personnel will be used to load the containers. The waste will be transported off-site to authorized disposal facilities using trailers and/or railcars. Leftover wooden pallets used to store containers will be broken up and shipped off-site for disposal.

7.2.1 Decontamination of Container Storage Areas

The cleaning of the container storage areas will consist of the following steps:

1. Container storage area floors will be scraped to remove any visible signs of contamination. Accumulated residues will be analyzed for characterization and disposal.

2. Drum storage racks (if present) will be dismantled in each containment area. They will then be scraped to remove any signs of contamination. Accumulated residues will be analyzed for characterization and disposal.

3. Any surface cracks or gaps in floors or berms will be examined by the independent engineer to determine potential for penetration to soil. Any cracks and gaps in floors and berms will be repaired.

4. The racks will then be hydroblasted before being removed from the containment areas.

5. Container storage area building floors, walls and ceilings will be hydroblasted with an appropriate cleaning solution.

6. During hydroblasting operations, precautions will be taken to prevent overspray and contain liquids. Precautions may include vacuuming the wash waters, erecting overspray curtains or other similar methods.

7. A qualified cleaning contractor specializing in hydroblasting or equivalent cleaning methods will be used to clean all surfaces which have or may have been in contact with materials. The contractor will take measures to ensure that all rinseates will be contained to prevent runoff from the container storage areas.

8. All process equipment and portable equipment used for decontamination will be decontaminated by steam-cleaning over a collection pan. Liquids contained in the collection pan will be combined with the washwater.

9. After hydroblasting is believed to be complete, a rinse sample (and a PCB wipe sample, if applicable) will be taken. This activity will be done under the direction of the engineer. Rinse samples will be analyzed for TOC, TOX and metal constituents using EPA-approved methods and quality control procedures. In regard to decontamination levels, with respect to organics, decontamination will be continued until TOC, TOX, and PCBs are not detected; with respect to inorganics (i.e., metals), decontamination will be continued until these constituents are either not detected or background concentrations are reached, as documented by the independent engineer. The background contaminant levels may be adjusted to account for variances in constituent levels inherently present in an uncontaminated “blank” rinseate sample or the media that is being decontaminated (i.e., any

compounds found to be naturally occurring in the concrete used for floors and berms, or coatings used for crack repair). This adjustment will be done with the knowledge and prior approval of the TCEQ.

10. If any constituents are present at or above the limits of quantification in the final rinse water, the storage area will be cleaned again. The rinse water will be sampled again for the constituents previously identified. If any constituents are still present after the second cleaning, the storage area will either be cleaned using an alternative method and the cleaning agent sampled and analyzed or the closure plan will be amended to provide for a more effective means of removal.

11. All washwaters and residues generated from closure activities will be collected and transported by truck or railcar to permitted off-site facilities for disposal.

12. Once decontamination of the secondary containment area is completed, at least one boring will be made in the flooring of each secondary containment area. Particular attention will be paid to penetrating cracks and stains. The boring location will be determined by the independent engineer. The engineer will make this determination by personally examining the area in question looking for any existing/repaired cracks, gaps, or other areas where a leak could have penetrated, as well as any slopes or trenches in the area. This physical examination will be combined with the independent engineer's review of spill history in the unit. Using all parts of this information, the independent engineer will make the determination as to the location of the boring.

13. The soil sampling will be advanced to the depth of the water table, penetrating concrete as required. All soil samples will be analyzed for TOC, TOX, metals and PCB constituents using EPA-approved methods and quality control procedures. The analysis for each unit's soil will be compared to the detection limits established for each chemical constituent in the analysis.

    Soil underlying a given unit will be considered uncontaminated if the chemical constituents in a given soil sample are at the non-detect level, as documented by the independent engineer. The background contaminant levels (when compared to the detection limits for a specific chemical constituent) for the soil may be adjusted to account for variances in constituent levels inherently present, as calculated in the mean of the background soil samples. Such an adjustment would be done with the knowledge and prior approval of the TCEQ.

    Detectable concentrations of TOC, TOX, or PCBs in affected soils will be considered as evidence of a release from a unit. With respect to inorganics (i.e., metals), the presence of these constituents at or above the detection limits or background concentrations in affected areas will be considered as evidence of a release from a unit.

    Sampling and statistical analysis procedures to establish background soil concentrations will be conducted per "Methods for Evaluating the Attainment of

Cleanup Standards, Volume 1: Soils and Solid Media," EPA Document 230/02-89-042, or similar document, as approved by TCEQ.

14. If soil contamination is found in any area, CH (Deer Park) will submit a revised contingent closure plan to TCEQ to propose a sampling plan that will fully define the extent of contamination in the soil.

7.3 CLOSURE OF MISCELLANEOUS UNITS

The facility has five miscellaneous units; Rail Car Unloading Area, Direct Burn Pads, PCB Shredder, Pug Mill B-1203 and RCRA Shredder. The closure of each is described below.

7.3.1 Rail Car Unloading Area

The Rail Car Unloading Area (RCUA) is a reinforced concrete containment area measuring 120 feet long by 16 feet wide. It is surrounded by a six-inch curb. The floor is sloped to a floor drain and a sump. The unloading area is designed and operated to park and unload two rail cars simultaneously. Closure will consist of the activities described below.

Engineering design plans detailing the construction and design of the railcar unloading area are contained in Section V.K (Miscellaneous Units) of the permit application.

7.3.1.1 <u>Decontamination of Rail Car Unloading Area</u>

The cleaning of the RCUA will consist of the following steps:

1. The RCUA's floor will be scraped to remove any visible signs of contamination. Accumulated residues will be analyzed for characterization and disposal.

2. Any surface cracks or gaps in floors or berms will be examined by the independent engineer to determine potential for penetration to soil. Any cracks and gaps in floors and berms will be repaired.

3. The RCUA floor will be hydroblasted with an appropriate cleaning solution.

4. All equipment ancillary to the RCUA (e.g., pumps, pipes, connections) will be disassembled and hydroblasted to decontaminate the pieces. Small parts that cannot be decontaminated will be placed in containers and handled as hazardous waste.

5. During hydroblasting operations, precautions will be taken to prevent overspray and contain liquids. Precautions may include vacuuming the wash waters, erecting overspray curtains or other similar methods.

6. A qualified cleaning contractor specializing in hydroblasting or equivalent cleaning methods will be used to clean all surfaces that have or may have been in contact with materials. The contractor will take measures to ensure that all rinseates will be

contained to prevent runoff from the container storage areas.

7. All process equipment and portable equipment used for decontamination will be decontaminated by steam-cleaning over a collection pan. Liquids contained in the collection pan will be combined with the washwater.

8. After hydroblasting is believed to be complete, a sample of the rinseate and a PCB wipe sample will be collected from the Rail Car Unloading Area. This activity will be done under the direction of the engineer. Rinse samples will be analyzed for TOC, TOX and metals constituents using EPA-approved methods and quality control procedures. In regard to decontamination levels, with respect to organics, decontamination will be continued until TOC, TOX, and PCBs are not detected; with respect to inorganics (i.e., metals), decontamination will be continued until these constituents are either not detected or background concentrations are reached, as documented by the independent engineer. The background contaminant levels may be adjusted to account for variances in constituent levels inherently present in an uncontaminated "blank" rinseate sample or the media that is being decontaminated (i.e., any compounds found to be naturally occurring in the concrete used for floors and berms, or coatings used for crack repair). This adjustment will be done with the knowledge and prior approval of the TCEQ.

9. If any constituents are present at or above the limits of quantification in the final rinse water, the storage area will be cleaned again. The rinse water will be sampled again for the constituents previously identified. If any constituents are still present after the second cleaning, the storage area will either be cleaned using an alternative method and the cleaning agent sampled and analyzed or the closure plan will be amended to provide for a more effective means of removal.

9. All washwaters and residues generated from closure activities will be collected and transported by truck or railcar to permitted off-site facilities for disposal.

10. Once decontamination of the secondary containment area is completed, at least one boring will be made in the flooring of each secondary containment area. Particular attention will be paid to penetrating cracks and stains. The boring location will be determined by the independent engineer. The engineer will make this determination by personally examining the area in question looking for any existing/repaired cracks, gaps, or other areas where a leak could have penetrated, as well as any slopes or trenches in the area. This physical examination will be combined with the independent engineer's review of spill history in the unit. Using all parts of this information, the independent engineer will make the determination as to the location of the boring. The soil sampling will be advanced to the depth of the water table, penetrating concrete as required.

11. All soil samples will be analyzed for TOC, TOX, metals and PCB constituents using EPA-approved methods and quality control procedures. The analysis for each unit's soil will be compared to the detection limits established for each chemical constituent in the analysis.

Soil underlying a given unit will be considered uncontaminated if the chemical constituents in a given soil sample are at the non-detect level, as documented by the independent engineer. The background contaminant levels (when compared to the detection limits for a specific chemical constituent) for the soil may be adjusted to account for variances in constituent levels inherently present, as calculated in the mean of the background soil samples. Such an adjustment would be done with the knowledge and prior approval of the TCEQ.

Detectable concentrations of TOC, TOX, or PCBs in affected soils will be considered as evidence of a release from a unit. With respect to inorganics (i.e., metals), the presence of these constituents at or above the detection limits or background concentrations in affected areas will be considered as evidence of a release from a unit.

Sampling and statistical analysis procedures to establish background soil concentrations will be conducted per "Methods for Evaluating the Attainment of Cleanup Standards, Volume 1: Soils and Solid Media," EPA Document 230/02-89-042, or similar document, as approved by TCEQ.

12. If soil contamination is found in any area, CH (DEER PARK) will submit a revised contingent closure plan to TCEQ to propose a sampling plan that will fully define the extent of contamination in the soil.

7.3.2 Direct Burn Pads

The CH (Deer Park) facility processes many bulk waste streams by feeding directly to an incinerator system. In many instances, this is the safest and most environmentally responsible method for processing incompatible or reactive wastes. These materials are not transferred from their original trailers or containers, or blended with any other waste materials.

There are three separate direct burn areas to service the facility's incinerator systems. These areas are identified as:

* Rotary Reactor Direct Burn Area
* 4.4 Meter Kiln Direct Burn Area
* Afterburner/Loddby Direct Burn Area

The Afterburner/Loddby Direct Burn Area is divided into two parts: the "Scale Section" and the "29 Pad Section."

The combined capacity of the Direct Burn Areas is eight 5,500 gallon trucks (55,294 gallons). Each of the areas is located on a paved area that has curbing or sloped drainage to provide for the containment of spills and/or contaminated rainwater.

7.3.2.1 Decontamination of Direct Burn Pads

The Direct Burn Pads (DBP's) are similarly constructed to the Rail Car Unloading Area. That is, they contain a hard sealed surface, secondary containment, and similar ancillary equipment. Decontamination of the DBP's will take place following the steps outlined in Section 7.3.1.1 (Decontamination of Rail Car Unloading Area) of this Closure Plan.

7.3.3 PCB Shredder

The PCB Shredder is a device that is used to shred containers of PCB-contaminated materials. It is often necessary to cut up some PCB-contaminated containers and materials to a size and form that is more effectively incinerated. These materials are fed into the PCB Shredder. Some PCB materials could be contaminated with RCRA-regulated wastes, so the PCB Shredder could handle both TSCA and RCRA-regulated wastes.

The PCB Shredder sets on an irregularly shaped concrete pad that is located in a building common with the PCB Warehouse (Permit Unit No. II.B. 76.h.). The irregular pad is 3,845 square feet in area and is shown on Drawing No. H-015-CC-020-D. Most of the PCB Shredder is feed and discharge equipment.

The PCB Shredder is comprised of the following main parts:

- A covered conveyor line;
- The Shredder Feed Hopper;
- The Hydraulic Shredder;
- A discharge conveyor; and,
- A Drum Fill Station.

7.3.3.1 Decontamination of PCB Shredder

The cleaning of the PCB Shredder will consist of the following steps:

1. The floor in the area of the PCB Shredder will be scraped to remove any visible signs of contamination. Accumulated residues will be analyzed for characterization and disposal.

2. Any surface cracks or gaps in floors or berms will be examined by the independent engineer to determine potential for penetration to soil. Any cracks and gaps in floors and berms will be repaired.

3. The floor will be hydroblasted with an appropriate cleaning solution.

4. The PCB Shredder and all equipment ancillary to the unit (e.g., feed systems, conveyors, discharge systems, hoppers, etc.) will be disassembled, hydroblasted and triple-rinsed with a suitable solvent (such as diesel fuel) to decontaminate the pieces. Small parts that cannot be decontaminated will be placed in containers and handled

as TSCA-regulated hazardous waste. All decontamination fluids generated in this process will be handled as TSCA/RCRA-regulated materials.

5. During hydroblasting operations, precautions will be taken to prevent overspray and contain liquids. Precautions may include vacuuming the wash waters, erecting overspray curtains or other similar methods.

6. A qualified cleaning contractor specializing in hydroblasting or equivalent cleaning methods will be used to clean all surfaces that have or may have been in contact with materials. The contractor will take measures to ensure that all rinseates will be contained to prevent runoff from the container storage areas.

7. All process equipment and portable equipment used for decontamination will be decontaminated by steam-cleaning over a collection pan. Liquids contained in the collection pan will be combined with the washwater.

8. After hydroblasting is believed to be complete, a sample of the rinseate will be collected from the PCB Shredder. This activity will be done under the direction of the engineer. Rinse samples will be analyzed for TOC, TOX, metals and PCB (where applicable) constituents using EPA-approved methods and quality control procedures. In regard to decontamination levels, with respect to organics, decontamination will be continued until TOC, TOX, and PCBs are not detected; with respect to inorganics (i.e., metals), decontamination will be continued until these constituents are either not detected or background concentrations are reached, as documented by the independent engineer. The background contaminant levels may be adjusted to account for variances in constituent levels inherently present in an uncontaminated "blank" rinseate sample or the media that is being decontaminated (i.e., any compounds found to be naturally occurring in the concrete used for floors and berms, or coatings used for crack repair). This adjustment will be done with the knowledge and prior approval of the TCEQ.

9. If any constituents are present at or above the limits of quantification in the final rinse water, the storage area will be cleaned again. The rinse water will be sampled again for the constituents previously identified. If any constituents are still present after the second cleaning, the storage area will either be cleaned using an alternative method and the cleaning agent sampled and analyzed or the closure plan will be amended to provide for a more effective means of removal.

10. If contaminants are still present, the area will either be cleaned by alternative methods and the cleaning agent sampled and analyzed again or the closure plan will be amended and submitted for approval to the TCEQ to provide for a more effective means of removal.

11. All washwaters and residues generated from closure activities will be collected and transported by truck or railcar to permitted off-site facilities for disposal as TSCA/RCRA-regulated wastes.

12. Once decontamination of the PCB Shredder is completed, at least one boring will be made in the flooring of the area. Particular attention will be paid to penetrating cracks and stains. The boring location will be determined by the independent engineer. The engineer will make this determination by personally examining the area in question looking for any existing/repaired cracks, gaps, or other areas where a leak could have penetrated, as well as any slopes or trenches in the area. This physical examination will be combined with the independent engineer's review of spill history in the unit. Using all parts of this information, the independent engineer will make the determination as to the location of the boring. Once decontamination of the secondary containment area is completed, at least one boring will be made in the flooring of each secondary containment area. Particular attention will be paid to penetrating cracks and stains. The boring location will be determined by the independent engineer. The engineer will make this determination by personally examining the area in question looking for any existing/repaired cracks, gaps, or other areas where a leak could have penetrated, as well as any slopes or trenches in the area. This physical examination will be combined with the independent engineer's review of spill history in the unit. Using all parts of this information, the independent engineer will make the determination as to the location of the boring.

13. The soil sampling will be advanced to the depth of the water table, penetrating concrete as required. All soil samples will be analyzed for TOC, TOX, metals and PCB constituents using EPA-approved methods and quality control procedures. The analysis for each unit's soil will be compared to the detection limits established for each chemical constituent in the analysis.

    Soil underlying a given unit will be considered uncontaminated if the chemical constituents in a given soil sample are at the non-detect level, as documented by the independent engineer. The background contaminant levels (when compared to the detection limits for a specific chemical constituent) for the soil may be adjusted to account for variances in constituent levels inherently present, as calculated in the mean of the background soil samples. Such an adjustment would be done with the knowledge and prior approval of the TCEQ.

    Detectable concentrations of TOC, TOX, or PCBs in affected soils will be considered as evidence of a release from a unit. With respect to inorganics (i.e., metals), the presence of these constituents at or above the detection limits or background concentrations in affected areas will be considered as evidence of a release from a unit.

    Sampling and statistical analysis procedures to establish background soil concentrations will be conducted per "Methods for Evaluating the Attainment of Cleanup Standards, Volume 1: Soils and Solid Media," EPA Document 230/02-89-042, or similar document, as approved by TCEQ.

14. Soils and surrounding areas will be visibly inspected by the independent engineer

for any signs of potential contamination. Particular attention will be paid to areas where known spills (if any) have occurred in the past.

If soil contamination is found in any area, CH (DEER PARK) will submit a revised contingent closure plan to TCEQ to propose a sampling plan that will fully define the extent of contamination in the soil.

7.3.4 Pug Mill B-1203

The Continuous Mixer (Pugmill B-1203) is a intensively agitated mixer installed and used in the waste Stabilization and Encapsulation (S&E) process, prior to landfill. The pugmill receives screened or shredded waste, stabilizing agents, water and slurries. In the pugmill, the materials are thoroughly mixed and discharged to the T-1204 pit for storage prior to disposal in the landfill.

The pugmill is electrically powered and has a capacity of 22 cubic yards. No ignitable, reactive, or incompatible wastes are processed in the pugmill. The mixing operation is controlled by process computer and is monitored by on-site operators to prevent overfilling and to ensure the design operational efficiency. The pugmill is completely enclosed inside the S & E building, which provides containment and protection from direct precipitation and run-on.

7.3.4.1 <u>Decontamination of Pugmill</u>

The cleaning of the Pugmill will consist of the following steps:

1. The floor in the area of the Pugmill Shredder will be scraped to remove any visible signs of contamination. This area is shared with several tanks. Accumulated residues will be analyzed for characterization and disposal.

2. Any surface cracks or gaps in floors or berms will be examined by the independent engineer to determine potential for penetration to soil. Any cracks and gaps in floors and berms will be repaired.

3. The floor will be hydroblasted with an appropriate cleaning solution.

4. The Pugmill and all equipment ancillary to the unit (e.g., feed systems, conveyors, discharge systems, hoppers, etc.) will be disassembled, and hydroblasted to decontaminate the pieces. Small parts that cannot be decontaminated will be placed in containers and handled as hazardous waste.

5. During hydroblasting operations, precautions will be taken to prevent overspray and contain liquids. Precautions may include vacuuming the wash waters, erecting overspray curtains or other similar methods.

6. A qualified cleaning contractor specializing in hydroblasting or equivalent cleaning methods will be used to clean all surfaces which have or may have been in contact

with materials. The contractor will take measures to ensure that all rinseates will be contained to prevent runoff from the container storage areas.

7. All process equipment and portable equipment used for decontamination will be decontaminated by steam-cleaning over a collection pan. Liquids contained in the collection pan will be combined with the washwater.

8. After hydroblasting is believed to be complete, a sample of the rinseate will be collected from the Pugmill. This activity will be done under the direction of the engineer. Rinse samples will be analyzed for TOC and TOX constituents using EPA-approved methods and quality control procedures. In regard to decontamination levels, with respect to organics, decontamination will be continued until TOC, TOX, and PCBs are not detected; with respect to inorganics (i.e., metals), decontamination will be continued until these constituents are either not detected or background concentrations are reached, as documented by the independent engineer. The background contaminant levels may be adjusted to account for variances in constituent levels inherently present in an uncontaminated "blank" rinseate sample or the media that is being decontaminated (i.e., any compounds found to be naturally occurring in the concrete used for floors and berms, or coatings used for crack repair). This adjustment will be done with the knowledge and prior approval of the TCEQ.

9. If any constituents are present at or above the limits of quantification in the final rinse water, the storage area will be cleaned again. The rinse water will be sampled again for the constituents previously identified. If any constituents are still present after the second cleaning, the storage area will either be cleaned using an alternative method and the cleaning agent sampled and analyzed or the closure plan will be amended to provide for a more effective means of removal.

10. If contaminants are still present, the area will either be cleaned by alternative methods and the cleaning agent sampled and analyzed again or the closure plan will be amended and submitted for approval to the TCEQ to provide for a more effective means of removal.

11. All washwaters and residues generated from closure activities will be collected and transported by truck or railcar to permitted off-site facilities for disposal as RCRA-regulated wastes.

12. Once decontamination of the Pugmill is completed, at least one boring will be made in the flooring of the area. Particular attention will be paid to penetrating cracks and stains. The boring location will be determined by the independent engineer. The engineer will make this determination by personally examining the area in question looking for any existing/repaired cracks, gaps, or other areas where a leak could have penetrated, as well as any slopes or trenches in the area. This physical examination will be combined with the independent engineer's review of spill history in the unit. Using all parts of this information, the independent engineer will make the determination as to the location of the boring. Once decontamination of the

secondary containment area is completed, at least one boring will be made in the flooring of each secondary containment area. Particular attention will be paid to penetrating cracks and stains. The boring location will be determined by the independent engineer. The engineer will make this determination by personally examining the area in question looking for any existing/repaired cracks, gaps, or other areas where a leak could have penetrated, as well as any slopes or trenches in the area. This physical examination will be combined with the independent engineer's review of spill history in the unit. Using all parts of this information, the independent engineer will make the determination as to the location of the boring.

13. The soil sampling will be advanced to the depth of the water table, penetrating concrete as required. All soil samples will be analyzed for TOC, TOX, metals and PCB constituents using EPA-approved methods and quality control procedures. The analysis for each unit's soil will be compared to the detection limits established for each chemical constituent in the analysis.

    Soil underlying a given unit will be considered uncontaminated if the chemical constituents in a given soil sample are at the non-detect level, as documented by the independent engineer. The background contaminant levels (when compared to the detection limits for a specific chemical constituent) for the soil may be adjusted to account for variances in constituent levels inherently present, as calculated in the mean of the background soil samples. Such an adjustment would be done with the knowledge and prior approval of the TCEQ.

    Detectable concentrations of TOC, TOX, or PCBs in affected soils will be considered as evidence of a release from a unit. With respect to inorganics (i.e., metals), the presence of these constituents at or above the detection limits or background concentrations in affected areas will be considered as evidence of a release from a unit.

    Sampling and statistical analysis procedures to establish background soil concentrations will be conducted per "Methods for Evaluating the Attainment of Cleanup Standards, Volume 1: Soils and Solid Media," EPA Document 230/02-89-042, or similar document, as approved by TCEQ.

14. If soil contamination is found in any area, CH (Deer Park) will submit a revised contingent closure plan to TCEQ to propose a sampling plan that will fully define the extent of contamination in the soil.

If soil contamination is found in any area, CH (Deer Park) will submit a revised contingent closure plan to TCEQ to propose a sampling plan that will fully define the extent of contamination in the soil.

7.3.5 RCRA Shredder

The RCRA Shredder is a device that is used to shred containers of hazardous and nonhazardous wastes. Although this unit was designed to shred car air bag initiator cylinders prior to incineration, it can be used for other waste contaminated containers and/or materials.

The RCRA Shredder sets on a concrete pad that is located in the S&E building. Most of the RCRA Shredder is feed and discharge equipment.

The RCRA Shredder is comprised of the following main parts:

- A conveyor feed line;
- The Shredder Feed Hopper;
- Two Stacked Hydraulic Shredders;
- A discharge conveyor.

7.3.5.1 Decontamination of RCRA Shredder

The cleaning of the RCRA Shredder will consist of the following steps:

1. The floor in the area of the RCRA Shredder will be scraped to remove any visible signs of contamination. Accumulated residues will be analyzed for characterization and disposal.

2. Any surface cracks or gaps in floors or berms will be examined by the independent engineer to determine potential for penetration to soil. Any cracks and gaps in floors and berms will be repaired.

3. The floor will be hydroblasted with an appropriate cleaning solution.

4. The RCRA Shredder and all equipment ancillary to the unit (e.g., feed systems, conveyors, discharge systems, hoppers, etc.) will be disassembled, hydroblasted and triple-rinsed with a suitable solvent to decontaminate the pieces. Small parts that cannot be decontaminated will be placed in containers and handled as RCRA-regulated hazardous waste. All decontamination fluids generated in this process will be handled as RCRA-regulated materials.

5. During hydroblasting operations, precautions will be taken to prevent overspray and contain liquids. Precautions may include vacuuming the wash waters, erecting overspray curtains or other similar methods.

6. A qualified cleaning contractor specializing in hydroblasting or equivalent cleaning methods will be used to clean all surfaces that have or may have been in contact with materials. The contractor will take measures to ensure that all rinseates will be contained to prevent runoff from the container storage areas.

7. All process equipment and portable equipment used for decontamination will be decontaminated by steam-cleaning over a collection pan. Liquids contained in the collection pan will be combined with the washwater.

8. After hydroblasting is believed to be complete, a sample of the rinseate will be collected from the RCRA Shredder. This activity will be done under the direction of the engineer. Rinse samples will be analyzed for TOC, TOX and metals constituents using EPA-approved methods and quality control procedures. In regard to decontamination levels, with respect to organics, decontamination will be continued until TOC and TOX are not detected; with respect to inorganics (i.e., metals), decontamination will be continued until these constituents are either not detected or background concentrations are reached, as documented by the independent engineer. The background contaminant levels may be adjusted to account for variances in constituent levels inherently present in an uncontaminated "blank" rinseate sample or the media that is being decontaminated (i.e., any compounds found to be naturally occurring in the concrete used for floors and berms, or coatings used for crack repair). This adjustment will be done with the knowledge and prior approval of the TCEQ.

9. If any constituents are present at or above the limits of quantification in the final rinse water, the storage area will be cleaned again. The rinse water will be sampled again for the constituents previously identified. If any constituents are still present after the second cleaning, the storage area will either be cleaned using an alternative method and the cleaning agent sampled and analyzed or the closure plan will be amended to provide for a more effective means of removal.

10. If contaminants are still present, the area will either be cleaned by alternative methods and the cleaning agent sampled and analyzed again or the closure plan will be amended and submitted for approval to the TCEQ to provide for a more effective means of removal.

11. All washwaters and residues generated from closure activities will be collected and transported by truck or railcar to permitted off-site facilities for disposal as RCRA-regulated wastes.

12. Once decontamination of the RCRA Shredder is completed, at least one boring will be made in the flooring of the area. Particular attention will be paid to penetrating cracks and stains. The boring location will be determined by the independent engineer. The engineer will make this determination by personally examining the area in question looking for any existing/repaired cracks, gaps, or other areas where a leak could have penetrated, as well as any slopes or trenches in the area. This physical examination will be combined with the independent engineer's review of spill history in the unit. Using all parts of this information, the independent engineer will make the determination as to the location of the boring.

13. The soil sampling will be advanced to the depth of the water table, penetrating

concrete as required. All soil samples will be analyzed for TOC, TOX and metals constituents using EPA-approved methods and quality control procedures. The analysis for each unit's soil will be compared to the detection limits established for each chemical constituent in the analysis.

a. Soil underlying a given unit will be considered uncontaminated if the chemical constituents in a given soil sample are at the non-detect level, as documented by the independent engineer. The background contaminant levels (when compared to the detection limits for a specific chemical constituent) for the soil may be adjusted to account for variances in constituent levels inherently present, as calculated in the mean of the background soil samples. Such an adjustment would be done with the knowledge and prior approval of the TCEQ.

b. Detectable concentrations of TOC or TOX, in affected soils will be considered as evidence of a release from a unit. With respect to inorganics (i.e., metals), the presence of these constituents at or above the detection limits or background concentrations in affected areas will be considered as evidence of a release from a unit.

c. Sampling and statistical analysis procedures to establish background soil concentrations will be conducted per "Methods for Evaluating the Attainment of Cleanup Standards, Volume 1: Soils and Solid Media," EPA Document 230/02-89-042, or similar document, as approved by TCEQ.

14. Soils and surrounding areas will be visibly inspected by the independent engineer for any signs of potential contamination. Particular attention will be paid to areas where known spills (if any) have occurred in the past.

If soil contamination is found in any area, CHDP will submit a revised contingent closure plan to TCEQ to propose a sampling plan that will fully define the extent of contamination in the soil.

7.4 INCINERATORS

The facility has two separate incineration trains. Engineering design plans detailing the construction and design of the incinerators are contained in Section V.H (Incinerators) of the permit application.

Closure of the incinerators and their underlying areas will consist of the activities described below.

7.4.1 Decontamination of Incinerators

The decontamination of the incineration units shall be performed in the following manner:

1. The burn schedule for each of the incinerators will be coordinated to ensure that all feed lines have been flushed with an appropriate solvent in the last step prior to completely shutting down each incinerator.

2. Each incinerator will then be allowed to cool to ambient temperature prior to initiating incinerator closure.

3. Any slag or ash remaining will be removed using shovels and jackhammers and hauled to an approved off-site landfill. All kiln bricks will be removed and disposed as hazardous waste at an approved off-site facility.

4. Hydroblasting or an equivalent cleaning method will be used to clean the incinerators. Washwater or rinseate will be removed by a vacuum truck or equivalent method. All washwater and rinseate will be disposed of offsite at a permitted disposal facility.

5. After hydroblasting is believed to be complete, a sample of the rinseate will be collected from each incineration unit. This activity will be done under the direction of the engineer. Rinse samples will be analyzed for TOC and TOX constituents using EPA-approved methods and quality control procedures. Decontamination shall be considered complete when the contaminant levels in the rinseate do not exceed the detection limits given for TOC and TOX analyses as documented by the independent engineer. The background contaminant levels may be adjusted to account for variances in constituent levels inherently present in an uncontaminated "blank" rinseate sample or the media that is being decontaminated (i.e., any compounds found to be naturally occurring in the concrete used for floors and berms, or coatings used for crack repair). This adjustment will be done with the knowledge and prior approval of the TCEQ.

6. If any constituents are present at or above the limits of quantification in the final rinse water, the storage area will be cleaned again. The rinse water will be sampled again for the constituents previously identified. If any constituents are still present after the second cleaning, the storage area will either be cleaned using an alternative method and the cleaning agent sampled and analyzed or the closure plan will be amended to provide for a more effective means of removal.

6. The Incineration Pad will be scraped to remove any visible signs of contamination. Accumulated residues will be analyzed for characterization and disposal.

7. Any surface cracks or gaps in floors or berms will be examined by the independent engineer to determine potential for penetration to soil. Any cracks and gaps in floors and berms will be repaired.

8. The Incineration Pad will be hydroblasted with an appropriate cleaning solution.

9. During hydroblasting operations, precautions will be taken to prevent overspray and contain liquids. Precautions may include vacuuming the wash waters, erecting overspray curtains or other similar methods.

10. A qualified cleaning contractor specializing in hydroblasting or equivalent cleaning methods will be used to clean all surfaces that have or may have been in contact with materials. The contractor will take measures to ensure that all rinseates will be contained to prevent runoff from the container storage areas.

11. All process equipment and portable equipment used for decontamination will be decontaminated by steam-cleaning over a collection pan. Liquids contained in the collection pan will be combined with the washwater.

12. After hydroblasting is believed to be complete, a sample of the rinseate will be collected from each incineration pad. This activity will be done under the direction of the engineer. Rinse samples will be analyzed for TOC, TOX, metals and PCB (where applicable) constituents using EPA-approved methods and quality control procedures. In regard to decontamination levels, with respect to organics, decontamination will be continued until TOC, TOX, and PCBs are not detected; with respect to inorganics (i.e., metals), decontamination will be continued until these constituents are either not detected or background concentrations are reached, as documented by the independent engineer. The background contaminant levels may be adjusted to account for variances in constituent levels inherently present in an uncontaminated "blank" rinseate sample or the media that is being decontaminated (i.e., any compounds found to be naturally occurring in the concrete used for floors and berms, or coatings used for crack repair). This adjustment will be done with the knowledge and prior approval of the TCEQ.

13. If any constituents are present at or above the limits of quantification in the final rinse water, the storage area will be cleaned again. The rinse water will be sampled again for the constituents previously identified. If any constituents are still present after the second cleaning, the storage area will either be cleaned using an alternative method and the cleaning agent sampled and analyzed or the closure plan will be amended to provide for a more effective means of removal.

14. If contaminants are still present, the area will either be cleaned by alternative methods and the cleaning agent sampled and analyzed again or the closure plan will be amended and submitted for approval to the TCEQ to provide for a more effective means of removal.

15. All washwaters and residues generated from closure activities will be collected and transported by truck or railcar to permitted off-site facilities for disposal.

16. Once decontamination of the Incineration Pad is completed, at least one boring will be made in the flooring of the area. Particular attention will be paid to penetrating cracks and stains. The boring location will be determined by the independent engineer. The engineer will make this determination by personally examining the

area in question looking for any existing/repaired cracks, gaps, or other areas where a leak could have penetrated, as well as any slopes or trenches in the area. This physical examination will be combined with the independent engineer's review of spill history in the unit. Using all parts of this information, the independent engineer will make the determination as to the location of the boring Once decontamination of the secondary containment area is completed, at least one boring will be made in the flooring of each secondary containment area. Particular attention will be paid to penetrating cracks and stains. The boring location will be determined by the independent engineer. The engineer will make this determination by personally examining the area in question looking for any existing/repaired cracks, gaps, or other areas where a leak could have penetrated, as well as any slopes or trenches in the area. This physical examination will be combined with the independent engineer's review of spill history in the unit. Using all parts of this information, the independent engineer will make the determination as to the location of the boring.

17. The soil sampling will be advanced to the depth of the water table, penetrating concrete as required. All soil samples will be analyzed for TOC, TOX, metals and PCB constituents using EPA-approved methods and quality control procedures. The analysis for each unit's soil will be compared to the detection limits established for each chemical constituent in the analysis.

    Soil underlying a given unit will be considered uncontaminated if the chemical constituents in a given soil sample are at the non-detect level, as documented by the independent engineer. The background contaminant levels (when compared to the detection limits for a specific chemical constituent) for the soil may be adjusted to account for variances in constituent levels inherently present, as calculated in the mean of the background soil samples. Such an adjustment would be done with the knowledge and prior approval of the TCEQ.

    Detectable concentrations of TOC, TOX, or PCBs in affected soils will be considered as evidence of a release from a unit. With respect to inorganics (i.e., metals), the presence of these constituents at or above the detection limits or background concentrations in affected areas will be considered as evidence of a release from a unit.

    Sampling and statistical analysis procedures to establish background soil concentrations will be conducted per "Methods for Evaluating the Attainment of Cleanup Standards, Volume 1: Soils and Solid Media," EPA Document 230/02-89-042, or similar document, as approved by TCEQ.

18. If soil contamination is found in any area, CH (DEER PARK) will submit a revised contingent closure plan to TCEQ to propose a sampling plan that will fully define the extent of contamination in the soil.

7.5 LANDFILLS

The CH (Deer Park) facility presently has three landfills, the North Landfill, East Landfill and South Landfill. Currently only the North Landfill is active. The South Landfill has previously been certified closed by a professional engineer. Wastes placed in the landfill areas include bulk solids, containerized solids, stabilized inorganic bulk solids, and small quantities of stabilized materials with low organic content.

CH (Deer Park) uses a moving-face landfill for the disposal of solid hazardous wastes. Partial placement of interim cover of the landfill is an integral part of routine facility operations, as individual disposal areas are closed as they reach capacity. Final closure of the landfills will involve closure of the active disposal area including disposal area previously received interim cover. As a result of the land disposal methods practiced at CH (Deer Park), closure activities for the landfills are included as part of the normal operating budget for the facility.

The moving face landfill method of disposal employs a continuous process of excavating and preparing disposal areas within the landfill, filling the cell with waste, and covering the filled cell.

7.5.1 North Landfill Cover System

The North Landfill will be capped with a clay soil/synthetic liner system. The cover will prevent seepage into the waste, protect the environment from potential waste releases, and aid in run-off control. The waste is placed at an elevation 3.0 feet below the dike crest and is sloped to a maximum of three percent to the center of the landfill at a maximum elevation of 75 feet MSL. The final cover is 4 feet thick and is constructed over the interim cover. To control run-off, drainage ditches are constructed along the dike crest and the exterior toe of the dike. The cover consists of the following profile from bottom up:

- 2-feet of interim cover;
- A minimum of 1-additional foot of compacted clay over the interim cover with a permeability of 1 x 10^{-7} cm/sec or less. The top 1-foot of interim cover will be reworked, recompacted, tested and become an integral part of the final cover system (*i.e.,* total clay liner thickness equal to 2-feet);
- A geosynthetic clay liner (GCL);
- A 60-mil (textured) HDPE liner overlain by a geocomposite lateral drainage layer, which in conjunction with the clay cap prevents infiltration of rainwater into the landfill cell;
- 18 inches of cover soil;
- Six inches of topsoil; and,

- Shallow root vegetation to stabilize the soil.

The cover system installed by CH (Deer Park) over the disposal cells is designed to fulfill the necessary requirements imposed by the TCEQ and EPA.

7.5.2 East Landfill Cover System

The East Landfill will be capped with a clay soil and synthetic liner system. The final cover system is designed to minimize long-term maintenance, infiltration into the waste, settlement, erosion, and promote positive drainage. The cover system shall at least slope at three percent from the center of the landfill toward the perimeter drainage channel. The cover will prevent seepage into the waste, protect the environment from potential waste releases, and aid in run-off control. The waste is placed no higher than 3 feet below the lowest crest elevation of the dike crest and is sloped to a maximum of three percent to the center of the landfill at a maximum elevation of 77.5 feet MSL. The final cover is 3.0 feet thick and is constructed over 1-foot of interim cover. To control run-off, drainage ditches are constructed along the dike crest and the exterior toe of the dike. All clay and synthetic liner components will be installed or constructed in accordance with the pre-approved QA/QC procedures and methods.

The final cover for the East Landfill will be constructed once the final waste has been placed and the interim cover completed. The final cover will consist of the following constructed from the bottom up:

- 1-foot thick interim clay cover;
- 1-foot of compacted clay;
- A Geosynthetic Clay Liner (GCL);
- 60 mil (textured) HDPE geomembrane;
- Geocomposite, a lateral drainage layer consisting of a geosynthetic drainage net bonded between 2 layers of geotextile that has a minimum transmissivity of $5.0X10^{-4}$ m^2/sec;
- 18-inches of cover soil;
- 6-inches of topsoil that has adequate nutrient and organic content to allow for self sustaining vegetation growth; and
- Shallow root vegetation to stabilize the soil.

The cover system installed by CH (Deer Park) over the disposal cells is designed to fulfill the requirements imposed by the TCEQ and EPA regulation.

7.5.3 Closure Activities

Closure of the landfill occurs when the unit has reached the maximum design capacity. The construction of the interiml cover system occurs as each cell of the landfill is filled to

capacity. The final cover system will be placed when the entire landfill reaches the maximum permitted volume.

Prior to placement of the final cover system, all remaining cell capacity is filled with processed waste meeting LDR requirements for land disposal. All contaminated stormwater generated during the final placement of waste is removed following standard operating procedures and transported to the facility's wastewater tanks for treatment and final disposal. All transport vehicles exiting the landfill are decontaminated at the truck decontamination station before being allowed to travel throughout the site. All washwater is collected and processed through the incinerator or hauled offsite to an approved disposal facility.

The final completion of the leachate collection system for the final cell is constructed as the final cover of the cell is installed. Leachate collection is conducted manually until the new wells are equipped with automatic collection systems. Throughout closure, the leachate collection system is inspected following the TCEQ approved inspection schedule.

7.5.4 Inspection

During the closure procedures for the landfill, routine inspection and construction monitoring continue as specified in the inspection plan and construction QA/QC procedures. All drainage control systems are inspected and maintained in good operational order. Security systems and fencing are inspected and maintained. All reporting and record-keeping requirements continue in accordance with applicable regulations and permit requirements.

7.5.5 Post-Closure Survey

After completion of the final cover, the closed landfill is surveyed to determine the final elevation of the landfill. Permanent benchmarks are installed for future reference points and are utilized to record any settlement of the final cover system. Due to settlement and compaction of the waste materials, the elevation of the landfill may alter. A survey plat showing the location and size of the landfill is prepared by a certified land surveyor. The plat shall indicate CH (Deer Park) obligation to restrict disturbance of the landfill in accordance with all applicable regulations. The survey plat will be filed with the local zoning authority and filed no later than the date of closure certification.

8.0 NOTIFICATION OF TCEQ/EPA Region 6

CH (Deer Park) will notify the TCEQ in writing at least 90 days prior to commencing closure of any permitted unit. CH (Deer Park) will notify the TCEQ local district office in writing at least 10 days prior to commencing closure. The notification will include the estimated date that closure will commence. For any TSCA units, CH (Deer Park) will notify the EPA Region 6 Administrator 60 days prior to the date on which the closure is expected to commence.

9.0 CERTIFICATION OF CLOSURE

The facility will be inspected at key points during the closure activities (see Table 2) by a professional engineer and the owner/operator who will certify that the closure was performed according to the requirements of this closure plan. The cost for this activity is covered under administrative costs.

10.0 FINAL CLOSURE ACTIVITIES

Final closure activities will consist of groundwater monitoring and site maintenance tasks. This entails a general inspection of the site to assess the condition of landfill covers, on-site roads, and the perimeter fence. The monitoring wells will be sampled, and the samples will be analyzed in accordance with the groundwater monitoring plan. The plan currently requires analysis for pH, specific conductance, TOC, TOX, chloride, iron, manganese, phenols, sodium and sulfate. Any maintenance activities which are noted, such as fence repair, road repair, drainage ditch maintenance, re-vegetation, etc. will be performed.

11.0 CLOSURE PERFORMANCE STANDARD

The general closure performance standard for hazardous waste management facilities is specified in the RCRA regulations and requires that the facility owner/operator must close the facility in a manner which:

- minimizes the need for further maintenance
- controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the ground water, or surface waters, or to the atmosphere

This standard will be achieved at closure of the storage and treatment units by removal of all hazardous wastes, hazardous waste constituents and hazardous residues. This standard will be achieved for all disposal units by covering disposal areas with appropriate caps and vegetation, leachate management, and by periodic inspections and maintenance of these areas.

12.0 CLOSURE SCHEDULE

Based upon remaining landfill capacity at its site, final closure activities for the CH (Deer Park) facility are expected to occur in the year 2027. In accordance with the worst-case assumption regarding stormwater assumed to be present at the time of closure, closure would commence in the month of January (with stormwater from November and December assumed to be present within exposed secondary containment structures at the time of closure).

Closure activities are anticipated to require 180 days to complete as shown in Table 3. If any time extension to this schedule is necessary, TCEQ approval will be sought via a permit modification.

Table 3
Worst-case Closure Time Schedule

Closure Activity	Duration (days)
1. Shipment of stored wastes for offsite disposal	00-30
2. Removal of residues from units and containment systems	15-45
3. Hydroblast units	30-60
4. Dismantle and clean process and ancillary equipment	10-70
5. Collection of rinse samples	10-70
6. Laboratory analysis submitted and received	10-120
7. Inspection by Professional Engineer	10-70
8. Shipment of process equipment offsite for disposal	35-130
9. Repeat cleaning, sampling and analysis steps	30-120
10. Disposal of contaminated steel-work and rinse water	75-125
11. Inspection by Professional Engineer	125
12. Placement of soil borings	30-130
13. Placement of background soil borings	30-130
14. Laboratory analysis of soil borings submitted and received	30-150
15. Placement of fill material in disposal areas	125-150
16. Final site maintenance activities	150-180
17. Final inspection by Professional Engineer	180
18. Submission of Closure Report	180

Note: Events are listed in order of anticipated occurrence; the sequencing of events may change due to operational issues, also, it is likely that some activities will take place concurrent with other listed activities.

POST CLOSURE CARE PLAN
TABLE OF CONTENTS

1.0 POST CLOSURE CARE PLAN

The Post Closure Care Plan for CH (Deer Park) is provided below.

1.1 INTRODUCTION

Post closure care for the South landfill, North landfill and East Landfill will be provided for a period of 30 years after the completion of the closure activities for each unit. CH (Deer Park) will ensure that:

- the leachate collection system is maintained and operated until leachate is no longer being generated by the landfill
- the integrity and composure of the final cover is maintained. This includes making repairs to the final cover to correct and any damage from erosion, subsidence, animal burrowing, or other events which may jeopardize the effectiveness of the final cover
- the final cover is protected from damage from rainwater run-on and rainwater run-off
- the surveyed benchmarks are protected and maintained
- the groundwater monitoring wells are sampled and maintained in accordance with the applicable Compliance Plan, which will be modified upon termination of compliance monitoring.

As required by 40 CFR 264.117, regularly scheduled inspections and maintenance activities are performed during the 30-year post closure care period. These inspections and maintenance routines provide for the effective operation of the leachate collection system, drainage system, final landfill cover, and perimeter security fencing.

Certification of post closure care is provided by an independent professional engineer registered in the State of Texas. All post closure care activities are performed by trained CH (Deer Park) employees or contractors and documented.

During post closure care, information concerning the landfill can be obtained from the CH (Deer Park) corporate headquarters.

Physical Address:	Clean Harbors Environmental Services 1501 Washington Street Braintree, MA 02185
Mailing Address	1501 Washington Street Braintree MA 02185
Phone Number	(781)849-1800

1.2 POST CLOSURE NOTIFICATION

CH (Deer Park) will submit to the Executive Director of the Texas Natural Resource Conservation Commission and the local land use authority a record of the type, quantity, and location of all hazardous wastes disposed of within the landfill. This information will be provided within 60 days of closure certification.

CH (Deer Park) will also deed record the facility property within 60 days of closure certification of the first hazardous waste disposal unit and within 60 days of closure certification of the last disposal unit. The deed recordation must indicate to potential future owners that the property:

- has been used to dispose of hazardous wastes
- has been restricted under 40 CFR 264 Subpart G
- has had the survey plat and waste information filed with the local land use authority and Executive Director.

1.3 MAINTENANCE OF FACILITY

Site maintenance activities will be conducted at the facility at regularly spaced intervals to ensure the continued operation of control and monitoring equipment. Maintenance of the facility includes maintaining the final cover of the landfill, maintaining the perimeter security fence, maintaining permanent benchmarks, and conducting topographic surveys.

1.3.1 Maintenance of Final Cover

The final cover of each landfill unit will be maintained for a period of thirty years after the closure of the final waste management cell. The top portion of the final cover consists of 1 foot of sandy clay loam topsoil. A vegetative cover will be established to reduce the effect of erosion on the final cover. If repairs are required due to damage from storm events or animals, the final cover will be repaired to the same design specifications as the original final cover. The vegetative cover will be re-established to reduce erosion. All diversion trenches will be maintained and cleaned periodically.

1.3.2 Maintenance of Permanent Benchmarks

A registered surveyor will be contracted to verify the location and elevation of all benchmarks associated with each landfill every five years or any time the general inspection reveals damage.

1.3.3 Maintenance of Perimeter Fence

The security fencing surrounding the closed landfills will be examined every six months and all warning signs will be replaced when necessary.

1.3.4 Topographic Surveys

Topographic surveys of the landfill will occur after the first, third, and fifth year after certification of closure. After the fifth year, the landfill will be surveyed every five years to determine if the landfill cap has changed in elevation due to compaction of the waste, subsidence, or erosion. Any area that has subsided more than 6 inches over a horizontal distance of 20-feet will be repaired under the direction of an independent professional engineer registered in the State of Texas.

1.4 GROUNDWATER MONITORING

All groundwater monitoring will be analyzed for the parameters given in the Groundwater Detection Monitoring Plan in Section VI of this permit application.

1.5 SITE SECURITY

Security of the facility includes inspecting and maintaining the perimeter security fence, keeping all access gates locked to prevent unauthorized entry and keeping all monitoring well caps locked.

1.6 RESPONSE TO SEVERE STORMS

Erosion and other damage to the facility is expected to occur from severe storms that strike the area. The facility will be inspected within one week after a severe storm to check the landfill for any signs of damage. All damaged areas will be repaired within 24 hours or as soon as possible.

1.7 LEACHATE COLLECTION

All leachate associated with the landfill will be removed using an automatic leachate collection system. The system will be designed to be labor free and to require little if any maintenance. The system will be inspected as shown on Table 3.0. All leachate water collected will be stored in the landfill leachate collection tanks during the post-closure period. All leachate water will be processed through the CH (Deer Park) wastewater treatment system. The quantity of leachate water collected will be evaluated to determine if the landfill final cover is working properly.

1.7.1 Landfill Leachate Collection Tanks

One 21,000-gallon tank will remain in operation during the post closure care period for collection of leachate water. All leachate water collected will be processed through the CH (Deer Park) wastewater treatment system. The leachate collection tank will be inspected as

shown on Table 3.0. The tank will be closed after the landfill stops generating leachate water or at the end of the post closure period (30 years).

1.8 RECORDKEEPING AND REPORTING

A complete record of the facility's post closure inspection logs and maintenance logs will be maintained. The inspection logs will include the name of the inspector, date of the inspection, notations of any observations made, and the date of any repairs. The records will be kept on file for a period of at least 3 years from the date of each inspection.

1.9 CERTIFICATION

Upon the successful completion of the post closure period, certification will be submitted to the Executive Director of the Texas Natural Resource Conservation Commission indicating that the post closure period for the landfill has been performed in accordance with the specifications contained within the Post Closure Care Plan. The certification will be signed by an independent professional engineer registered in the State of Texas. All necessary records will be maintained and provided to the Executive Director upon request until CH (Deer Park) is released from financial assurance requirements.

Table 3.0
Post Closure Inspection Schedule

Component	Inspection Item	Frequency
Final Cover	**Erosion, Subsidence, Maintenance of Vegetative Cover**	**Semi-annually or after major storm event**
	Condition of stormwater run-on & run-off control structures	**Semi-annually or after major storm event**
Leachate Collection System	**Check water levels in risers and sumps**	**Monthly**
	Check water levels in Tanks	**Weekly**
	Check tank for cracks, corrosion, discoloration	**Weekly**
	Check tank integrity	**Annually**
	Check containment area surrounding tank for evidence of leakage	**Weekly**
	Check valves for damage, corrosion	**Weekly**
	Tank vent obstructions	**Semi-annually**
	Check riser pipes/manholes for sediment	**Monthly**
Leak Detection System	**Check for presence of liquids**	**Semi-annually**
Run-off system	**Erosion of dikes, ditches. Check for obstruction in flow**	**Semi-annually**

Component	Inspection Item	Frequency
Benchmarks	**Check for damage**	**Semi-annually**
	Verification of accuracy	**Every 5 years or after repair**
Safety Equipment	**Condition of alarm systems, fire extinguishers**	**Semi-annually**
	Condition of safety gear	**Semi-annually**
Fence	**Check condition of gates, locks, and fence**	**Semi-annually**
Monitor Wells	**Check wells for signs of damage and tampering**	**Monthly**

2.0 CLOSURE OF LEACHATE COLLECTION TANK

The CH (Deer Park) leachate collection storage system consists of one 21,000 gallon leachate collection tank. The tank is constructed of carbon steel, closed top, and equipped with high level alarms and automatic feed cutoff valves.

The tank is enclosed within a secondary containment system constructed of steel-reinforced concrete. The secondary containment system will be designed to contain 100% of the total capacity of the leachate collection tank.

Closure of the leachate collection tank consists of removing all collected leachate from the tank and processing the leachate through the CH (Deer Park) wastewater treatment system for discharge. All collected rainwater will also removed from the secondary containment area and processed.

After all liquids are removed, the tank and secondary containment area is decontaminated. All decontamination rinse water is collected, sampled, and analyzed by an EPA-approved laboratory for TOC and TOX constituents, then manifested and transported offsite for proper disposal.

2.1 NOTIFICATION OF TCEQ

CH (Deer Park) will notify the TCEQ in writing at least 90 days prior to commencing closure of the leachate collection tank. CH (Deer Park) will notify the TCEQ local district office in writing at least 10 days prior to commencing closure. The notification will include the estimated date that closure will commence.

2.2 REMOVAL OF WASTES

All liquids in the tanks and discharge lines are removed and processed through the CH (Deer Park) wastewater treatment system and discharged in accordance with all TCEQ and EPA guidelines. At the time of closure, the tank may contain no leachate from the landfills if the landfills are constructed properly and the final cover is properly integrated with the side slopes. Rainwater should not be able to enter the landfill. Also, after thirty years, all liquids trapped by the waste at the time of disposal should have leached to the collection area.

After all liquids for the tank and associated lines are removed, the water within the secondary containment area is removed. The water is collected using a vacuum truck. The water is manifested and processed through the CH (Deer Park) wastewater treatment system.

2.3 DECONTAMINATION OF LEACHATE COLLECTION TANK

Once the tank and secondary containment system are emptied, a water line is connected to the top of the tank and then triple rinsed using hydroblasting techniques to assures complete decontamination. The rinseate from the tank is collected separately, sampled and analyzed

using EPA-approved methods for TOC and TOX constituents. The water is then processed through the CH (Deer Park) wastewater treatment plant.

The secondary containment area is also decontaminated using hydroblasting techniques. All surfaces, which have or may have come into contact with contaminated liquids, are decontaminated. During final rinsing, the rinseate water is collected, sampled and analyzed using EPA-approved methods for TOC and TOX constituents. Sampling and analyses is conducted per SW-846.

If concentrations of any of the above referenced constituents are detected at or above the limits of quantification in the final rinse water for either the tank or secondary containment area, the tank or containment area is cleaned again. The rinse water is sampled again and analyzed for the constituent previously detected. If any quantifiable constituents are still present, the tank or secondary containment area is cleaned by an alternative method, and the cleaning agent sampled and analyzed, or the closure plan is amended to provide for a more effective means of removal.

2.4 CERTIFICATION OF CLOSURE

Upon successful completion of the removal of all wastes and waste residues in the closure of the leachate collection tank and secondary containment area, certification by an independent qualified professional engineer registered in the State of Texas is provided. Certification is provided within 60 days after completion of closure activities. All closure activities are completed with 180 days of the time closure begins.

2.5 SCHEDULE

An estimated schedule of the above-described closure activities is outlined in the following table "Closure Schedule for Leachate Collection Tank":

CLOSURE SCHEDULE FOR LEACHATE COLLECTION TANK

ACTIVITY	CUMULATIVE WEEKS
Process wastes in storage	4
Decontamination of collection tank and secondary containment area	6
Sample and analyses of rinse water	12
Decontamination of collection tank and secondary containment area	14
Sample and analyses of rinse water	20
Provision of certification	26

Appendix VII
Compliance Certification

Clean Harbors Deer Park
2027 Independence Parkway South
La Porte, TX 77571

281-930-2300
www.cleanharbors.com

Harry Shah, Acting Branch Manager
RCRA Corrective Action, UST, Solid Waste & Permits Branch (6LCR-R)
Land, Chemicals and Redevelopment Division
U.S. Environmental Protection Agency, Region 6
1201 Elm Street
Suite 500
Dallas, TX 75270

RE: 40 CFR 761 TSCA Permit Renewal
Clean Harbors Deer Park, LLC
EPA Number – TXD 055141378

Mr. Shah,

In accordance with 40 CFR 761.65(d)(3)(vii), this correspondence serves as written notification certifying compliance with 40 CFR 761.65(b).

Clean Harbors Deer Park, LLC certifies that it complies with the storage for disposal of PCBs and PCB Items set forth in 40 CFR 761.65(b)

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615), I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the identified section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate, and complete.

Should you have any questions regarding this matter, please contact me at the numbers listed below.

Sincerely,

William Simmons
Facility General Manager III
Clean Harbors Deer Park Incinerations
2027 Independence Pkwy S
LaPorte, TX 77571
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Appendix VIII
ESA and NHPA

Biological Evaluation
Clean Harbors Deer Park, LLC
Polychlorinated Biphenyls Incineration and Commercial Storage Permit
La Porte, TX

PREPARED BY:
U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 6
RCRA CORRECTIVE ACTION, UST, SOLID WASTE AND PERMITS BRANCH
1201 ELM STREET
SUITE 500
DALLAS, TX 75270

May 19, 2025

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1.0 Background Information

Clean Harbors Deer Park, LLC, seeks to renew a permit for commercial storage and high-temperature incineration of polychlorinated biphenyl (PCB) liquid and solid waste at 2027 Independence Parkway South, La Porte, Texas. The requirements of 40 CFR 761.65(b)(1) will be met in the existing PCB warehouses, tanks, and incinerator. No construction is associated with the activity subject to the proposed permit renewal.

2.0 Scope of Federal Action

2.1 Environmental Protection Agency Action on PCB Commercial Storage and Incineration Permit Renewal Request

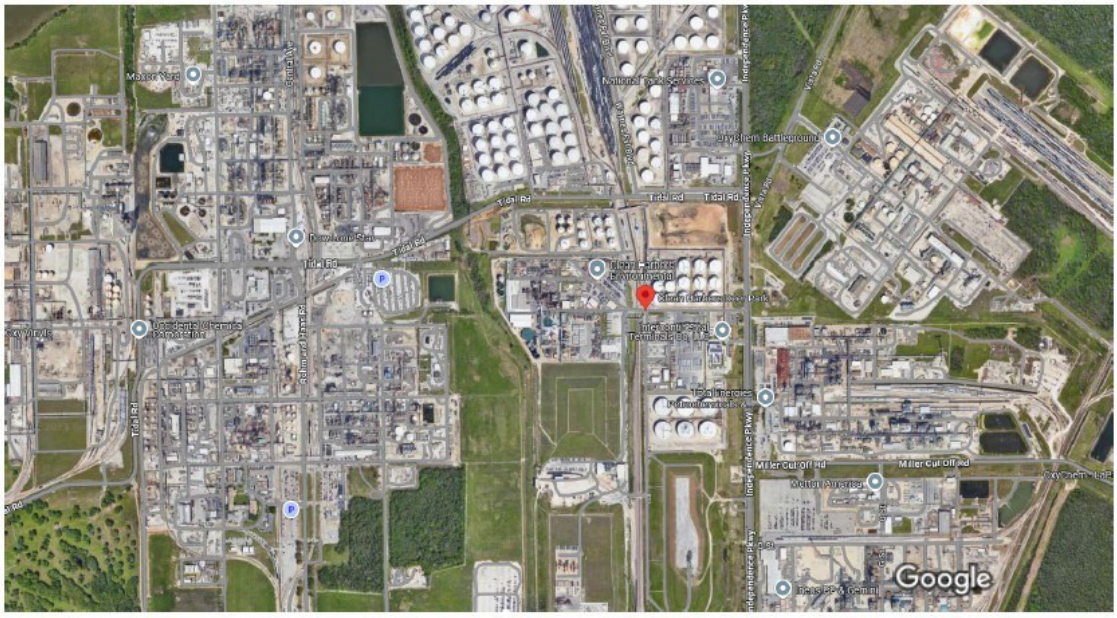
The federal action that is the subject of this Biological Evaluation (BE) is EPA's proposed approval of Clean Harbors' PCB Commercial Storage and Incineration Permit Renewal. The structures at the facility in La Porte were previously built and business activities are ongoing. Permit renewal approval would allow for the continued accumulation and storage of PCB-containing liquids and solids in accordance with 40 CFR 761.65(b)(1) in the designated PCB storage areas shown on the site plan in Appendix A and incineration per 40 CFR 761.70.

The following analysis of the effects of the action assumes that the operating procedures implemented at the site will prevent the release of PCB-containing materials. Per Clean Harbors' 2024 permit renewal application, the facility's tanks and tank truck storage pad have a total maximum capacity of 620,198 gallons. The PCB storage areas have a total maximum storage capacity of 520,800 gallons. The maximum capacity of the transformer and drum handling building is 163,980 gallons. The ash bin storage areas' capacity is 7,800 cubic yards. Additionally, the bulk container storage area has a capacity of 305,795 gallons. All areas meet the 40 CFR 264.175 requirements for secondary containment. The incinerator was last tested for PCB Destruction and Removal Efficiency in 2006 to ensure that it meets the EPA requirement of 99.9999%. Continuous parameter and emission monitoring are in place to ensure this efficiency is maintained (Clean Harbors 2025).

2.2 Site and Surrounding Land Use

The site includes several buildings with limited unpaved areas, aside from the landfill areas (Figure 1 and Appendix A). The surrounding area is largely industrial, with Independence Parkway and industrial facilities to the east, a narrow strip of green space and creek to the west, Tidal Road and another industrial facility to the north, and a rail line and industrial facilities to the south.

Figure 1. Site Location (Google 2025)



Imagery ©2025 Airbus, Maxar Technologies, Map data ©2025 500 ft

3.0 Effects Assessment

3.1 Species of Potential Concern

The EPA obtained the current ESA species list through the US Fish and Wildlife Service's ECOS-IPaC (USFWS 2025b) system for the defined action area. This list, included as Appendix B, provides the specific to the species to be considered in evaluation. The list includes seven species of interest that have been identified for consideration in this biological evaluation. Table 1 lists the threatened and endangered species as well as their current status and critical habitat.

Table 1. Species listed under the ESA within the action area (USFWS 2025b)

Mammal	Status	Critical Habitat
Tricolored Bat (*Perimyotis subflavus*)	Proposed Endangered	Wherever found
Avian		
Eastern Black Rail (*Laterallus Jamaicensis ssp. jamaicensis*)	Threatened	Wherever found
Piping Plover (*Charadrius melodus*)	Threatened	Only wind-related projects
Red Knot (*Calidris canutus rufa*)	Threatened	Only wind-related projects
Whooping Crane (*Grus americana)*	Endangered	Wherever found
Insects		

Monarch Butterfly (*Danaus plexippus*)	Proposed Threatened	Site does not overlap critical habitat
Reptiles		
Alligator Snapping Turtle (*Macrochelys temminckii*)	Proposed Endangered	Wherever found

3.0 Species Assessments and Determinations

The EPA has made the following assessments and determinations considering information produced by USFWS in evaluating whether EPA's proposed permitting action is Likely to Adversely Affect, Not Likely to Adversely Affect, or would have No Effect on each of the five species requiring evaluation. The Piping Plover (*Chardrius melodus*), and Red Knot (*Calidris canutus rufa*) are listed as Threatened but need only be considered when evaluating wind projects (USFWS 2025b) and will not be considered in this evaluation.

The tri-colored bat hibernates six to nine months a year, primarily in caves or mines (Texas 2025). This bat has been found to migrate only an average of 31 miles to its summary nursery site, tending to consist of 35 or fewer females in buildings, tree cavities, or rock crevices, from which they emerge after sunset and again around midnight to catch small insects along a forest edge or over a pond or other waterway (Texas 2025). There do not appear to be any mines or caves in the site vicinity to provide suitable wintering habitat. Therefore, this bat is not likely to forage in the vicinity of the facility.

Eastern black rails tend to use either coastal prairies or vegetated wetland zones along the Gulf Coast (USFWS 2025c). They typically prefer dense vegetative cover where they can move under the canopy. The 2.67-acre Freshwater Forested/Shrub Wetland west of the site could potentially harbor eastern black rails, although it is unlikely to be suitable for a nesting pair and would not be expected to provide more than temporary cover.

Wild whooping cranes breed in Canada and winter primarily in Aransas National Wildlife Refuge in Texas, although Deer Park is mapped as being part of their current range (USFWS 2025e). When wintering, they forage in coastal wetland areas. There is a small freshwater forested/shrub wetland to the west of the facility boundary, and areas surveyed to be freshwater ponds that were excavated and are permanently food are indicated within the property boundaries on the National Wetlands Inventory (USFWS 2025d, Appendix C). Because these resources are within an industrial area and not coastal, they are unlikely to be used by these endangered birds. Monarch butterflies require milkweed plants for laying their eggs, specifically for the development of the larval stage which requires the cardenolides supplied by these plants for the larvae to develop their toxicity, a protective mechanism against predators (USFWS 2024). The adult butterfly depends on flowering plants to gather nectar for sustenance during migration. The renewal of the Clean Harbors facility's permits will not result in any construction at the facility, so no reduction in habitat would occur. The World Health Organization (2000) indicates that there has been no evidence that plants concentrate PCBs, but rather they reflect the concentration in ambient air. Because this Clean Harbors facility deals with solid and liquid waste and the

incineration of this waste with high efficiency, the likelihood of PCB-containing particulate matter being released to the air is low.

Alligator snapping turtles are the largest freshwater turtle in the United States, with males reaching up to 29 inches long and as much as 249 pounds, whereas females are smaller with a maximum length of 22 inches and weight of 62 pounds (USFWS 2025a). They prefer deeper water such as larger rivers, streams, lakes, or swamps, particularly those forested with a high canopy as well as underwater features like root masses (USFWS 2025a). The small stream adjacent to the facility is unlikely to support alligator snapping turtles.

4.0 Effects Determination

The EPA has determined that renewal of the PCB Commercial Storage and Incineration Permit for Clean Harbor will have No Effect on the tricolored bat, piping plover, red knot, or alligator snapping turtle and is Not Likely to Adversely Affect the eastern black rail, whooping crane, or monarch butterfly.

5.0 References

Clean Harbors Deer Park. 2024. TSCA Permit Renewal Application.

Google. 2025. https://www.google.com/maps/

MinesDatabase.com. 2025. https://minesdatabase.com/locations

Texas Parks and Wildlife (TPWD). 2025. Tricolored Bat *(Perimyotis subflavus)*. Retrieved from: https://tpwd.texas.gov/huntwild/wild/species/easpip/

USFWS. 2024. Endangered and Threatened Wildlife and Plants; Threatened Species Status with Section 4(d) Rule for Monarch Butterfly and Designation of Critical Habitat. Retrieved from https://www.govinfo.gov/content/pkg/FR-2024-12-12/pdf/2024-28855.pdf

USFWS. 2025a. Alligator Snapping Turtle. https://www.fws.gov/species/alligator-snapping-turtle-macrochelys-temminckii

USFWS. 2025b. Clean Harbors Deer Park IPaC Resource List.

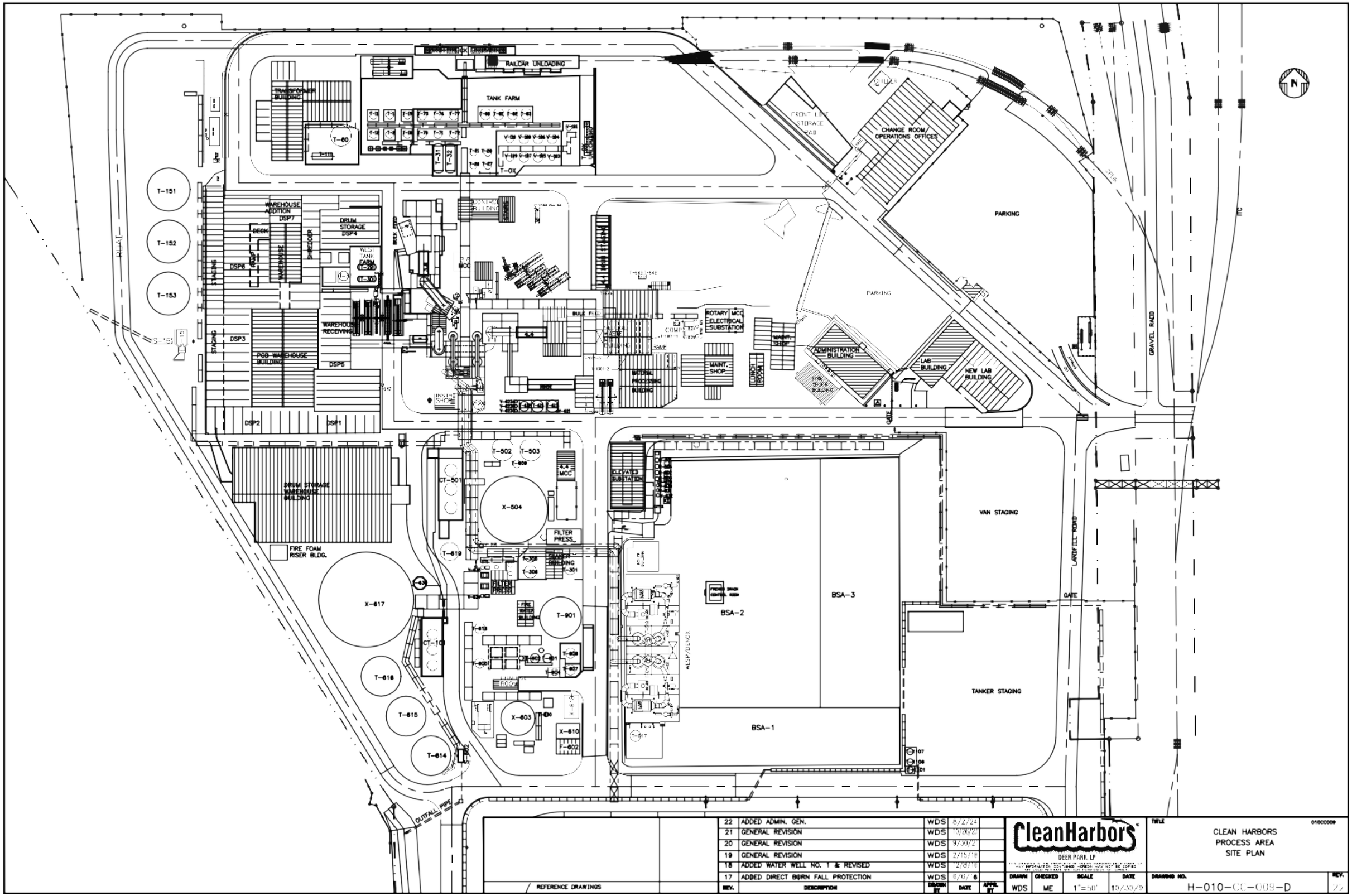
USFWS. 2025c. Eastern Black Rail. https://www.fws.gov/species/eastern-black-rail-laterallus-jamaicensis-jamaicensis

USFWS. 2025d. National Wetlands Inventory. https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/

USFWS. 2025e. Whooping Crane *(Grus americana)*. USFWS ECOS Environmental Conservation Online System; Conserving the Nature of America website: https://ecos.fws.gov/ecp/species/758

World Health Organization. Regional Office for Europe. (2000). Air quality guidelines for Europe, 2nd ed. World Health Organization. Regional Office for Europe. Retrieved from: https://apps.who.int/iris/handle/10665/107335

Appendix A



REV.	DESCRIPTION	DRAWN BY	DATE	APPR. BY
22	ADDED ADMIN. GEN.	WDS	5/2/24	
21	GENERAL REVISION	WDS	10/26/22	
20	GENERAL REVISION	WDS	9/30/22	
19	GENERAL REVISION	WDS	2/15/19	
18	ADDED WATER WELL NO. 1 & REVISED	WDS	2/8/19	
17	ADDED DIRECT BURN FALL PROTECTION	WDS	8/6/18	

REFERENCE DRAWINGS

CleanHarbors
DEER PARK, LP

DRAWN	CHECKED	SCALE	DATE
WDS	ME	1"=60'	10/30/09

TITLE 010CC009

CLEAN HARBORS
PROCESS AREA
SITE PLAN

DRAWING NO. H-010-CC-009-D REV. 22

Appendix B

IPaC U.S. Fish & Wildlife Service

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Harris County, Texas

Local office

Texas Coastal & Central Plains Esfo

- (281) 286-8282
- (281) 488-5882

MAILING ADDRESS

17629 El Camino Real, Suite 211
Houston, TX 77058-3051

PHYSICAL ADDRESS
17629 El Camino Real
Houston, TX 77058-3051

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Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Tricolored Bat Perimyotis subflavus	Proposed Endangered

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/10515

Birds

NAME	STATUS
Eastern Black Rail Laterallus jamaicensis ssp. jamaicensis	Threatened

Wherever found

No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/10477

Piping Plover Charadrius melodus — Threatened

This species only needs to be considered if the following condition applies:

- Wind related projects within migratory route.

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/6039

Rufa Red Knot Calidris canutus rufa — Threatened

Wherever found

This species only needs to be considered if the following condition applies:

- Wind related projects within migratory route.

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/1864

Whooping Crane Grus americana — Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
https://ecos.fws.gov/ecp/species/758

Reptiles

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NAME	STATUS

NAME	STATUS
Alligator Snapping Turtle Macrochelys temminckii Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4658	Proposed Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

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Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their nests, should follow appropriate regulations and implement required avoidance and minimization measures, as described in the various links on this page.

The data in this location indicates that no eagles have been observed in this area. This does not mean eagles are not present in your project area, especially if the area is difficult to survey. Please review the 'Steps to Take When No Results Are Returned' section of the Supplemental Information on Migratory Birds and Eagles document to determine if your project is in a poorly surveyed area. If it is, you may need to rely on other resources to determine if eagles may be present (e.g. your local FWS field office, state surveys, your own surveys).

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Bald and Golden Eagle information is not available at this time

Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

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Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (FWS). The incidental take of migratory birds is the injury or death of birds that results from, but is not the purpose, of an activity. The FWS interprets the MBTA to prohibit incidental take.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management

- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Migratory bird information is not available at this time

Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that

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subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

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Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

NOT FOR CONSULTATION

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

NOT FOR CONSULTATION

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Appendix C

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands CHDP

May 19, 2025

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270

May 19, 2025

Memorandum

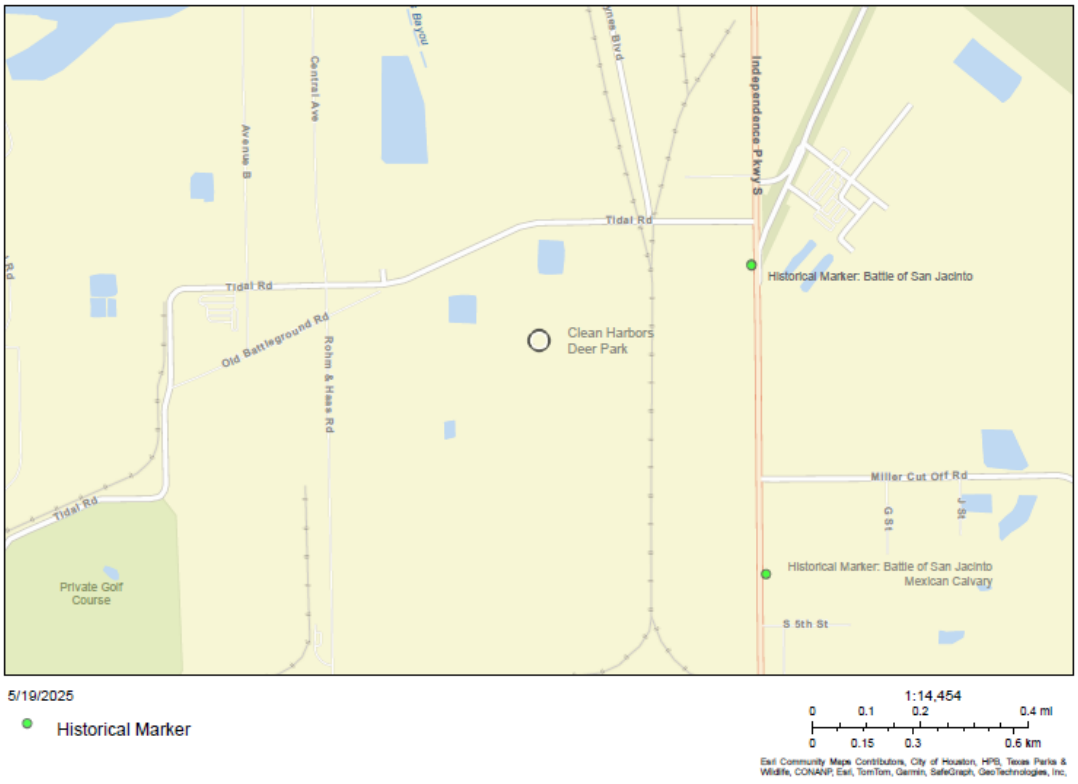
SUBJECT: Documentation of NHPA Section 106 Determination
Clean Harbors Deer Park Facility
EPA RCRA ID No. TXD055141378

FROM: Lisa Schaub
Life Scientist
RCRA Corrective Action (LCR-RC)

THROUGH: Laurie King
Chief, RCRA Corrective Action Section (LCR-RC)

TO: RCRA File

Based on a review of the draft permit for commercial storage and high-temperature incineration of polychlorinated biphenyl waste for the above-referenced facility and the map of known historical resources in the area via the Texas Historical Commission's Texas Historic Sites Atlas, permit approval will have no effect on historic properties. Approving the permit will enable continued storage and incineration of wastes onsite, with the Area of Potential Effect being the subject property, whereas the Historic Site Atlas indicates no historic properties in the immediate area, only historical markers.



cc: Harry Shah, LCR-RP
Jay Przyborski, ORCD
Sunita Baniya, LCR-RP