VERIFICATION OF RECEIPT

The undersigned verifies that a copy of the public notice has been received for the facility referenced below:

Re: THE FINAL HAZARDOUS WASTE OPERATING PERMIT RENEWAL
THE DOW CHEMICAL COMPANY, LOUISIANA OPERATIONS, PLAQUEMINE FACILITY
PLAQUEMINE, IBERVILLE PARISH
AGENCY INTEREST NO AI1409, PERMIT NO. LAD008187080-OP-1-RN-1, PER19980003

FOR THE Waste GROUP: Marie G. for Keith W.

By: _____ Date: _____

From: Laura A.

BOBBY JINDAL
GOVERNOR

HAROLD LEGGETT, PH.D.
SECRETARY

State of Louisiana

DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL SERVICES

Ms. Lisa Perry
EH&S
The Dow Chemical Company, Louisiana Operations
21255 LA Hwy 1
Plaquemine, LA 70765-0150

RE: Final Hazardous Waste Operating Renewal Permit
The Dow Chemical Company (Dow) – Plaquemine Facility
AI#1409 / LAD 008 187 080 / PER19980003

Dear Ms. Perry:

Attached is Dow's copy of the final hazardous waste operating renewal permit for Dow's Plaquemine Facility, LAD008187080-OP-RN-1, which contains language pertaining to the operation of hazardous waste storage tanks, container storage areas, thermal treatment units, and the Block 80 Hazardous Waste Landfill. The final hazardous waste operating renewal permit also contains language governing the post-closure care of the Northwest Landfill/Corrective Action Management Unit (NWLF/CAMU). The NWLF/CAMU was previously permitted under a hazardous waste CAMU permit (LAD008187080-CAMU-1). If the final permit is not appealed, the CAMU permit will be terminated.

In accordance with Louisiana Revised Statute (La. R.S.) 30:2024, the Permittee may file with the Secretary a request for hearing no later than thirty (30) days after the notice of the action is served. Under La. R.S. 30:2050.21, any person aggrieved by a final permit action may appeal to the Nineteenth Judicial Court within thirty (30) days after the notice of the action has been given.

Please reference the Agency Interest Number (1409), EPA ID Number (LAD008187080), and Permit Activity Number 19980003 on all future correspondence pertaining to this matter. If you have any questions, please contact Mr. Keith R. Williams of the Waste Services Section at (225) 219-3011 or Ms. Soumaya Ghosn of the Public Participation Group at (225) 219-3276.

Sincerely,

Thomas F. Harris
Administrator
Waste Permits Division

krw

Attachment

c: Kishor Fruitwala – EPA Region 6

PART A
APPLICATION

Form Approved. OMB No. 2050-0034 Expires 10/31/99
GSA No. 0748-EPA-01

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA I.D. Number (Enter from page 1)	Secondary ID Number (Enter from page 1)
LAD008187080	

VII. Operator Information (See Instructions)

Name of Operator	
THE DOW CHEMICAL COMPANY	
Street or P.O. Box	
PO BOX 150	
City or Town	State / ZIP Code
PLAQUEMINE	LA 70765-0150
Phone Number (Area Code and Number)	B. Operator Type / C. Change of Operator Indicator / Date Changed (Month Day Year)
225-353-6128	P / Yes [ ] No [X]

VIII. Facility Owner (See Instructions)

A. Name of Facility's Legal Owner	
THE DOW CHEMICAL COMPANY	
Street or P.O. Box	
ABBOTT ROAD	
City or Town	State / ZIP Code
MIDLAND	MI 48674-
Phone Number (Area Code and Number)	B. Owner Type / C. Change of Owner Indicator / Date Changed (Month Day Year)
517-638-8800	P / Yes [ ] No [X]

IX. SIC Codes (4-digit, in order of significance)

Primary		Secondary	
2812	(Description) CHLORINE/CAUSTIC	2869	(Description) HYDROCARBONS
Secondary		**Secondary**	
2821	(Description) POLYETHYLENE	2869	(Description) CHLORINATED HYDROCARBONS

X. Other Environmental Permits (See Instructions)

A. Permit Type (Enter code)	B. Permit Number	C. Description

Form Approved. OMB No. 2050-0034 Expires 10/31/99
GSA No. 0248-EPA-OT

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA I.D. Number (Enter from page 1)	Secondary ID Number (Enter from page 1)
L A D 0 0 8 1 8 7 0 8 0	

XI. Nature of Business (Provide a brief description)

INTEGRATED PRODUCTION OF CHLORINE, SODIUM HYDROXIDE, ELECTRIC POWER, ETHYLENE, PROPYLENE, CHLORINATED PARAFINS, POLYETHYLENE, CHLORINATED POLYETHYLENE, ETHANOLAMINES, BENZENE, VINYL CHLORIDE, SUBSTITUTED CELLULOSE, ETHYLENE OXIDE, PROPYLENE OXIDE, GLYCOLS, GLYCOL ETHERS, STYRENIC BLOCK COPOLYMERS.

XII. Process Codes and Design Capacities

A. PROCESS CODE - *Enter the code from the list of process codes below that best describes each process to be used at the facility. Thirteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), describe the process (including its design capacity) in the space provided in Item XIII.*

B. PROCESS DESIGN CAPACITY - *For each code entered in column A, enter the capacity of the process.*
1. AMOUNT - *Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.*
2. UNIT OF MEASURE - *For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.*

C. PROCESS TOTAL NUMBER OF UNITS - *Enter the total number of units used with the corresponding process code.*

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	Disposal:	
D79	Underground Injection	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet or Hectare-meter
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment	Gallons or Liters
D99	Other Storage	Any Unit of Measure Listed Below
	Storage:	
S01	Container (Barrel, Drum, Etc.)	Gallons or Liters
S02	Tank	Gallons or Liters
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment	Gallons or Liters
S05	Drip Pad	Gallons or Liters
S06	Containment Building	Cubic Yards or Cubic Meters
S99	Other Disposal	Any Unit of Measure Listed Below
	Treatment:	
T01	Tank	Gallons Per Day or Liters Per Day
T02	Surface Impoundment	Gallons Per Day or Liters Per Day
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; or Btu's Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
T80	Boiler	Gallons or Liters
T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
T82	Lime Kiln	
T83	Aggregate Kiln	
T84	Phosphate Kiln	
T85	Coke Oven	
T86	Blast Furnace	
T87	Smelting, Melting, Or Refining Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
T88	Titanium Dioxide Chloride Process Oxidation Reactor	
T89	Methane Reforming Furnace	
T90	Pulping Liquor Recovery Furnace	
T91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid	
T92	Halogen Acid Furnaces	
T93	Other Industrial Furnaces Listed in 40 CFR §260.10	
T94	Containment Building	Cubic Yards or Cubic Meters
	Miscellaneous (Subpart X):	
X01	Open Burning/Open Detonation	Any Unit of Measure Listed Below
X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; or Kilograms Per Hour
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
X04	Geologic Repository	Cubic Yards or Cubic Meters
X99	Other Subpart X	Any Unit of Measure Listed Below

UNIT OF MEASURE	UNIT OF MEASURE CODE
Gallons	G
Gallons Per Hour	E
Gallons Per Day	U
Liters	L
Liters Per Hour	H
Liters Per Day	V
Short Tons Per Hour	D
Metric Tons Per Hour	W
Short Tons Per Day	N
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	R
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu's Per Hour	I

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GSA No. 0249-EPA-01

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA I.D. Number (Enter from page 1)	Secondary ID Number (Enter from page 1)
L A D 0 0 8 1 8 7 0 8 0	

XII. Process Codes and Design Capabilities (Continued)

EXAMPLE FOR COMPLETING ITEM XII (shown in line number X-1 below): A facility has a storage tank, which can hold 533,788 gallons.

Line Number		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY 1. Amount (Specify)	2. Unit Of Measure (Enter code)	C. Process Total Number Of Units	For Official Use Only
X	1	S	0	2	5 3 3 7 8 8	G	0 0 1	
	1	S	0	1	2 2 2 , 0 0 0 *	G	0 0 5	
	2	S	0	2	1 8 4 , 5 8 9	G	0 1 4	
	3	T	0	3	1 0 6 , 0 0 0 , 0 0 0	I	0 0 2	
	4	D	8	0	1 6 8 , 2 7 8	Y	0 0 2	
	5	T	8	0	1 5 0 , 0 0 0 , 0 0 0	I	0 0 4	
	6							
	7				*capacity for wastes containing			
	8				free liquids			
	9							
	10							
	11							
	12							
	13							

NOTE: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item XIII.

XIII. Other Processes (Follow instructions from Item XII for D99, S99, T04 and X99 process codes)

Line Number (Enter the line seq. w/XII)		A. Process Code (From list above)			B. PROCESS DESIGN CAPACITY 1. Amount (Specify)	2. Unit Of Measure (Enter code)	C. Process Total Number Of Units	D. Description Of Process
X	1	T	0	4				In-situ Vitrification
	1							
	2							
	3							
	4							

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GSA No. 0248-EPA-OT

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EPA I.D. Number (Enter from page 1)												Secondary ID Number (Enter from page 1)
L	A	D	0	0	8	1	8	7	0	8	0	

XIV. Description of Hazardous Wastes

A. EPA HAZARDOUS WASTE NUMBER - Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR, Part 261 Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item XII A. on page 3 to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item XII A. on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. Enter the first two as described above.
2. Enter "000" in the extreme right box of Item XIV-D(1).
3. Enter in the space provided on page 7, Item XIV-E, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form (D.(2)).

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.
3. Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM XIV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number	A. EPA HAZARD WASTE NO. (Enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESS (1) PROCESS CODES (Enter)	D. PROCESS (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
X 1	K 0 5 4	900	P	T 0 3 D 8 0	
X 2	D 0 0 2	400	P	T 0 3 D 8 0	
X 3	D 0 0 1	100	P	T 0 3 D 8 0	
X 4	D 0 0 2				Included With Above

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GSA No. 0244-EPA-OT

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EPA I.D. Number (Enter from page 1): L A D 0 0 8 1 8 7 0 8 0

Secondary ID Number (Enter from page 1):

XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	S E E	TABLE	2	S E E T A	BLE 2
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					

Form Approved, OMB No 2050-0034 Expires 10/31/99
GSA No. 0248-EPA-OT

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

EPA I.D. Number (Enter from page 1)	Secondary ID Number (Enter from page 1)
A D 0 0 8 1 8 7 0 8 0	

XV. Map

Attach to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (See instructions for more detail).

XVII. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

XVIII. Certification(s)

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

Owner Signature	Date Signed 12/7/04
Name and Official Title (Type or print) LEE TRUSTY, VICE PRESIDENT & GENERAL MANAGER, LOUISIANA OPERATIONS	
Owner Signature	Date Signed
Name and Official Title (Type or print)	
Operator Signature	Date Signed
Name and Official Title (Type or print)	
Operator Signature	Date Signed
Name and Official Title (Type or print)	

XIX. Comments

Note: Mail completed form to the appropriate EPA Regional or State Office. (Refer to instructions for more information)

Attachment A - Part A Application Form

Current Permit	Permit Number	Permit Date Issued
Air Permits		
LHC II	2255	4/8/1994
VINYL II GROUNDWATER REMEDIATION	2301	3/3/1995
SOLVENTS GROUNDWATER TANK	2328	7/5/1995
TANK CAR/TANK TRUCK CLEANING	2235	5/6/1996
CMP	2037 (M-4)	9/6/1996
CPE	2200-V0	10/10/1999
CMP (Small Source Permit)	2702	1/26/2001
GLYCOL II	2203 (M-1)	2/5/2001
CMP THROX	1902 (M-2)	2/23/2001
POLY A	2008-V1	3/2/2001
GLYCOL 1	2007-V1	5/9/2001
VINYL II TTU	2285-V1	12/21/2001
POLY C	2048-V0	3/1/2002
POWER & UTILITIES Fuel Switching	2267-V1	5/8/2002
GLYCOL 1 THROX Initial Title V	2794-V0	5/24/2002
CHLOR ALKALI III	2759-V0	8/27/2002
LHC III Major Modification	2024-V2	10/29/2002
Environmental Operations	2190 (M-1)	12/2/2002
Polyethylene B Minor Modification	2179-V3	1/17/2003
VECTOR SBC Minor Modification	2025-V1	5/14/2003
Chlorine/Cell Service Minor Modification	2573-V3	8/22/2003
Cellulose Minor Modification	2227-V3	1/13/2004
Solvents/EDC I Title V	2188-V0	1/30/2004
VINYL II Minor Modification	2665-V6	4/2/2004
Solid Waste Permits		
Block 80 Non-Hazardous Landfill	P-0069	Sep-89
Facility RCRA permit	LAD008187080	19-May-89
Water		
Division NPDES	LA0003301	12-Oct-04
Hydrostatic Test Waters	LAG679014	19-Feb-03
Multisector General Stormwater	LAR05N128	24-Oct-01
Stormwater for Construction Activities	LAR10C623	7-Sep-04

Table 2 of Part A Application

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. Processes (1) Process Codes (Enter code)			(2) Process Description (If a code is not entered in D(1))
1	D001	4,277	T	S01	S02	T03	T80, D80
2	D002	12,817	T	S01	S02	T03	T80, D80
3	D003	144.0	T	S01	S02	T03	T80, D80
4	D004	<1	T	S01	S02	T03	T80, D80
5	D005	<1	T	S01	S02	T03	T80, D80
6	D006	<1	T	S01	S02	T03	T80, D80
7	D007	<1	T	S01	S02	T03	T80, D80
8	D008	<1	T	S01	S02	T03	T80, D80
9	D009	<1	T	S01	S02	T03	T80, D80
10	D010	<1	T	S01	S02	T03	T80, D80
11	D011	<1	T	S01	S02	T03	T80, D80
12	D012	<1	T	S01	S02	T03	T80, D80
13	D013	<1	T	S01	S02	T03	T80, D80
14	D014	<1	T	S01	S02	T03	T80, D80
15	D015	<1	T	S01	S02	T03	T80, D80
16	D016	<1	T	S01	S02	T03	T80, D80
17	D017	<1	T	S01	S02	T03	T80, D80
18	D018	29.0	T	S01	S02	T03	T80, D80
19	D019	93.0	T	S01	S02	T03	T80, D80
20	D020	<1	T	S01	S02	T03	T80, D80
21	D021	2.0	T	S01	S02	T03	T80, D80
22	D022	37.0	T	S01	S02	T03	T80, D80
23	D023	<1	T	S01	S02	T03	T80, D80
24	D024	<1	T	S01	S02	T03	T80, D80
25	D025	<1	T	S01	S02	T03	T80, D80
26	D026	<1	T	S01	S02	T03	T80, D80
27	D027	23	T	S01	S02	T03	T80, D80
28	D028	139.0	T	S01	S02	T03	T80, D80
29	D029	4.0	T	S01	S02	T03	T80, D80
30	D030	<1	T	S01	S02	T03	T80, D80
31	D031	<1	T	S01	S02	T03	T80, D80
32	D032	41.0	T	S01	S02	T03	T80, D80
33	D033	48.0	T	S01	S02	T03	T80, D80

Table 2 of part A Application (Cont.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. Processes			
				(1) Process Codes (Enter code)			(2) Process Description (If a code is not entered in D(1))
34	D034	47.0	T	S01	S02	T03	T80, D80
35	D035	5.0	T	S01	S02	T03	T80, D80
36	D036	<1	T	S01	S02	T03	T80, D80
37	D037	<1	T	S01	S02	T03	T80, D80
38	D038	<1	T	S01	S02	T03	T80, D80
39	D039	32.0	T	S01	S02	T03	T80, D80
40	D040	128.0	T	S01	S02	T03	T80, D80
41	D041	<1	T	S01	S02	T03	T80, D80
42	D042	<1	T	S01	S02	T03	T80, D80
43	D043	<1	T	S01	S02	T03	T80, D80
44	F001	512.0	T	S01	S02	T03	T80, D80
45	F002	349.0	T	S01	S02	T03	T80, D80
46	F003	31.0	T	S01	S02	T03	T80, D80
47	F004	<1	T	S01	S02	T03	T80, D80
48	F005	110.0	T	S01	S02	T03	T80, D80
49	F024	3,271	T	S01	S02	T03	T80, D80
50	F025	<1	T	S01	S02	T03	T80, D80
51	F039	2	T	S01	S02	T03	T80, D80
52	K016	1,033	T	S01	S02	T03	T80, D80
53	K017	<1	T	S01	S02	T03	T80, D80
54	K018	<1	T	S01	S02	T03	T80, D80
55	K019	3,832	T	S01	S02	T03	T80, D80
56	K020	4,030	T	S01	S02	T03	T80, D80
57	K022	<1	T	S01	S02	T03	T80, D80
58	K027	<1	T	S01	S02	T03	T80, D80
59	K028	5.4	T	S01	S02	T03	T80, D80
60	K029	<1	T	S01	S02	T03	T80, D80
61	K030	1,418	T	S01	S02	T03	T80, D80
62	K073	615.0	T	S01	S02	T03	T80, D80
63	K095	<1	T	S01	S02	T03	T80, D80
64	K096	<1	T	S01	S02	T03	T80, D80
65	K116	<1	T	S01	S02	T03	T80, D80
66	K174	<1	T	S01	S02	T03	T80, D80

Table 2 of Part A Application (Cont.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. Processes			
				(1) Process Codes (Enter code)			(2) Process Description (If a code is not entered in D(1))
67	P001	<1	T	S01	S02	T03	T80, D80
68	P002	<1	T	S01	S02	T03	T80, D80
69	P003	<1	T	S01	S02	T03	T80, D80
70	P005	<1	T	S01	S02	T03	T80, D80
71	P006	<1	T	S01	S02	T03	T80, D80
72	P007	<1	T	S01	S02	T03	T80, D80
73	P008	<1	T	S01	S02	T03	T80, D80
74	P009	<1	T	S01	S02	T03	T80, D80
75	P014	<1	T	S01	S02	T03	T80, D80
76	P016	<1	T	S01	S02	T03	T80, D80
77	P017	<1	T	S01	S02	T03	T80, D80
78	P018	<1	T	S01	S02	T03	T80, D80
79	P021	<1	T	S01	S02	T03	T80, D80
80	P022	<1	T	S01	S02	T03	T80, D80
81	P023	<1	T	S01	S02	T03	T80, D80
82	P026	<1	T	S01	S02	T03	T80, D80
83	P027	<1	T	S01	S02	T03	T80, D80
84	P028	<1	T	S01	S02	T03	T80, D80
85	P030	<1	T	S01	S02	T03	T80, D80
86	P031	<1	T	S01	S02	T03	T80, D80
87	P033	<1	T	S01	S02	T03	T80, D80
88	P034	<1	T	S01	S02	T03	T80, D80
89	P040	<1	T	S01	S02	T03	T80, D80
90	P041	<1	T	S01	S02	T03	T80, D80
91	P042	<1	T	S01	S02	T03	T80, D80
92	P043	<1	T	S01	S02	T03	T80, D80
93	P044	<1	T	S01	S02	T03	T80, D80
94	P045	<1	T	S01	S02	T03	T80, D80
95	P046	<1	T	S01	S02	T03	T80, D80
96	P047	<1	T	S01	S02	T03	T80, D80
97	P048	<1	T	S01	S02	T03	T80, D80
98	P049	<1	T	S01	S02	T03	T80, D80
99	P054	<1	T	S01	S02	T03	T80, D80

Table 2 of Part A Application (Cont.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste[1]	C. Unit of Measure (Enter code)	D. Processes			
				(1) Process Codes (Enter code)			(2) Process Description (If a code is not entered in D(1))
100	P057	<1	T	S01	S02	T03	T80, D80
101	P058	<1	T	S01	S02	T03	T80, D80
102	P062	<1	T	S01	S02	T03	T80, D80
103	P063	<1	T	S01	S02	T03	T80, D80
104	P064	<1	T	S01	S02	T03	T80, D80
105	P066	<1	T	S01	S02	T03	T80, D80
106	P067	<1	T	S01	S02	T03	T80, D80
107	P068	<1	T	S01	S02	T03	T80, D80
108	P069	<1	T	S01	S02	T03	T80, D80
109	P070	<1	T	S01	S02	T03	T80, D80
110	P072	<1	T	S01	S02	T03	T80, D80
111	P075	<1	T	S01	S02	T03	T80, D80
112	P081	<1	T	S01	S02	T03	T80, D80
113	P084	<1	T	S01	S02	T03	T80, D80
114	P085	<1	T	S01	S02	T03	T80, D80
115	P087	<1	T	S01	S02	T03	T80, D80
116	P088	<1	T	S01	S02	T03	T80, D80
117	P093	<1	T	S01	S02	T03	T80, D80
118	P095	<1	T	S01	S02	T03	T80, D80
119	P096	<1	T	S01	S02	T03	T80, D80
120	P098	<1	T	S01	S02	T03	T80, D80
121	P102	<1	T	S01	S02	T03	T80, D80
122	P105	<1	T	S01	S02	T03	T80, D80
123	P106	<1	T	S01	S02	T03	T80, D80
124	P108	<1	T	S01	S02	T03	T80, D80
125	P109	<1	T	S01	S02	T03	T80, D80
126	P111	<1	T	S01	S02	T03	T80, D80
127	P112	<1	T	S01	S02	T03	T80, D80
128	P116	<1	T	S01	S02	T03	T80, D80
129	P118	<1	T	S01	S02	T03	T80, D80
130	P121	<1	T	S01	S02	T03	T80, D80
131	P122	<1	T	S01	S02	T03	T80, D80
132	U001	<1	T	S01	S02	T03	T80, D80

Table 2 of Part A Application (Cont.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. Processes (1) Process Codes (Enter code)			(2) Process Description (If a code is not entered in D(1))
133	U002	<1	T	S01	S02	T03	T80, D80
134	U003	<1	T	S01	S02	T03	T80, D80
135	U004	<1	T	S01	S02	T03	T80, D80
136	U005	<1	T	S01	S02	T03	T80, D80
137	U006	<1	T	S01	S02	T03	T80, D80
138	U007	<1	T	S01	S02	T03	T80, D80
139	U008	<1	T	S01	S02	T03	T80, D80
140	U009	<1	T	S01	S02	T03	T80, D80
141	U010	<1	T	S01	S02	T03	T80, D80
142	U011	<1	T	S01	S02	T03	T80, D80
143	U012	<1	T	S01	S02	T03	T80, D80
144	U014	<1	T	S01	S02	T03	T80, D80
145	U015	<1	T	S01	S02	T03	T80, D80
146	U016	<1	T	S01	S02	T03	T80, D80
147	U017	<1	T	S01	S02	T03	T80, D80
148	U018	<1	T	S01	S02	T03	T80, D80
149	U019	<1	T	S01	S02	T03	T80, D80
150	U020	<1	T	S01	S02	T03	T80, D80
151	U021	<1	T	S01	S02	T03	T80, D80
152	U022	<1	T	S01	S02	T03	T80, D80
153	U023	<1	T	S01	S02	T03	T80, D80
154	U025	<1	T	S01	S02	T03	T80, D80
155	U026	<1	T	S01	S02	T03	T80, D80
156	U027	<1	T	S01	S02	T03	T80, D80
157	U028	<1	T	S01	S02	T03	T80, D80
158	U029	<1	T	S01	S02	T03	T80, D80
159	U031	<1	T	S01	S02	T03	T80, D80
160	U033	<1	T	S01	S02	T03	T80, D80
161	U034	<1	T	S01	S02	T03	T80, D80
162	U035	<1	T	S01	S02	T03	T80, D80
163	U037	<1	T	S01	S02	T03	T80, D80
164	U038	<1	T	S01	S02	T03	T80, D80
165	U039	<1	T	S01	S02	T03	T80, D80

Table 2 of Part A Application (Cont.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste[1]	C. Unit of Measure (Enter code)	D. Processes			
				(1) Process Codes (Enter code)			(2) Process Description (If a code is not entered in D(1))
166	U041	<1	T	S01	S02	T03	T80, D80
167	U042	<1	T	S01	S02	T03	T80, D80
168	U043	<1	T	S01	S02	T03	T80, D80
169	U044	172	T	S01	S02	T03	T80, D80
170	U045	25.0	T	S01	S02	T03	T80, D80
171	U046	<1	T	S01	S02	T03	T80, D80
172	U047	<1	T	S01	S02	T03	T80, D80
173	U048	<1	T	S01	S02	T03	T80, D80
174	U049	<1	T	S01	S02	T03	T80, D80
175	U050	<1	T	S01	S02	T03	T80, D80
176	U051	<1	T	S01	S02	T03	T80, D80
177	U052	<1	T	S01	S02	T03	T80, D80
178	U053	<1	T	S01	S02	T03	T80, D80
179	U055	<1	T	S01	S02	T03	T80, D80
180	U056	6	T	S01	S02	T03	T80, D80
181	U057	<1	T	S01	S02	T03	T80, D80
182	U058	<1	T	S01	S02	T03	T80, D80
183	U059	<1	T	S01	S02	T03	T80, D80
184	U062	<1	T	S01	S02	T03	T80, D80
185	U063	<1	T	S01	S02	T03	T80, D80
186	U064	<1	T	S01	S02	T03	T80, D80
187	U066	<1	T	S01	S02	T03	T80, D80
188	U067	1,188	T	S01	S02	T03	T80, D80
189	U068	<1	T	S01	S02	T03	T80, D80
190	U069	<1	T	S01	S02	T03	T80, D80
191	U070	<1	T	S01	S02	T03	T80, D80
192	U071	<1	T	S01	S02	T03	T80, D80
193	U072	<1	T	S01	S02	T03	T80, D80
194	U073	<1	T	S01	S02	T03	T80, D80
195	U074	<1	T	S01	S02	T03	T80, D80
196	U075	<1	T	S01	S02	T03	T80, D80
197	U076	<1	T	S01	S02	T03	T80, D80
198	U077	281	T	S01	S02	T03	T80, D80

Table 2 of Part A Application (Cont.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste[1]	C. Unit of Measure (Enter code)	D. Processes			
				(1) Process Codes (Enter code)			(2) Process Description (If a code is not entered in D(1))
199	U078	<1	T	S01	S02	T03	T80, D80
200	U079	<1	T	S01	S02	T03	T80, D80
201	U080	<1	T	S01	S02	T03	T80, D80
202	U081	<1	T	S01	S02	T03	T80, D80
203	U082	<1	T	S01	S02	T03	T80, D80
204	U083	25.0	T	S01	S02	T03	T80, D80
205	U084	8.9	T	S01	S02	T03	T80, D80
206	U085	<1	T	S01	S02	T03	T80, D80
207	U086	<1	T	S01	S02	T03	T80, D80
208	U087	<1	T	S01	S02	T03	T80, D80
209	U088	<1	T	S01	S02	T03	T80, D80
210	U089	<1	T	S01	S02	T03	T80, D80
211	U090	<1	T	S01	S02	T03	T80, D80
212	U091	<1	T	S01	S02	T03	T80, D80
213	U092	<1	T	S01	S02	T03	T80, D80
214	U093	<1	T	S01	S02	T03	T80, D80
215	U094	<1	T	S01	S02	T03	T80, D80
216	U095	<1	T	S01	S02	T03	T80, D80
217	U096	<1	T	S01	S02	T03	T80, D80
218	U097	<1	T	S01	S02	T03	T80, D80
219	U098	<1	T	S01	S02	T03	T80, D80
220	U099	<1	T	S01	S02	T03	T80, D80
221	U101	<1	T	S01	S02	T03	T80, D80
222	U102	<1	T	S01	S02	T03	T80, D80
223	U103	<1	T	S01	S02	T03	T80, D80
224	U105	<1	T	S01	S02	T03	T80, D80
225	U107	<1	T	S01	S02	T03	T80, D80
226	U108	<1	T	S01	S02	T03	T80, D80
227	U109	<1	T	S01	S02	T03	T80, D80
228	U110	<1	T	S01	S02	T03	T80, D80
229	U112	<1	T	S01	S02	T03	T80, D80
230	U113	<1	T	S01	S02	T03	T80, D80
231	U114	<1	T	S01	S02	T03	T80, D80

Table 2 of Part A Application (Cont.)

Line Number	EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste[1]	C. Unit of Measure (Enter code)	D. Processes			
				(1) Process Codes (Enter code)			(2) Process Description (If a code is not entered in D(1))
232	U115	<1	T	S01	S02	T03	T80, D80
233	U116	<1	T	S01	S02	T03	T80, D80
234	U117	<1	T	S01	S02	T03	T80, D80
235	U118	<1	T	S01	S02	T03	T80, D80
236	U119	<1	T	S01	S02	T03	T80, D80
237	U120	<1	T	S01	S02	T03	T80, D80
238	U121	<1	T	S01	S02	T03	T80, D80
239	U122	<1	T	S01	S02	T03	T80, D80
240	U123	<1	T	S01	S02	T03	T80, D80
241	U124	<1	T	S01	S02	T03	T80, D80
242	U125	<1	T	S01	S02	T03	T80, D80
243	U126	<1	T	S01	S02	T03	T80, D80
244	U127	<1	T	S01	S02	T03	T80, D80
245	U128	<1	T	S01	S02	T03	T80, D80
246	U130	<1	T	S01	S02	T03	T80, D80
247	U131	<1	T	S01	S02	T03	T80, D80
248	U132	<1	T	S01	S02	T03	T80, D80
249	U133	<1	T	S01	S02	T03	T80, D80
250	U135	<1	T	S01	S02	T03	T80, D80
251	U137	<1	T	S01	S02	T03	T80, D80
252	U140	<1	T	S01	S02	T03	T80, D80
253	U141	<1	T	S01	S02	T03	T80, D80
254	U143	<1	T	S01	S02	T03	T80, D80
255	U144	<1	T	S01	S02	T03	T80, D80
256	U147	<1	T	S01	S02	T03	T80, D80
257	U148	<1	T	S01	S02	T03	T80, D80
258	U149	<1	T	S01	S02	T03	T80, D80
259	U150	<1	T	S01	S02	T03	T80, D80
260	U153	<1	T	S01	S02	T03	T80, D80
261	U154	<1	T	S01	S02	T03	T80, D80
262	U156	<1	T	S01	S02	T03	T80, D80
263	U157	<1	T	S01	S02	T03	T80, D80
264	U158	<1	T	S01	S02	T03	T80, D80

Table 2 of Part A Application (Cont.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste[1]	C. Unit of Measure (Enter code)	D. Processes			
				(1) Process Codes (Enter code)			(2) Process Description (If a code is not entered in D(1))
265	U159	<1	T	S01	S02	T03	T80, D80
266	U160	<1	T	S01	S02	T03	T80, D80
267	U161	<1	T	S01	S02	T03	T80, D80
268	U162	<1	T	S01	S02	T03	T80, D80
269	U163	<1	T	S01	S02	T03	T80, D80
270	U164	<1	T	S01	S02	T03	T80, D80
271	U165	<1	T	S01	S02	T03	T80, D80
272	U166	<1	T	S01	S02	T03	T80, D80
273	U167	<1	T	S01	S02	T03	T80, D80
274	U168	<1	T	S01	S02	T03	T80, D80
275	U169	<1	T	S01	S02	T03	T80, D80
276	U170	<1	T	S01	S02	T03	T80, D80
277	U171	<1	T	S01	S02	T03	T80, D80
278	U172	<1	T	S01	S02	T03	T80, D80
279	U173	<1	T	S01	S02	T03	T80, D80
280	U176	<1	T	S01	S02	T03	T80, D80
281	U177	<1	T	S01	S02	T03	T80, D80
282	U178	<1	T	S01	S02	T03	T80, D80
283	U179	<1	T	S01	S02	T03	T80, D80
284	U180	<1	T	S01	S02	T03	T80, D80
285	U181	<1	T	S01	S02	T03	T80, D80
286	U182	<1	T	S01	S02	T03	T80, D80
287	U183	<1	T	S01	S02	T03	T80, D80
288	U184	<1	T	S01	S02	T03	T80, D80
289	U185	<1	T	S01	S02	T03	T80, D80
290	U186	<1	T	S01	S02	T03	T80, D80
291	U187	<1	T	S01	S02	T03	T80, D80
292	U188	<1	T	S01	S02	T03	T80, D80
293	U189	<1	T	S01	S02	T03	T80, D80
294	U190	<1	T	S01	S02	T03	T80, D80
295	U191	55.8	T	S01	S02	T03	T80, D80
296	U192	<1	T	S01	S02	T03	T80, D80
297	U193	<1	T	S01	S02	T03	T80, D80

Table 2 of Part A Application (Cont.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste[1]	C. Unit of Measure (Enter code)	D. Processes			
				(1) Process Codes (Enter code)			(2) Process Description (If a code is not entered in D(1))
298	U194	<1	T	S01	S02	T03	T80, D80
299	U196	<1	T	S01	S02	T03	T80, D80
300	U197	<1	T	S01	S02	T03	T80, D80
301	U200	<1	T	S01	S02	T03	T80, D80
302	U201	<1	T	S01	S02	T03	T80, D80
303	U202	<1	T	S01	S02	T03	T80, D80
304	U206	<1	T	S01	S02	T03	T80, D80
305	U207	<1	T	S01	S02	T03	T80, D80
306	U208	<1	T	S01	S02	T03	T80, D80
307	U209	<1	T	S01	S02	T03	T80, D80
308	U210	<1	T	S01	S02	T03	T80, D80
309	U211	17.5	T	S01	S02	T03	T80, D80
310	U213	<1	T	S01	S02	T03	T80, D80
311	U218	<1	T	S01	S02	T03	T80, D80
312	U219	<1	T	S01	S02	T03	T80, D80
313	U220	22.0	T	S01	S02	T03	T80, D80
314	U221	<1	T	S01	S02	T03	T80, D80
315	U222	<1	T	S01	S02	T03	T80, D80
316	U223	<1	T	S01	S02	T03	T80, D80
317	U225	<1	T	S01	S02	T03	T80, D80
318	U226	1.8	T	S01	S02	T03	T80, D80
319	U227	2.8	T	S01	S02	T03	T80, D80
320	U228	<1	T	S01	S02	T03	T80, D80
321	U234	<1	T	S01	S02	T03	T80, D80
322	U236	<1	T	S01	S02	T03	T80, D80
323	U237	<1	T	S01	S02	T03	T80, D80
324	U238	<1	T	S01	S02	T03	T80, D80
325	U239	<1	T	S01	S02	T03	T80, D80
326	U240	<1	T	S01	S02	T03	T80, D80
327	U243	<1	T	S01	S02	T03	T80, D80
328	U244	<1	T	S01	S02	T03	T80, D80
329	U246	<1	T	S01	S02	T03	T80, D80
330	U247	<1	T	S01	S02	T03	T80, D80

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Table 2 of Part A Application (Cont.)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste[1]	C. Unit of Measure (Enter code)	D. Processes			
				(1) Process Codes (Enter code)			(2) Process Description (If a code is not entered in D(1))
331	U248	<1	T	S01	S02	T03	T80, D80
332	U249	<1	T	S01	S02	T03	T80, D80
333	U328	<1	T	S01	S02	T03	T80, D80
334	U353	<1	T	S01	S02	T03	T80, D80
335	U359	<1	T	S01	S02	T03	T80, D80

[1] Estimated annual waste quantities are from 1997 (baseline year).

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BODY OF PERMIT

FINAL
HAZARDOUS WASTE OPERATING RENEWAL PERMIT

The Dow Chemical Company – Louisiana Operations
EPA ID# LAD008187080
Agency Interest# 1409

Iberville Parish
Plaquemine, Louisiana
PER19980003
Permit Number LAD008187080-OP-1-RN-1

I. PERMIT PREAMBLE

This permit is issued to The Dow Chemical Company, hereinafter referred to as the Permittee, by the Louisiana Department of Environmental Quality (LDEQ) under authority of the Louisiana Hazardous Waste Control Law, R.S. 30:2171 et seq., and the regulations adopted thereunder.

For the purposes of the permit, "Administrative Authority" shall mean the Secretary of the Department of Environmental Quality, or his/her designee.

This permit is based on information submitted in the permit application, and all subsequent amendments, and on the applicant's certification that such information is accurate and that all facilities were or will be maintained and operated as specified in the application.

This permit is conditioned upon full compliance with all applicable provisions of the Louisiana Hazardous Waste Control Law, R.S. 30:2171 et. Seq., and the regulations adopted thereunder.

GLOSSARY OF TERMS

For the purpose of this Permit, terms used herein shall have the same meaning as those in LAC 33:V.Subpart 1 unless the context of use in this Permit clearly indicates otherwise. Where terms are not otherwise defined, the meaning otherwise associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

"Administrative Authority" means the Secretary of the Department of Environmental Quality or his designee or the appropriate assistant secretary or his designee.

"Application" refers to the RCRA Part B Permit Application and subsequent amendments submitted by the Permittee for obtaining a Permit.

"Area of Concern" (AOC) means any discernable unit or area, which, in the opinion of the Administrative Authority, may have received solid or hazardous waste or waste containing hazardous constituents at any time. The Administrative Authority may require investigation of the unit to determine if it is a Solid Waste Management Unit (SWMU). If shown to be a SWMU by the investigation, the AOC must be reported by the Permittee as a newly identified SWMU. If the AOC is shown not to be a SWMU by the investigation, the Administrative Authority may determine that no further action is necessary and notify the Permittee in writing.

"Area of Investigation" (AOI) is a zone contiguous to and including impacted media defined vertically and horizontally by the presence of one or more constituents in concentrations exceeding the limiting SS, MO-1 RS, or MO-2 RS (depending on the option being implemented).

"Beneficial Resource" describes a natural resource that is useful to human and ecological receptors. The state may establish statutes or regulations that identify certain environmental components, such as specific ground water or surface water sources, as a "Special Beneficial Resource," or "Designated Beneficial Resource." The beneficial resource then may be entitled to greater protection from contamination.

"Constituents of Concern" (COC) means the COPCs that pose a significant risk.

"Constituents of Potential Concern" (COPC) means chemicals from hazardous waste and hazardous waste constituents that are potentially site related and have data of quality for use in the Screen or a site-specific risk assessment. The facility should compile a list of COPCs for each release site based on existing sampling data, waste analysis reports, etc.

"Conceptual Site Model" (CSM) is part of the Data Quality Objective (DQO) process that presents a three-dimensional picture of site conditions at a discrete point in time that conveys what is known about the facility, releases, release mechanisms, contaminant fate and transport,

exposure pathways, potential receptors, and risks. The information for the CSM is documented into six profiles. The CSM evolves as data gaps in the profiles become more complete, and will be refined based upon results of site characterization data. The final CSM is documented in the Risk Management Plan (RMP).

"CWA" means Clean Water Act.

"Corrective Action" is an activity conducted to protect human health and the environment.

"Department" means the Louisiana Department of Environmental Quality.

"Dense Nonaqueous Phase Liquid (DNAPL)" a dense liquid not dissolved in water, commonly referred to as "free product."

"EPA" means the United States Environmental Protection Agency.

"Facility" means, for the purpose of conducting corrective action under LAC 33:V.3322, all the contiguous property under the control of the Permittee.

"HSWA" means the 1984 Hazardous and Solid Waste Amendments to RCRA.

"Hazardous Constituent" means any constituent identified in LAC 33:V.Chapter 31, Table 1, or any constituent identified in LAC 33:V.3325, Table 4.

"LDEQ" means the Louisiana Department of Environmental Quality.

"Light Nonaqueous Phase Liquid (LNAPL)" a light liquid not dissolved in water, commonly referred to as "free product."

"Newly-discovered Release" any release(s) of hazardous waste, including hazardous constituents, in which there is a statistically significant in crease over the background data for the media of concern, during the course of groundwater monitoring, field investigation, environmental auditing, or by other means.

"Operating Record" means written or electronic records of all maintenance, monitoring, inspection, calibration, or performance testing—or other data as may be required—to demonstrate compliance with this Permit, document noncompliance with this Permit, or document actions taken to remedy noncompliance with this Permit. The minimum list of documents that must be included in the operating record is identified at LAC 33:V.1529.B.

"Permittee" means The Dow Chemical Company, 21255 LA Hwy 1, Plaquemine, Iberville Parish, Louisiana.

"RCRA Permit" means the full permit, with RCRA and HSWA portions.

"RFA" means RCRA Facility Assessment.

"RFI" means RCRA Facility Investigation.

"Release" means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping or disposing of hazardous wastes (including hazardous constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents).

"SARA" means Superfund Amendments and Reauthorization Action of 1986.

"Solid Waste Management Unit" (SWMU) means any discernable unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

"Stabilization" is an action taken for the purpose of controlling or abating threats to human health or the environment from releases or preventing or minimizing the further spread of contaminants while long-term remedies are pursued.

If, subsequent to the issuance of this Permit, regulations are promulgated which redefine any of the above terms, the Administrative Authori ty ma y, at its discretion, apply the new definition to this Permit.

All regulating citations are defined as being the regulations in effect on the date of issuance of this permit. New and/or amended regulations are not included as Permit requirements until permit modification procedures as specified in Condition II.C of the permit and LAC 33:V.321 are completed.

II. GENERAL PERMIT CONDITIONS

II.A. DURATION OF PERMIT

This permit is effective as of the date indicated on the accompanying signature page and shall remain in effect for a maximum period of ten (10) years from the effective date, unless suspended, modified, revoked and reissued or terminated for just cause.

II.B. EFFECT OF PERMIT

This permit authorizes the Permittee to store, treat, and dispose hazardous waste in accordance with the conditions of this permit. This permit also authorizes the Permittee to conduct post-closure care activities associated with the Northwest Landfill/Corrective Action Management Unit in accordance with the conditions of this permit and LAC 33:V.Chapter 35 and LAC 33:V.2521. The Permittee is prohibited from any storage, treatment or disposal of hazardous waste not authorized by statute, regulation or this permit. Compliance with this permit, LAC 33:V.Subpart 1 and HSWA, constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA and Chapter 9 of the Louisiana Environmental Quality Act (Act). However, compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under Condition 3013 or Condition 7003 of RCRA, or under Condition 106 (a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) {42 U.S.C. 9606 (a)}.

In accordance with LAC 33:V.307.B and C, issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations.

II.C. PERMIT ACTIONS

Any inaccuracies found in the permit application may be cause for revocation or modification of this permit. The Permittee must inform the Administrative Authority of any deviation from, changes or inaccuracies in the information in the permit application.

The Administrative Authority may also suspend, modify, revoke and reissue, or terminate for cause when necessary to be protective of human health or the environment as specified in 40 CFR 270.41, 270.42, 270.43 or LAC 33:V.309.F, 311.A or 323. The Administrative Authority may modify the permit when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued. The filing of a request for permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of Permittee does not stay the applicability or enforceability of any permit condition.

II.D. SEVERABILITY

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

II.E. DUTIES AND REQUIREMENTS

II.E.1. Duty to Comply

The Permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance may be authorized by an emergency permit, as described in LAC 33:V.701. Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of the LAC 33:V.Subpart 1 and the Environmental Quality Act and is grounds for enforcement action which may include permit termination, permit revocation and reissuance, permit modification, or denial of permit renewal application.

II.E.2. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must reapply for the permit as required by the LAC 33:V.303.N and 309.B. Notification shall be at least 180 calendar days before the permit expires.

II.E.3. Permit Extension

This permit and all conditions herein will remain in effect beyond the permit's expiration date until the Administrative Authority issues a final decision on the re-application, provided the Permittee has submitted a timely, complete new permit application as provided in LAC 33:V.309.B and 315.A.

II.E.4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

II.E.5. Duty to Mitigate

The Permittee shall immediately take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit as required by LAC 33:V.309.D.

II.E.6. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related ancillary equipment) that are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

II.E.7. Duty to Provide Information

The Permittee shall furnish to the Administrative Authority, within a reasonable time, any information which the Administrative Authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Administrative Authority upon request, copies of records required by this permit and in accordance with LAC 33:V.309.H.

II.E.8. Inspection and Entry

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

II.E.8.a. enter upon the Permittee's premises where a regulated activity is located or conducted, or where records must be maintained under the conditions of this permit;

II.E.8.b. have access to and copy, at reasonable times, any records that must be maintained under the conditions of this permit;

II.E.8.c. inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operation regulated or required under this permit; and

II.E.8.d. sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Administrative Authority any substances or parameters at any location.

II.E.9. Sample Monitoring and Records

II.E.9.a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of 40 CFR Part 261. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, "SW-846", latest revision; Manual of Ground Water Quality Sampling Procedures, 1981, EPA-600/2-81-160, as revised; Procedures Manual for Ground Water Monitoring at Solid Waste Disposal Facilities, 1977, EPA-530/SW-611, as revised; or an equivalent method as specified in the attached Waste Analysis Plan referenced in Attachment 1.

II.E.9.b. Records of monitoring information shall include:

II.E.9.b.(1). the date, exact place, and time of sampling or measurements;

II.E.9.b.(2). the name(s) and signature(s) of the individual(s) who performed the sampling or measurements:

II.E.9.b.(3). the date(s) analyses were performed;

II.E.9.b.(4). the name(s) and signature(s) of the individual(s) who performed the analyses;

II.E.9.b.(5). the analytical techniques or methods used;

II.E.9.b.(6). the results of such analyses; and

II.E.9.b.(7). associated quality assurance performance data.

II.E.9.c. Laboratory Quality Assurance/Quality Control

Laboratory data generated by commercial laboratories not accredited under LELAP will not be accepted by the Department. In order to ensure the accuracy, precision, and reliability of data generated for use, the Permittee shall submit a statement, certified as specified in LAC 33:V.513 and included in the annual report, indicating that:

II.E.9.c.(1). any commercial laboratory providing analytical results and test data to the Department required by this permit is accredited by the Louisiana Environmental Laboratory Accreditation Program (LELAP) in accordance with LAC 33:I. Subpart 3, Chapter 45. LAC 33:I.Subpart 3 (Chapters 45-49) provides requirements for the accreditation program. Regulations and a list of labs that have applied

for accreditation are available on the LDEQ website located at: http://www.deq.louisiana.gov/portal/tabid/2412/Default.aspx.

In accordance with LAC 33:V.4501, the requirements for LELAP accreditation applies whenever data is:

- submitted on behalf of a facility;
- required as part of a permit application;
- required by order of the Department;
- required to be included in a monitoring report submitted to the Department;
- required to be submitted by contract; or
- otherwise required by Department regulations.

This includes, but is not limited to, data from RCRA Trial Burns, Risks Burns, Risk Assessments, MACT Comprehensive Performance Tests, and data used for continuing compliance demonstrations.

II.E.9.c.(2). If the Permittee decides to use its own in-house laboratory for test and analysis, the laboratory is not required to be accredited by LELAP. However, the laboratory must maintain quality assurance/quality control procedures onsite.

II.E.9.c.(3). For approval of equivalent testing or analytical methods not previously approved in a plan incorporated by reference in Attachment 1, the Permittee may petition for a regulatory amendment under LAC 33:V.105.I and LAC 33:I.Chapter 9. In cases where an approved methodology for a parameter/analyte is not available or listed, a request to utilize an alternate method shall be submitted to the Administrative Authority for approval. Documentation must be submitted to the LDEQ that will verify that the results obtained from the alternate method are equal to or better than those obtained from EPA-accepted methods, as well as those deemed equivalent by the LDEQ.

II.E.10. Retention of Records

The Permittee shall maintain records through the active life of the facility (including operation, closure and post-closure periods) as required by LAC 33:V.309.J and LAC 33:V.1529.A, B, and C. All records, including plans, must be furnished upon request and made available at all reasonable times as required by LAC 33:V.1529.C. File copies shall be kept for LDEQ Inspection for a period of not less than three years as required by LAC 33:V.317.B.

The Permittee shall, for the life of the permit, maintain records of all data used to complete the application for this permit and any supplemental information submitted under the Louisiana Hazardous Waste Control Law (LA. R.S. 30:2171 et seq.).

II.E.11. Notices of Planned Physical Facility Changes

The Permittee shall give notice to the Administrative Authority, as soon as possible, of any planned physical alterations or additions to the permitted facility, in accordance with LAC 33:V.309.L.1.

II.E.12. Physical Facility after Modification

For a new facility, the Permittee may not treat, store, or dispose of hazardous waste; and for a facility being modified, the Permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility except as provided in LAC 33:V.321.C until:

II.E.12.a. the Permittee has submitted to and received approval from the Administrative Authority, by certified mail or hand delivery, a letter signed by the Permittee and an independent registered professional engineer stating that the unit is complete and has been constructed or modified in compliance with the permit; and

II.E.12.b. the Administrative Authority has inspected the modified unit following a request to make final inspection by the Permittee and finds it is in compliance with the conditions of the permit and all applicable sections of LAC 33:V.Subpart 1, and has issued an Order to Proceed. The Permittee may then commence treatment, storage, or disposal of hazardous waste.

II.E.13. Anticipated Noncompliance

The Permittee shall give advance notice to the Administrative Authority of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

II.E.14. Transfer of Permits

This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to LAC 33:V.309.L.4, 321.B, 321.C.4, and 1531.D and E, as applicable.

II.E.15. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date as required by LAC 33:V.309.L.6.

II.E.16. Emergency Unauthorized Discharge Notification

In accordance with LAC 33:I.3915, in the event of an unauthorized discharge that results in an emergency condition (an emergency condition is any condition which could be reasonably expected to endanger the health and safety of the public, cause significant adverse impact to the land, water, or air environment, or cause severe damage to property), the Permittee shall notify the DPS (Department of Public Safety) 24-hour Louisiana Emergency Hazardous Materials Hotline by telephone at (225) 925-6595 immediately (a reasonable period of time after taking prompt measures to determine the nature, quantity, and potential off-site impact of a release, considering the exigency of the circumstances), but in no case later than one (1) hour after learning of the discharge. The DPS 24-hour Louisiana Emergency Hazardous Materials Hotline will subsequently notify the Department regarding the details of the discharge.

II.E.17. Non-Emergency Unauthorized Discharge Notification

In accordance with LAC 33:I.3917, in the event of an unauthorized discharge that exceeds a reportable quantity specified in LAC 33:I.Chapter 39.Subchapter E but does not result in an emergency condition, the Permittee shall promptly notify the Department within twenty-four (24) hours after learning of the discharge. Notification shall be made to the Office of Environmental Compliance, Emergency and Radiological Services Division, Single Point of Contact (SPOC) in accordance with the procedure and content requirements specified in LAC 33:I.3923.

II.E.18. Unauthorized Discharge to Groundwater Notification

In accordance with LAC 33:I.3919, in the event of an unauthorized discharge resulting in contamination of groundwaters of the state by moving in, into, within or on any saturated subsurface strata, the Permittee shall promptly notify the Department within seven (7) days after learning of the discharge. Notification shall be made to the Office of Environmental Compliance, Emergency and Radiological Services Division, SPOC in accordance with the procedure and content requirements specified in LAC 33:I.3925.

II.E.19. Written Notification Reports for Unauthorized Discharges

The Permittee shall submit written reports to the SPOC for any unauthorized discharges requiring notification under Condition II.E.16 through Condition II.E.18. The written report shall be submitted in accordance with the procedure and content requirements specified in LAC 33:I.3925.

II.E.20. Noncompliance Reporting

The Permittee shall report orally within twenty-four (24) hours any noncompliance with the permit not reported under Condition II.E.16 through Condition II.E.18 that may endanger the human health or the environment. This report shall include at minimum the following information:

II.E.20.a. information concerning the release of any hazardous waste that may endanger public drinking water supplies; and

II.E.20.b. information concerning the release or discharge of any hazardous waste, or of a fire or explosion at the facility, that could threaten the environment or human health outside the facility. The description of the occurrence and its cause shall include:

II.E.20.b.(1). name, address, and telephone number of the owner or operator;

II.E.20.b.(2). name, address, and telephone number of the facility;

II.E.20.b.(3). date, time, and type of incident;

II.E.20.b.(4). name and quantity of materials involved;

II.E.20.b.(5). the extent of injuries, if any;

II.E.20.b.(6). an assessment of actual or potential hazard to the environment and human health outside the facility, where this is applicable; and

II.E.20.b.(7). estimated quantity and disposition of recovered material that resulted from the incident.

II.E.21. Follow-up Written Report of Noncompliance

The Permittee shall provide a written submission within five (5) days after the time the Permittee becomes aware of any noncompliance which may endanger human health or the environment and reported under Condition II.E.20. The written submission shall contain a description of the noncompliance and its cause; the periods of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. If the Administrative Authority waives the requirement, then the Permittee submits a written report within fifteen (15) days after the time the Permittee becomes aware of the circumstances, as required by LAC 33:V.309.L.7.

II.E.22. Other Noncompliance

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, at the time required monitoring reports are submitted. The reports shall contain the information listed in Condition II.E.20.

II.E.23. Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or that it submitted incorrect information in a permit application, or in any report to the Administrative Authority, the Permittee shall promptly submit such facts or information.

II.E.24. Signatory Requirement

All applications, reports or other information submitted to the Administrative Authority shall be signed and certified according to LAC 33:V.507, 509, 511, and 513.

II.E.25. Schedule of Compliance

II.E.25.a. Within one hundred and eighty (180) days of the effective date of this Permit, the Permittee shall submit for review and approval by the Administrative Authority one of the following:

II.E.25.a.(1). A plan for installing impermeable coatings for each permitted tank system designated in Table 7 of this Permit that utilizes a bare concrete external liner system to meet the secondary containment requirement. The plan must contain the following items: 1) engineering specifications for the impermeable coatings and preparation and treatment of joints that will be utilized, including compatibility with the waste being stored; and 2) a proposed schedule for completing the installation of the impermeable coatings; or

II.E.25.a.(2). Information demonstrating that the secondary containment system for each permitted tank system designated in Table 7 of this Permit that utilizes a bare concrete external liner system meets all requirements of LAC 33:V.1907. The submittal must contain documentation including, but not limited to, the following information:

II.E.25.a.(2).a. detailed information on the secondary containment system, including, but not limited to: 1) the design and installation specifications for any concrete joints; 2) the characteristics of any joint sealant used,

including its compatibility with the waste stored in the tank system; and 3) the characteristics of the concrete mix design and any American Concrete Institute or other applicable codes used;

II.E.25.a.(2).b. the physical and chemical characteristics of the waste in the tank system, including its potential for migration and compatibility with the containment system;

II.E.25.a.(2).c. any other factors that influence the quality and mobility of hazardous constituents and the potential for them to migrate through the external liner system to the environment.

II.E.25.b. If the Permittee chooses to comply with Condition II.E.25.a.(1), within thirty (30) days of installing the impermeable coatings discussed in Permit Condition II.E.25.a.(1), the Permittee shall submit an installation inspection report of the impermeable coatings certified by an independent, qualified, Louisiana registered professional engineer.

II.E.25.c. Within thirty (30) days of the effective date of this Permit, the Permittee shall submit updated Financial Assurance information in accordance with LAC 33:V.Chapter 37.

II.E.25.d. Within ninety (90) days of the effective date of this permit, the Permittee must submit whole and complete versions of the following plans in order that they may be incorporated by reference into the permit:

II.E.25.d.(1). Revised Closure Plans that address outstanding comments (provided to the Permittee under separate cover) relating to the Closure Plans currently referenced in Attachment 1 of this permit.

II.E.25.d.(2). Revised Post-Closure Plan that includes all revisions required during the permit application review process and addresses outstanding comments (provided to the Permittee under separate cover) relating to the Post-Closure Plan currently referenced in Attachment 1 of this permit.

II.E.25.d.(3). Revised closure and post-closure cost estimates that address outstanding comments (provided to the Permittee under separate cover) relating to the closure and post-closure cost estimates currently referenced in Attachment 1 of this permit.

II.E.25.d.(4). Revised Groundwater Detection Monitoring Plan that includes all revisions required during the permit application review process and addresses outstanding comments (provided to the Permittee under separate cover) relating to the Groundwater Detection Monitoring Plan (and revisions) referenced in Attachment 1 of this permit.

II.E.25.d.(5). Revised Inspection Plan and Schedule that incorporates all revisions required during the permit application review process relating to the Inspection Plan and Schedule referenced in Attachment 1 of this permit.

II.E.25.d.(6). Revised Personnel Training Plan that incorporates all revisions required during the permit application review process relating to the Personnel Training Plan referenced in Attachment 1 of this permit.

II.E.25.d.(7). Revised landfill operation, design, and material specifications that incorporate all revisions required during the permit application review process as referenced in Attachment 1 of this permit.

II.E.25.e. Within ninety (90) days of the Administrative Authority's Approval of the revised Closure Plans, Post-Closure Plan and closure/post-closure cost estimates submitted by the Permittee in accordance with Conditions II.E.25.b.(1)-(3), the Permittee must submit revised and current financial assurance documentation accounting for the aforementioned approved closure/post-closure cost estimates.

II.E.25.f. Within ninety (90) days of the effective date of this permit, the Permittee must submit material clarifying and justifying the appropriate background concentrations for the naturally occurring groundwater monitoring parameters included in Tables VI-B and VI-C of this permit. The Administrative Authority's outstanding comments pertaining to background concentrations for naturally occurring groundwater monitoring parameters will be provided to the Permittee under separate cover.

II.E.25.g. Within sixty (60) days of the effective date of this permit, the Permittee shall submit a Notice of Intent (NOI) indicating the Permittee intends to utilize the Corrective Action Strategy (CAS), as described in Condition VIII of this permit, to govern corrective action of onsite releases. The NOI shall be submitted in accordance with content requirements specified in Condition VIII.B.1.

II.E.25.h. Within one-hundred and eighty (180) days of the effective date of this permit, the Permittee shall submit the information requested in Condition VIII, Appendix 1 under the heading "Additional SWMU/AOC/Release Area Information or Data to Be Provided by the Permittee". [Note: The information requested under Condition II.E.25.f is not being requested to resolve non-compliance on the part of the Permittee. Rather, this information is being requested to bring resolution to the 1986 RFA prepared for EPA Region VI by A.T. Kearney, Inc. for the Permittee's Plaquemine facility.]

II.E.26. Additional Operating Standards

(RESERVED)

II.E.27. Updated Documents To Be Submitted Prior To Operation

(RESERVED)

II.E.28. Documents To Be Maintained at Facility Site

II.E.28.a. The Permittee shall maintain at the facility, until closure/post-closure is completed and certified by an independent registered professional engineer, the following documents and any amendments, revisions, and modifications to these documents. Any revision or changes shall be submitted with the annual report unless previously submitted.

II.E.28.a.(1). Waste Analysis Plan (WAP) submitted in accordance with LAC 33:V.1519 and approved by the Administrative Authority (see Attachment 1).

II.E.28.a.(2). Personnel Training Plan and the training records as required by LAC 33:V.1515 (see Attachment 1).

II.E.28.a.(3). Contingency Plan submitted in accordance with LAC 33:V.1513 and approved by the Administrative Authority (see Attachment 1).

II.E.28.a.(4). Arrangements with local authorities in accordance with LAC 33:V.1511.G (see Attachment 1).

II.E.28.a.(5). Closure and Post-Closure Plans submitted in accordance with LAC 33:V.3511and 3523 and approved by the Administrative Authority, as well as any post-closure care requirements that may be required initially or through permit modifications in accordance with LAC 33:V.3523 (see Attachment 1).

II.E.28.a.(6). Cost estimate for facility closure, post-closure care, and corrective action submitted in accordance with LAC 33:V.3705, 3709, and 3322.B and C and approved by the Administrative Authority, as well as any post-closure cost estimate that may be required initially or through permit modifications in accordance with LAC 33:V.3709 (see Attachment 1).

II.E.28.a.(7). Operating records and Operations Plans as required by LAC 33:V.1529, 1911.D, and 3005.H.

II.E.28.a.(8). Inspection Plan and schedule developed in accordance with LAC 33:V.517.G and 1509.B and approved by the Administrative Authority (see Attachment 1).

II.E.28.a.(9). Security Plan developed in accordance with LAC 33:V.1507 (see Attachment 1).

II.E.28.a.(10). Groundwater Detection Monitoring Plan developed in accordance with LAC 33:V.Chapter 33 (see Attachment 1).

II.E.28.a.(11). Landfill operational, design, and material specifications for the permitted active and post-closure landfill units referenced in Tables IV-D and IV-E (see Attachment 1).

II.E.28.a.(12). The latest approved version of the "Remediation Plan – Northwest Landfill" (see Attachment 1).

II.E.28.b. All proposed amendments, revisions and modifications to any plan or cost estimates required by this permit shall be submitted to the Administrative Authority for approval. Changes that are considered Class 1 modifications under LAC 33:V.321 and 322 do not require approval by the Administrative Authority.

II.E.29. Annual Report

The Permittee shall submit an annual report covering all hazardous waste units and activities during the previous calendar year as required by LAC 33:V.1529.D.

II.E.30. Manifest

The Permittee shall report manifest discrepancies and un-manifested waste as required by LAC 33:V.309.L.8 and 9.

II.E.31. Emissions

Emissions from any hazardous waste facility shall not violate the Louisiana Air Quality Regulations. If air quality standards are exceeded, the site will follow air regulation protocol.

II.E.32. Water Discharges

Water discharges from any hazardous waste facility shall not violate the Louisiana Water Quality Regulations. If water standards are exceeded, the site will follow water quality regulation protocol.

II.E.33. Non-Listed Hazardous Waste Facilities

This permit is issued for those hazardous waste facilities listed in Condition IV (Permitted Facilities). If the Permittee determines that an un-permitted hazardous waste facility exists, the Permittee must immediately notify the Administrative Authority in accordance with Condition II.E.22 of the General Permit Conditions.

II.E.34. Compliance With Land Disposal Restrictions

The Permittee shall comply with those land disposal restrictions set forth in LA. R.S. 30:2193, all regulations promulgated thereunder, and the HSWA portion of this permit (Conditions VII and VIII).

II.E.35. Establishing Permit Conditions

Permits for facilities with pre-existing groundwater contamination are subject to all limits, conditions, remediation and corrective action programs designated under LAC 33:V.311.D and LAC 33:V.3303.

II.E.36. Obligation for Corrective Action

Owners or operators of hazardous waste management units must have all necessary permits during the active life of the unit and for any period necessary to comply with the corrective action requirements in Condition VIII. The facility is obligated to complete facility-wide corrective action regardless of the operational status of the facility.

II.E.37. Attachments and Documents Incorporated by Reference

All attachments and documents required by this permit, including all plans and schedules, are incorporated, upon approval by the Administrative Authority, into this permit by reference and become an enforceable part of this permit. When applicable, the Permittee must modify the permit according to LAC 33:V.Chapter 3. Since required items are essential elements of this permit, failure to submit any of the

required items or submission of inadequate or insufficient information may subject the Permittee to enforcement action, which may include fines, suspension, or revocation of the permit. Also, where applicable, the Permittee must meet all the permit modification requirements contained in LAC 33:V.321, 322, and 323.

Any noncompliance with approved plans and schedules shall be termed noncompliance with this permit. Written requests for extension of due dates for submittals may be granted by the Administrative Authority.

If the Administrative Authority determines that actions beyond those provided for, or changes to what is stated herein, are warranted, the Administrative Authority may modify this permit according to procedures in LAC 33:V.321.

III. GENERAL FACILITY CONDITIONS

III.A. DESIGN AND OPERATION OF ALL FACILITIES

III.A.1. The Permittee must maintain and operate all facilities to minimize the possibility of a fire, explosion, or any unauthorized sudden or non-sudden release of hazardous waste constituents to air, soil, or water that could threaten human health or the environment.

III.A.2. No off-site generated hazardous wastes may be received at the Permittee's Plaquemine facility (LAD 008187080) for storage, treatment, or disposal.

III.B. REQUIRED NOTICE

(RESERVED)

III.C. GENERAL WASTE ANALYSIS

The Permittee shall follow the procedures described in the Waste Analysis Plan (WAP) referenced in Attachment 1 and in accordance with LAC 33:V.1519.

III.C.1. The Permittee shall review the WAP annually and report to the Administrative Authority in the annual report whether any revision is required to stay abreast of changes in EPA methods and/or State regulatory provisions.

III.C.2. Annually, the Permittee shall submit a certified statement that indicates that any commercial laboratory, wherever located, that provides chemical analyses, analytical results, or other test data to the department, by contract or by agreement, is accredited in accordance with the laboratory accreditation requirements of LAC 33:I.Chapter 45. This written statement shall be certified as specified in LAC 33:V.513 and included in the annual report. This documentation shall be resubmitted when a different laboratory is contracted for services.

III.C.3. If there is reason to believe that the hazardous waste has changed or the operation generating the hazardous waste has changed, the Permittee shall review and re-characterize all potentially impacted hazardous waste streams generated by the Permittee on-site and treated, stored, and/or disposed on-site. The Permittee must re-characterize wastes in accordance with LAC 33:V.1519.A.3. This re-characterization shall include laboratory analyses which provide information needed to properly treat, store, and dispose of the hazardous waste, including physical characteristics and chemical components of the waste. The results of this re-characterization shall be summarized in the Permittee's Annual Report.

III.C.4. In accordance with LAC 33:V.1519.B, the WAP must meet all sampling and QA/QC protocols contained in Condition II.E.9. All test procedures used by the

Permittee shall be maintained on file by the Permittee and made available to the LDEQ upon request.

III.D. SECURITY

The Permittee must comply with the security provisions of LAC 33:V.1507, as referenced in Attachment 1.

III.E. GENERAL INSPECTION REQUIREMENTS

The Permittee must follow the approved Inspection Plan referenced in Attachment 1. The Permittee must remedy any deterioration or malfunction discovered by an inspection as required by LAC 33:V.1509.C. Records of inspections must be kept as required by LAC 33:V.1509.D. The inspection schedule must include the regulatory requirements of LAC 33:V.517.G, 1509, 1911, 2109, 2507, 3005.F, and 3119.

III.F. PERSONNEL TRAINING

The Permittee must conduct personnel training as required by LAC 33:V.1515.A, B, and C. The Permittee shall follow the approved Personnel Training Plan referenced in Attachment 1. The Permittee shall maintain all training documents and records as required by LAC 33:V.1515.D and E.

III.G. GENERAL REQUIREMENTS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The Permittee must take precautions as required by LAC 33:V.1517 to prevent accidental ignition or reaction of ignitable or reactive wastes. The Permittee shall store ignitable, reactive, or incompatible wastes only in accordance with LAC 33:V.1517, 1917, 1919, 2113, 2115, 2511, and 2513.

III.H. LOCATION STANDARDS

III.H.1. The Permittee has furnished that it is in compliance with seismic standards as required by LAC 33:V.517.T.

III.H.2. The Permittee must not manage any hazardous waste on any portion of the property that lies within the 100 year flood plain (as identified in the Flood Insurance Rating Map) unless such areas are raised above this flood level or other means (e.g., levees) are provided to protect such areas from washouts, overtopping by wave action, soil erosion or other effects of such a flood as required by LAC 33:V.1503.B.3. Such site improvements must be certified by independent licensed professional engineers and approved by the Administrative Authority prior to any hazardous waste and/or hazardous waste units being placed thereon.

III.I. PRECIPITATION RUN-ON AND RUN-OFF

The Permittee must provide for the control by diversion and/or containment of run-on and run-off resulting from a rainfall occurring during a period of twenty-four (24) hours as defined by local rainfall records and LAC 33:V.1503.B.2. The Permittee shall comply with the requirements of LAC 33:V.1907.E.1.b, 2111.B.4, and 2503.D-F.

III.J. HURRICANE EVENTS

The Permittee must initiate those applicable portions of the Contingency Plan during a hurricane as well as appropriate actions required by LAC 33:V.1507, 1509 and 1511.

III.K. PREPAREDNESS AND PREVENTION

III.K.1. Required Equipment

At a minimum, the Permittee must install and maintain the equipment set forth in the Contingency Plan, as required by LAC 33:V.1511.C.

III.K.2. Testing and Maintenance of Equipment

The Permittee must test and maintain the equipment specified in Condition III.K.1 to insure its proper operation in time of emergency. The testing and maintenance of the equipment must be documented in the operating record.

III.K.3. Access to Communications or Alarm Systems

The Permittee must maintain access to the communications or alarm system as required by LAC 33:V.1511.E.l and 1511.E.2.

III.K.4. Required Aisle Space

In no case shall aisle space be less than two (2) feet. In addition, the Permittee shall maintain adequate aisle space as required by LAC 33:V.1511.F.

III.K.5. Arrangements with Local Authorities

The Permittee shall document in the annual report that the requirements of LAC 33:V.1511.G have been met. This documentation shall include those state and local agencies involved and those facilities and operations covered. Documentation of written arrangements with state and local agencies shall also be included in this report. Where state or local authorities decline to enter into such arrangements, the Permittee must document the refusal in the operating record.

III.L. CONTINGENCY PLAN

III.L.1. Implementation of Plan

The Permittee must immediately carry out the provisions of the approved Contingency Plan referenced in Attachment 1, and follow the emergency procedures described by LAC 33:V.1513.F whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents that threaten or could threaten human health or the environment.

III.L.2. Copies of Plan

The Permittee must comply with the requirements of LAC 33:V.1513.C.

III.L.3. Amendments to Plan

The Permittee must review and immediately amend, if necessary, the Contingency Plan as required by LAC 33:V.1513.D.

III.L.4. Emergency Coordinator

The Permittee must comply with the requirements of LAC 33:V.1513.E concerning the emergency coordinator.

III.M. MANIFEST SYSTEM

The Permittee shall comply with the manifest requirements of LAC 33:V.Chapter 11.

III.N. RECORDKEEPING AND REPORTING

III.N.1. Operating Record

The Permittee shall maintain a written operating record at the facility in accordance with LAC 33:V.1529.A, B, and C and the approved Operations Plan.

III.N.2. Annual Report

The Permittee must comply with the annual report requirements of LAC 33:V.1529.D.

III.O. CLOSURE

The Permittee shall address the following regulatory citations in the Closure and Post-Closure Plans: LAC 33:V.1915, 2117, 2521, 3005.I, 3121, 3503, 3505, 3507, 3509, 3511, 3513, and 3515. The Administrative Authority may re-evaluate the adequacy of the Closure and Post-Closure Plans and/or the confirmatory sampling procedures prior to the commencement of closure or during the post-closure care period (e.g., the review and evaluation of permit renewal applications, permit modifications, and notifications of intent to close).

III.O.1. Closure Performance Standard

The Permittee shall close the facility in accordance with the approved Closure Plans referenced in Attachment 1 and in accordance with the applicable sections of LAC 33:V.3507.

III.O.2. Amendment to Closure Plan

The Permittee shall amend the Closure Plans where necessary, in accordance with LAC 33:V.3511.C. Any modification shall be subject to LAC 33:V.321, 322 and 323, where applicable.

III.O.3. Notification of Closure

The Permittee shall notify the Administrative Authority at least forty-five (45) days prior to the date it expects to begin closure in accordance with LAC 33:V.3511.D.

III.O.4. Time Allowed For Closure

After receiving the final volume of hazardous waste, the Permittee shall treat or remove from the site all hazardous waste in accordance with the schedule specified in the Closure Plans referenced in Attachment 1 and in accordance with LAC 33:V.3513.

III.O.5. Disposal or Decontamination of Equipment

The Permittee shall decontaminate and dispose all facility equipment in accordance with the approved Closure Plans referenced in and in accordance with LAC 33:V.3515.

III.O.6. Certification of Closure

The Permittee shall certify that the facility has been closed in accordance with the specifications in the approved Closure Plans as required by LAC 33:V.3517.

III.O.7. Inventory at Closure

The Permittee shall be responsible for closure costs based upon the maximum permitted facility inventories listed below in Tables III-A, III-B, and III-C.

TABLE III-A
(13) Existing Hazardous Waste Tanks

TANKS	SERVICE	WASTE	MAXIMUM PERMITTED CAPACITY (GALLONS)
T-400-2	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	49,300
T-410	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	375
D-13	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	2,500
D-15	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	22,676
D-42B-1	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	2,768
D-92-A	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	370
D-700	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	2,800
D-701	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	50
D-750	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	1,070
D-751	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	7,000
T-130[1]	Liquid Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	0
T-135[1]	Liquid Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	0
T-255[1]	Liquid Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	0

[1] Tanks T-130, T-135, and T-255 are undergoing closure and no longer actively managing hazardous waste (see Condition V.A.11).

TABLE III-B
(5) Existing Container Storage Areas (CSAs)

CSA	LOCATION	WASTE	MAXIMUM PERMITTED CAPACITY (GALLONS)
CSA A	Environmental Operations Plant	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	600,000 pounds
CSA B	Environmental Operations Plant	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	600,000 pounds
CSA C	Environmental Operations Plant	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	250,000 pounds
CSA D*	Environmental Operations Plant	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	24,000 gallons
CSA E	Environmental Operations Plant	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	210,000 gallons

*CSA D is comprised of 2 sub-areas: D-1 and D-2. Maximum permitted capacity listed for CSA D is the combined permitted capacity of D-1 and D-2.

TABLE III-C
(6) Thermal Treatment Units (TTUs)

TTU*	LOCATION	SERVICE
Environmental Operations Plant TTU[1] (I-200)	Environmental Operations Plant	Liquid Hazardous Waste Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)
Solvents/EDC TTU (F-700)	Solvents/EDC Plant	Liquid Hazardous Waste Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)
Glycol I TTU (R-4)	Glycol I Plant	Liquid Hazardous Waste Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)
Chlorinated Methanes TTU (R-750)	Chlorinated Methanes Plant	Liquid Hazardous Waste Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)
Vinyl II TTU (F-410)	Vinyl II Plant	Liquid Hazardous Waste Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)
Vinyl II TTU (F-420)	Vinyl II Plant	Liquid Hazardous Waste Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)

* Maximum permitted capacities are not applicable to the TTUs. Instead, permit conditions pertaining to the TTUs govern hazardous waste feed rates to the TTUs and emissions from the TTUs.

[1] The Environmental Operations Plant TTU is undergoing closure and no longer actively managing hazardous waste (see Condition V.D.5).

TABLE III-D
(1) Active Landfill

UNIT NAME	UNIT TYPE	CAPACITY
Block 80 Hazardous Waste Landfill	Active Hazardous Waste Landfill	131,000 cubic yards

III.P. POST-CLOSURE

III.P.1. Post-Closure Care

The Permittee must manage the post-closure care of the Northwest Landfill/CAMU as described in Table III-E in accordance with this permit, LAC 33:V. Chapter 35, Subchapter B and LAC 33:V.2521.

TABLE III-E
(1) Closed Landfill/Corrective Action Management Unit (CAMU)

UNIT NAME	UNIT TYPE	CAPACITY
Northwest Landfill/CAMU	Closed Hazardous Waste Landfill/CAMU	120,000 cubic yards

III.P.2. Amendment to Post-Closure Permit Conditions

The Permittee must request modification of any post-closure permit conditions included in this permit when necessary, in accordance with LAC 33:V.3523.D and LAC 33:V.321.

III.P.3. Post-Closure Maintenance

The Permittee must comply with all post-closure requirements contained in LAC 33:V.3519 through 3527, including maintenance and monitoring throughout the post-closure care period specified in LAC 33:V.3521.A.1. The Permittee must maintain all units in post-closure according to the requirements in Condition V.G.

III.P.4. Post-Closure Restrictions

The Administrative Authority may require, at partial and final closure, continuation of any of the security requirements of LAC 33:V.1507, during part or all of the post-closure care period when access by the public or domestic livestock may pose a hazard to human health.

III.P.5. Post-Closure Property or Site Use

III.P.5.a. Post-closure use of property on or in which hazardous wastes remain after partial or final closure must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the permitted closed unit's monitoring systems, unless the Administrative Authority finds that the disturbance:

III.P.5.a.(1). is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or

III.P.5.a.(2). is necessary to reduce a threat to human health or the environment.

III.P.5.b. Any post-closure activity other than that specified in this permit must have prior approval of the Administrative Authority.

III.P.6. Post-Closure Contact

The Permittee must provide the name, address, and phone number of the person or office to contact about the permitted post-closure units during the post-closure care period.

III.P.7. Certification of Completion of Post-Closure Care

No later than sixty (60) days after completion of the established post-closure care period for the specified unit, the Permittee must submit to the Administrative Authority, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit(s) was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the Permittee and an independent registered professional engineer. Within sixty (60) days after receipt of the certification the Administrative Authority will notify the owner or operator that he is no longer required to maintain financial assurance for post-closure care of that unit, unless the Administrative Authority has reason to believe that post-closure care was not conducted in accordance with the approved post-closure plan.

The certification of post-closure care shall include the certification statement found in the LAC 33:V.513.A or the current certification statement in the Louisiana hazardous waste regulations at the time of completion of post-closure care.

III.Q. COST ESTIMATES FOR CLOSURE/POST-CLOSURE/CORRECTIVE ACTION

III.Q.1. The Permittee must maintain cost estimates accounting for the costs associated with the execution of closure activities for all permitted units listed in Tables III-A, III-B, III-C, and III-D of this permit in accordance with LAC 33:V.3705 and 3707.

III.Q.2. The Permittee must maintain post-closure cost estimates accounting for the costs associated with the execution of post-closure activities for all permitted units listed in Tables III-D and III-E of this permit in accordance with LAC 33:V.3709.

III.Q.3. In the event of a release of hazardous constituents to environmental media from the permitted units listed in Tables III-A, III-B, III-C, and III-D of this permit, the Permittee must maintain cost estimates accounting for the costs associated with corrective action remedy implementation of said releases as required by LAC 33:V.3301.B and/or Condition VI.K of this permit..

III.Q.4. The Permittee shall maintain and adjust all cost estimates referenced in Conditions III.Q.1-3 of this permit for inflation, as specified in LAC 33:3705.B, 3705.C, and for other circumstances that increase the cost estimates.

III.Q.5. The Permittee must adjust any cost estimates within thirty (30) days after approval of changes to or modifications of the closure/post-closure plans or required corrective action activities by the Administrative Authority. The Permittee shall consider the impact of any changes on the cost estimates.

III.Q.6. The closure cost estimate must equal the cost of closure at the point in the facility's operating life when the extent and manner of its operation would make closure most expensive and must be based on costs to the Permittee of hiring a third party to execute all closure activities. The closure cost estimate shall be based on the maximum permitted inventory of each facility specified in Tables III-A, III-B, and III-D of this permit.

III.Q.7. If the Permittee is unable to complete clean closure of all facilities specified in Tables III-A, III-B, and III-C, as per LAC 33:V.Chapter 35 and as acceptable by the Administrative Authority, a Post-Closure Plan must be submitted for each facility failing to achieve clean closure within ninety (90) days from the date that the Permittee or Administrative Authority determines that the unit must be closed as a landfill. The Post-Closure Plan must meet the requirements of LAC 33:V.3523.B.

III.R. FINANCIAL ASSURANCE FOR CLOSURE, POST-CLOSURE, AND CORRECTIVE ACTION

The Permittee shall establish and maintain financial assurance for closure, post-closure, and corrective action, as applicable in accordance with LAC 33:V.3707 for all units listed under

Condition III.O.7 and III.P.1 and for all onsite and offsite releases requiring the implementation of corrective action activities (e.g., investigation, sampling and analysis, corrective action remedies, etc.). Financial assurance required for corrective action at permitted hazardous waste units shall be in accordance with Condition III.Q.3. Financial assurance required as part of the Corrective Action Strategy shall be in accordance with Condition VIII.

III.S. LIABILITY REQUIREMENTS

The Permittee shall have and maintain liability coverage for sudden accidental occurrences in the amounts of $1,000,000 each occurrence and $2,000,000 annual aggregate, exclusive of legal defense costs, as required by LAC 33:V.3715.A. The Permittee shall have and maintain liability coverage for non-sudden accidental occurrences in the amounts of $3,000,000 each occurrence and $6,000,000 annual aggregate, exclusive of legal defense costs, as specified in LAC 33:V.3715.B.

III.T. INCAPACITY OF THE PERMITTEE

The Permittee must comply with LAC 33:V.3717 whenever bankruptcy is initiated for the Permittee or its institutions providing financial assurance. If insurance is used for compliance with LAC 33:V.3715, the Permittee must immediately notify the Administrative Authority if the insurance company is placed in receivership. The Permittee must establish other financial assurance or liability coverage within sixty (60) days after such an event.

III.U. POST-CLOSURE NOTICES

If the Permittee (or any subsequent Permittee) wishes to remove hazardous wastes, hazardous waste residues, the liner, or contaminated soils from the land upon which the hazardous waste disposal units included in Tables III-D (after closure certification) and III-E of this permit are located, he must request a modification to the permit in accordance with the applicable requirements in LAC 33:V. Chapters 3 and 7. The Permittee must demonstrate that the removal will satisfy the criteria of LAC 33:V.3521. By removing hazardous waste, the Permittee may become a generator of hazardous waste and must manage it in accordance with all applicable requirements of LAC 33:V. Subpart 1. If the Permittee is granted a permit modification or otherwise granted approval to conduct such removal activities, the Permittee may request that the Administrative Authority approve either:

III.U.1. the removal of the notation on the deed to the facility property or other instrument normally examined during title search; or

III.U.2. the addition of a notation to the deed or instrument indicating the removal of the hazardous waste.

IV. PERMITTED FACILITES

IV.A. TANKS

Details of the existing tanks listed in Table IV-A, including design and operational specifications are contained in Condition V.A.

TABLE IV-A
(13) Existing Hazardous Waste Tanks

TANKS	SERVICE	WASTE	MAXIMUM PERMITTED CAPACITY (GALLONS)
T-400-2	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	49,800
T-410	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	375
D-13	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	2,500
D-15	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	22,676
D-42B-1	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	2,768
D-92-A	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	370
D-700	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	2,800
D-701	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	50
D-750	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	940
D-751	Liquid Organic Hazardous Wastes	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	6,018
T-130[1]	Liquid Hazardous Waste	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	0
T-135[1]	Liquid Hazardous Waste	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	0
T-255[1]	Liquid Hazardous Waste	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	0

[1] Tanks T-130, T-135, and T-255 are undergoing closure and no longer actively managing hazardous waste (see Condition V.A.11).

IV.B. CONTAINER STORAGE AREAS

Details of the existing container storage areas listed in Table IV-B, including design and operational specifications, are contained in Condition V.B.

TABLE IV-B
(5) Existing Container Storage Areas (CSAs)

CSA	LOCATION	WASTE	MAXIMUM PERMITTED CAPACITY
CSA A	Environmental Operations Plant	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	600,000 pounds
CSA B	Environmental Operations Plant	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	600,000 pounds
CSA C	Environmental Operations Plant	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	250,000 pounds
CSA D*	Environmental Operations Plant	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	24,000 gallons
CSA E	Environmental Operations Plant	Numerous waste streams carrying F, K, P, U and D waste codes (see WAP)	210,000 gallons

*CSA D is comprised of 2 sub-areas: D-1 and D-2. Maximum permitted capacity listed for CSA D is the combined permitted capacity of D-1 and D-2.

IV.C. THERMAL TREATMENT UNITS

Details of the existing thermal treatment units listed in Table IV-C, including design and operational specifications, are contained in Conditions V.C through V.E.

TABLE IV-C
(6) Thermal Treatment Units (TTUs)

TTU	LOCATION	SERVICE
Environmental Operations Plant TTU[1] (I-200)	Environmental Operations Plant	Liquid Hazardous Waste *Numerous waste streams carrying F, K, P, U and D waste codes
Solvents/EDC TTU (F-700)	Solvents/EDC Plant	Liquid Hazardous Waste *Numerous waste streams carrying F, K, P, U and D waste codes
Glycol I TTU (R-4)	Glycol I Plant	Liquid Hazardous Waste *Numerous waste streams carrying F, K, P, U and D waste codes
Chlorinated Methanes TTU (R-750)	Chlorinated Methanes Plant	Liquid Hazardous Waste *Numerous waste streams carrying F, K, P, U and D waste codes
Vinyl II TTU (F-410)	Vinyl II Plant	Liquid Hazardous Waste *Numerous waste streams carrying F, K, P, U and D waste codes
Vinyl II TTU (F-420)	Vinyl II Plant	Liquid Hazardous Waste *Numerous waste streams carrying F, K, P, U and D waste codes

* For specific information regarding waste streams treated in the TTUs, see the WAP included in Attachment 1.

[1] The Environmental Operations Plant TTU is undergoing closure and no longer actively managing hazardous waste (see Condition V.D.5).

IV.D. ACTIVE LANDFILL

Details of the existing landfill listed in Table IV-D, including design and operational specifications, are contained in Condition V.F.

TABLE IV-D
(1) Active Landfill

UNIT NAME	UNIT TYPE	CAPACITY
Block 80 HW Landfill	Active Hazardous Waste Landfill	131,000 cubic yards

IV.E. PERMITTED POST-CLOSURE UNITS

Details of the existing post-closure landfill listed in Table IV-E, including design and operational specifications, are contained in Condition V.G.

TABLE IV-E
(1) Closed Landfill/Corrective Action Management Unit (CAMU)

UNIT NAME	UNIT TYPE	CAPACITY
Northwest Landfill/CAMU	Closed Hazardous Waste Landfill/CAMU	120,000 cubic yards

V. PERMIT CONDITIONS APPLICABLE TO PERMITTED FACILITIES

V.A. TANKS

V.A.1. Description of Tank Systems

V.A.1.a. Operation

V.A.1.a.(1). All permitted tanks and associated piping, pumps, instruments, containments, and vent controls shall be operated and maintained in accordance with LAC 33:V.Chapter19, the specification and design criteria provided in the Part II Permit Application, and the design limits specified in Tables V-A-1 and V-A-2.

V.A.1.a.(2). The design temperature and pressure for each tank shall not change from the one listed in Table V-A-1, unless a permit modification is approved by the Department.

V.A.1.b. Permitted Tanks

V.A.1.b.(1). The tanks listed in Table V-A-1 are permitted for hazardous waste storage. These tanks have been certified by an independent, professional engineer licensed in the State of Louisiana and have sufficient structural integrity for the storage of hazardous waste.

V.A.1.b.(2). The tanks listed in Table V-A-1 must be clearly marked with the words "Hazardous Waste" in accordance with LAC 33:V.1109.E.1.d.

V.A.1.b.(3). The Permittee is prohibited from storing or treating hazardous waste in any tank storage system not listed in Table V-A-1 for greater than ninety (90) days, unless an extension is granted by the Administrative Authority in accordance with LAC 33:V.1109.E.2 or the activity is exempt from regulation.

V.A.1.b.(4). The Permittee is prohibited from receiving any hazardous waste from off-site.

V.A.1.c. Proposed Tanks

(RESERVED)

Table V-A-1
DESIGN AND OPERATING PARAMETERS FOR RCRA TANK SYSTEMS

Tank No.	Materials of Construction	Shell Thickness Design (inches)	Minimum Thickness (inches)	Corrosion Allowance (inches)	Secondary Containment Capacity (gallons)	Dimensions	Permitted Capacity (Gals.)	Design Temp. (F)	Design Pressure (PSI)
T-130[1]	SA-285-C Carbon Steel	0.3125	.1875	0.0625	27,000[1]	144"OD X 24'H	0	200	10
T-135[1]	SA-285-C Carbon Steel	0.3125	.1875	0.0625	27,000[1]	144"OD X 23'-6"H	0	200	10
T-255[1]	SA-285-C Carbon Steel	0.3125	.1875	0.0625	27,000[1]	144"OD X 23'-6"H	0	200	10
D-13	Monel/Alloy 400 Steel	0.1875 (shell) 0.250 (head)	.1875	None	45,900	12'L X 6' OD	2,500	650	50
D-15	SA-285-C Carbon Steel	0.9375 (shell) 0.8125 (head)	.558	0.125	45,900	23'-10"L X 12'OD	22,676	600	50
D-42B-1	SA-516-70 Carbon Steel (Teflon Lined)	0.5 (shell) 0.375 (head)	.2474	0.0625	33,370	102"OD X 4'-2" H with conical bottom 7'-3"H and 6" outlet	2,768	300	50
D-92-A	SA-285-C Carbon Steel	0.5 (shell) 0.5 (head)	.1875	0.0625	33,370	7'L X 5'OD	370	600	287
D-700	Monel/Alloy 400 Steel	0.3125 (shell) 0.432 (top)	.232	0.0805	33,370	166"L X 64"OD with one conical end	2,800	600	40
D-701	Carbon Steel (Teflon Lined)	0.322 (nominal Schedule 40 pipe)	.1875	None	50	8" Dia. X 23' H	50	100	150
T-400-2	SA-516-70 Norm.	0.625	.518	0.0625	111,100	17'ID X 23'-4"H	49,300	450	76
T-410-2	SA-106B Carbon Steel	0.5 (shell and bottom)	.1875	0.125	111,100	4'OD X 4'H	375	150	3.5
D-750	SA-516-70 Carbon Steel (Teflon Lined)	0.25	.1808	None[2]	13,086	4'ID X 10'	1,070	300	18
D-751	SA-516-GR-70 Carbon Steel	0.625	.427	0.123	13,086	9'ID X 16'	7000	300	150

1.Tanks T-130, T-135, and T-255 share a common secondary containment area and are undergoing closure with I-200. T-250, not listed, has completed closure.
2. Tank D-750 is Teflon lined. No corrosion allowance is defined, but the use of common ¼ inch sheet with a minimum thickness of 0.1875 defaults to an allowance of 0.0625 inches of corrosion allowance.

TABLE V-A-2
DESIGN AND OPERATING PARAMETERS FOR RCRA TANK SYSTEMS

Tank No.[1]	Year Put Into Service	Design Standard	Inspection Standard	Air Emission Compliance
D-13	1970	ASME Section VIII, Div. 1 (1968)	API 510	40 CFR 60, Subpart H
D-15	2005	ASME Section VIII, Div. 1 (2004)	API 510	40 CFR 60, Subpart H
D-42B-1	1999	ASME Section VIII, Div. 1 (1995)	API 510	40 CFR 60, Subpart H
D-92-A	1983	ASME Section VIII, Div. 1 (1977)	API 510	40 CFR 60, Subpart H
D-700	1976	ASME Section VIII, Div. 1 (1974)	API 510	40 CFR 60, Subpart H
D-701	2001	ASME B31.3	ASME B 31.3	40 CFR 60, Subpart H through D-700
T-400-2	1993	ASME Section VIII, Div. 1 (1992A)	API 510	40 CFR 60, Subpart H and 40 CFR 61, Subpart FF
T-410-2	2005	ASME Section VIII, Div. 1 (2004)	API 510	40 CFR 60, Subpart H and 40 CFR 61, Subpart FF
D-750	1985	ASME Section VIII, Div. 1 (1983)	API 510	40 CFR 60, Subpart H
D-751	1985	ASME Section VIII, Div. 1 (1983)	API 510	40 CFR 60, Subpart H

1. Tanks T-130, T-135, 250 and T-255 were not listed above because these units are in the process of being closed.

V.A.2. Permitted and Prohibited Wastes

V.A.2.a. Permitted Waste

Subject to the terms of this permit, the Permittee is allowed to store in the tanks as described in Condition V.A.1.b, and the hazardous wastes identified in the Part A Permit Application.

V.A.2.b. Prohibited Waste

The Permittee is prohibited from storing hazardous waste that is not identified in the Part A Permit Application.

V.A.3. Secondary Containment

V.A.3.a. Duty to Comply with LAC 33:V.1907.B through F

The Permittee shall design, construct, operate, and maintain the secondary containment systems in accordance with LAC 33:V.1907.B-F, the Part II Permit Application, and Tables V-A-1 and V-A-2 of this Permit.

V.A.3.b. Prevention of Migration

V.A.3.b.(1). Secondary containment systems must be maintained and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, groundwater, or surface water at any time during the use of the tank system in accordance with LAC 33:V.1907.B.1.

V.A.3.b.(2). Ancillary equipment must be provided with secondary containment, except as excluded by LAC 33:V.1907.F.

V.A.3.b.(3). Secondary containment systems must be free of cracks or gaps and other surface defects that would allow liquid to migrate out of the containment system in accordance with LAC 33:V.1907.E.

V.A.3.b.(4). Permittee must address Condition II.E.25.a and b of this permit in order to meet the requirements of LAC 33:V.1907.B-F to prevent lateral or vertical migration of accumulated liquid and wastes.

V.A.3.b.(5). Spilled or leaked waste and/or accumulated precipitation must be removed from the secondary containment system within twenty-four (24) hours in accordance with LAC 33:V.1907.C.4.

V.A.3.b.(6). If unable to remove spilled or leaked waste and/or accumulated precipitation within twenty-four (24) hours, the Permittee

must demonstrate to the Administrative Authority that more time is required and propose an alternate schedule for removal.

V.A.3.c. Requirements for Facilities Requesting a Variance

(RESERVED)

V.A.4. Operating Requirements

V.A.4.a. Duty to Comply with LAC 33:V.1909.A

The Permittee shall comply with LAC 33:V.1909.A. Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

V.A.4.b. Duty to Comply with LAC 33:V.1909.B

The Permittee shall comply with LAC 33:V.1909.B and Tables V-A-1 and V-A-2 of this permit. The Permittee must use appropriate controls and practices to prevent spills and overflows from tanks and containment systems.

V.A.4.c. Tank Covers

All hazardous waste storage tanks shall be covered and shall not be vented directly to the atmosphere if the tanks are used to store, or if a possibility exists that they may be used to store, volatile or malodorous waste.

V.A.4.d. Maintenance

The Permittee shall maintain the permitted tank systems according to the design code specified for each tank as listed in Table V-A-2 and not exceed the listed operating conditions.

V.A.5. Ignitable, Reactive, and Incompatible Wastes

The Permittee shall store ignitable, reactive, or incompatible wastes only in accordance with LAC 33:V.1517.B, 1917 and 1919.

V.A.6. Inspections

V.A.6.a. Inspection Schedule

The Permittee shall comply with LAC 33:V.1911.A through C by following the inspection schedule submitted in the Inspection Plan (see Attachment 1).

V.A.6.b. Daily Inspection

V.A.6.b.(1). At least once per day while the tank is operating in hazardous waste service, the Permittee shall inspect the following:

V.A.6.b.(1).(a). Above ground portions of the tank system, including the tank, ancillary piping, valves, and vent controls, to detect corrosion, cracks or releases of waste.

V.A.6.b.(1).(b). Data gathered from monitoring and leak detection equipment.

V.A.6.b.(1).(c). The construction materials and area immediately surrounding the externally accessible portion of the tank system and ancillary equipment, e.g. secondary containment system, to detect erosion, cracks and signs of hazardous waste releases.

V.A.6.b.(2). All deficiencies noted during daily inspections must be recorded and remedied in a timely manner.

V.A.6.c. External Inspection

At a minimum, external inspection of each tank covered by this permit shall be performed as often as required by the API designated inspection standard in Table V-A-2. The required frequency of inspection with reference to the applicable section of the standard shall be kept on site and available for review by the Administrative Authority upon request. The inspection shall be performed by a person meeting the minimum qualifications required under the inspection standard in Appendix B of API Standard 510. The inspection checklist shall be comparable to that in Appendix C of API Standard 510.

If the result of such an inspection reveals that the tank is unfit for continued service, the Permittee shall immediately stop the flow of hazardous waste into the tank and comply with LAC 33:V.1913. The certification required by LAC 33:V.1913.F shall be obtained before the tank is put back into service.

V.A.6.d. Internal Inspection

Internal inspection of each tank covered by this permit shall be performed as often as required by the inspection standard in Table V-A-2. The required frequency of inspection with reference to the applicable section of the standard shall be kept on site and available for review by the Administrative Authority upon request. The inspection shall be performed by a person

meeting the minimum qualifications required under the inspection standard in Table V-A-2. The inspection checklist shall be comparable to that in Appendix C of API Standard 510.

If the result of such an inspection reveals that the tank is unfit for continued service, the Permittee shall immediately stop the flow of hazardous waste into the tank and comply with LAC 33:V.1913. The certification required by LAC 33:V.1913.F shall be obtained before the tank is put back into service.

V.A.6.e. Thickness Testing

V.A.6.e.(1). Thickness testing of each metallic tank listed in Tables V-A-1 and V-A-2 of this permit shall be performed biennially.

V.A.6.e.(2). Tank thickness measurements shall be taken on the tank top and shell and shall be taken on each tank quadrant. Tank thickness readings shall be taken on the same place during each testing event in order to form a comparison of readings for corrosion rate determination.

V.A.6.e.(3). Thickness testing of the tank bottom shall be performed as often as the internal inspection, or more often if required by the inspection standard specified in Table V-A-2. The required frequency of inspection, with reference to the applicable section of the inspection standard, shall be kept on-site and made available to the Administrative Authority upon request.

V.A.6.e.(4). Tank thickness readings shall also be taken at any spot where visual corrosion or compromised integrity is evident.

V.A.6.e.(5). When any tank shell thickness measurement at a single point is less than that required in Table V-A-1, the Permittee shall immediately comply with either Condition V.A.6.e.(5).(a) or (b) below. Condition V.A.6.e.(5).(b) shall not be used for any tank where the shell thickness measurement is less than 0.100 inches.

V.A.6.e.(5).(a). The tank shall be deemed unfit for use and the Permittee shall immediately stop the flow of hazardous waste into the tank and comply with LAC 33:V.1913. The tank shall be repaired or replaced and the certification required by LAC 33:V.1913.F shall be obtained before the tank is put back into service.

V.A.6.e.(5).(b). An engineering evaluation shall be performed, conforming to the appropriate standard or standards, as allowed by the design or inspection standard in Table V-A-2. If the

evaluation determines that the tank is unfit for service, the Permittee shall comply with Condition V.A.6.e.(5).(a) immediately. The evaluation must be submitted to the Administrative Authority for approval within ninety (90) days of the initial measurement.

V.A.6.e.(6). Tank thickness measurements shall not be averaged, unless allowed under the tank inspection standard in Table V-A-2. The Permittee shall submit a Class 2 permit modification request in accordance with LAC 33:V.322.G.4 (Modification of Tank Management Practice) to allow for the averaging of thickness measurements unless averaging of tank thickness for a particular tank is specified in Tables V-A-1 and V-A-2.

V.A.6.f. Overfill Controls

Overfill controls shall be tested to ensure that they are in working order according to the schedule proposed in the Inspection Plan (see Attachment 1).

V.A.6.g. Fiberglass Tanks

(RESERVED)

V.A.7. Response to Leaks and Spills

V.A.7.a. Duty to Comply with LAC 33:V.1913.A through E

In the event of a leak or spill from a tank system, secondary containment system, or if a system becomes unfit for use, the Permittee shall comply with LAC 33:V.1913.A through E.

V.A.7.b. Leaks and Spills

V.A.7.b.(1). Upon discovering a leak or spill, the Permittee must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

V.A.7.b.(2). Within twenty-four (24) hours of detecting a leak from the tank system, or in as timely a manner as is practical if the Permittee demonstrates that it is not possible to remove the waste within twenty-four (24) hours, the Permittee must remove as much waste as necessary to prevent further release from the tank or secondary containment system and to allow inspection and repair of the tank system in accordance with LAC 33:V.1913.B.1.

V.A.7.b.(3). Any spilled material or material trapped in sumps that is a hazardous waste or that will be disposed of as a hazardous waste must be cleaned up in a timely manner, as required by LAC 33:V.1505.C.3.

V.A.7.b.(3).(a). If the collected material is discharged through a point source to United States waters or to a Publicly Owned Treatment Works, it is subject to the requirements of the Clean Water Act.

V.A.7.b.(3).(b). If the collected material is released to the environment, it may be subject to reporting under applicable requirements of LAC 33:V.1505, LAC 33:I.Chapter 39, and 40 CFR Part 302.

V.A.7.b.(4). When a leak or spill occurs, the Permittee shall remove and properly dispose of any visible contamination of the soil or surface water in accordance with LAC 33:V.1913.C.2.

V.A.7.b.(5). A tank system from which a leak or spill has occurred must be closed in accordance with the approved Closure Plan and LAC 33:V.1915, unless the requirements of LAC 33:V.1913.E.2 and 3 are satisfied.

V.A.7.b.(5).(a). For a release caused by a spill that has not damaged the integrity of the system, the Permittee may return the system to service as soon as the released waste is removed and repairs, if necessary, are made in accordance with LAC 33:V.1913.E.2.

V.A.7.b.(5).(b). For a release caused by a leak from the primary tank system to the secondary containment system, the Permittee shall repair the primary system prior to returning the tank to service in accordance with LAC 33:V.1913.E.3.

V.A.7.b.(6). If the Permittee replaces a component of the tank system to eliminate a leak, that component must satisfy the requirements for new tank systems or components in LAC 33:V.1905 and 1907.

V.A.7.b.(7). All leaks and spills shall be documented in the daily inspection log.

V.A.7.c. Major Repairs

V.A.7.c.(1). The Permittee shall comply with LAC 33:V.1913.F when performing major repairs to a tank system in accordance with LAC 33:V.1913.E.

V.A.7.c.(2). Major repairs shall include, but not be limited to, installation of an internal liner, repair of a ruptured tank, repair of a ruptured secondary containment vessel, and removal of a tank from its foundation for any reason.

V.A.7.c.(3). The Permittee shall conform to the appropriate portion of the most recent inspection code (listed in Table V-A-2 of this permit) for maintenance, inspection, re-rating, repair, and alteration of all tanks.

V.A.7.c.(4). The tank shall not be returned to service unless the Permittee has obtained a certification by an independent professional engineer licensed in the State of Louisiana that the system is capable of handling hazardous waste without release for the intended life of the system. The certification of repairs shall include an inspection in accordance with the requirements of any applicable codes, such as API 510. In accordance with LAC 33:V.1913.F, the certification shall be submitted to the Administrative Authority within seven (7) days of returning the tank system to use.

V.A.8. Air Emission Control Equipment Standards (RESERVED)

In order to prevent redundant regulation, Condition V.A.8 has been reserved. The Permittee will comply with the provisions of Condition V.A.8 by complying with the provisions of its approved Comprehensive Fugitive Emissions Monitoring Program implemented under the facility air permit. Failure by the Permittee to comply with those provisions that are equivalent to the provisions in LAC 33:V.Chapter 17 will also result in a failure to comply with LAC 33:V.Chapter 17.

V.A.9. Recordkeeping and Reporting

V.A.9.a. New Tanks

In the event any new tank systems are installed, the Permittee shall obtain, and keep on file at the facility, the written statements by those persons required to certify the design and installation of new tank systems, in accordance with LAC 33:V.1905.G.

V.A.9.b. Written Assessment

The Permittee shall keep on file at the facility, written assessments of the tank systems' integrity. The assessments shall be updated at the time of submittal of a Permit Renewal Application and/or at any other time deemed necessary by the Administrative Authority (i.e., permit modifications, tank replacements, tank repairs, etc.).

V.A.9.c. Inspections

V.A.9.c.(1). The Permittee shall document in the operating record for the facility inspection of those items in Condition V.A.6.a and b of this permit.

V.A.9.c.(1).(a). The daily log sheets shall include all monitored parameters for the prevention of spills and overflows (e.g., temperature, pressures, and levels) for tanks operated at non-ambient conditions.

V.A.9.c.(1).(b). The Permittee shall note all deficiencies discovered during the inspection in the inspection log.

V.A.9.c.(1).(c). Corrective action taken in response to deficiencies must be included as part of the operating record for the facility.

V.A.9.c.(2). The Permittee shall document in the operating record all tests and inspections of overfilling controls.

V.A.9.c.(3). The Permittee shall keep on file at the facility the results of the internal and external inspections required by Condition V.A.6.c and d of this permit. The Permittee shall note all deficiencies discovered during the inspection in the inspection log. Corrective action taken in response to deficiencies must be included as part of the operating record for the facility.

V.A.9.c.(4). The Permittee shall keep on file at the facility all information related to tank thickness testing required under Condition V.A.6.e of this permit.

V.A.9.c.(4).(a). This information shall include at a minimum the date(s) of assessment, the location where measurement readings are taken, the raw measurement data, comparison of actual reading to minimum thickness requirements, the corrosion rate, and calculation of remaining tank life.

V.A.9.c.(4).(b). If an engineering evaluation is performed in accordance with Condition V.A.6.e.(5).(b), the results of such an evaluation shall be kept in the operating record. The engineering evaluation must include, at minimum, details on how the evaluation was performed, references to applicable

tank codes, raw data, calculations performed, and an explanation of why the tank is or is not fit for continued service.

V.A.9.c.(4).(c). Any tank thickness measurements that are averaged under Condition V.A.6.e.(6) must be supported by documentation with references to the applicable tank codes. The documentation shall include all raw measurement data, calculations, and results of averaging. This information shall be kept as a part of the operating record for the facility.

V.A.9.c.(5). The Permittee shall keep on file at the facility the records of repairs required under Condition V.A.7.c of this permit.

V.A.9.d. Releases

V.A.9.d.(1). The Permittee shall keep on file at the facility notification reports submitted under LAC 33:V.1913.D.

V.A.9.d.(2). Within twenty-four (24) hours of detecting a reportable leak or spill from a tank system or secondary containment system to the environment, the Permittee shall report the leak in accordance with either Condition II.E.16 (Emergency) or Condition II.E.17 (Non-Emergency).

V.A.9.d.(3). As required by LAC 33:V.1913.D.3, within thirty (30) days of detecting a reportable release to the environment from a tank system or secondary containment system, the Permittee shall report the following information to the Administrative Authority's Single Point of Contact (SPOC):

V.A.9.d.(3).(a). Likely route of migration of the release,

V.A.9.d.(3).(b). Characteristics of the surrounding soil, including soil composition, geology, hydrogeology, and climate,

V.A.9.d.(3).(c). Results of any monitoring or sampling conducted in connection with the release (if available). If the Permittee finds it will be impossible to meet this time schedule, the Permittee must provide the Administrative Authority with a schedule of when the results will be available. This schedule must be provided before the required thirty (30) day submittal period expires,

V.A.9.d.(3).(d). Proximity of downgradient drinking water, surface water, and populated areas, and

V.A.9.d.(3).(e). A description of response actions taken or planned.

V.A.9.e. Repairs

The Permittee shall keep on file at the facility all certifications required by Condition V.A.7.c.

V.A.10. Closure and Post-Closure Care

V.A.10.a. Duty to Comply with LAC 33:V.1915.A

The Permittee shall comply with LAC 33:V.1915.A by following the procedures specified in the latest approved Closure Plans, see Attachment 1.

V.A.10.b. Duty to Comply with LAC 33:V.1915.B

If the Permittee demonstrates that not all contaminated soils can be practicably removed or decontaminated in accordance with Condition V.A.10.a of this permit, the Permittee shall comply with LAC 33:V.1915.B.

V.A.10.c. Post-Closure

The Permittee shall attempt to clean close all tank systems. If the surface and subsurface soils below and adjacent to the tank system cannot be clean closed and the Permittee has not demonstrated through a risk assessment approved by the Administrative Authorit y that closure with the remaining contaminant levels is protective of human health and the environment, the Permittee shall present a post-closure plan to the Administrative Authority for approval. If any waste residue or contaminated media are left in place at final closure, the Permittee must comply with all post-closure requirements contained in LAC 33:V.3519 through 3527, including maintenance and monitoring throughout the post-closure care period.

V.A.11. Compliance Schedule

The Permittee has implemented the approved closure plan for the permitted Environmental Operations Plant hazardous waste tanks: T-130; T-135; and T-255; therefore the tanks no longer actively manage hazardous waste. However, the Permittee has not yet provided a closure certification report to the Administrative Authority documenting clean closure of the tanks. Therefore, the tanks will remain as permitted hazardous waste units in this permit with a maximum permitted capacity of zero (0) gallons until such time that clean closure is verified by the Administrative Authority.

V.B. CONTAINERS AND CONTAINER STORAGE AREAS (CSAs)

The permit conditions as set forth under this section shall apply where applicable, to the permitted container storage facilities as identified in Table V-B.

V.B.1. Conditions and Operations

V.B.1.a. Conditions of Containers

V.B.1.a.(1). The Permittee shall be in compliance with all applicable conditions set forth in LAC 33:V.Chapter 21.

V.B.1.a.(2). The Permittee shall manage the containers holding hazardous waste in accordance with LAC 33:V.2103.

V.B.1.a.(3). The Permittee shall maintain the integrity of all containers in accordance with LAC 33:V.2103.

V.B.1.b. Management of Containers

The Permittee shall operate and maintain the container storage units in accordance with LAC 33:V.2101 and the specification and design criteria submitted in the Part B Permit Application.

V.B.1.b.(1). The Permittee shall manage containers in accordance with LAC 33:V.2107.

V.B.1.b.(2). Hazardous waste containers shall be managed in accordance with LAC 33:V.2105. Hazardous wastes being transported offsite must be packaged and labeled in accordance with DOT standards listed in 49 CFR 173 and 178 as required by LAC 33:V.1109 and LAC 33:V.1759.F.

V.B.1.b.(3). If any hazardous waste is emptied from a container, the residue remaining in the container is not considered hazardous waste if the container is "empty" as defined by LAC 33:V.109.

V.B.1.b.(4). With the exception of large containers (tank trucks, roll-off bins, etc.), drums or containers holding thirty (30) gallons or more, must be stored on pallets not more than two (2) containers high with no more than four (4) containers per tier on the pallet.

V.B.1.b.(5). Five (5) gallon containers may be stored pallets three (3) containers high with sixteen (16) containers per tier on each pallet and with a maximum of three (3) pallets per stack.

V.B.1.b.(6). All containers must be placed in a manner allowing waste identification and warning labels to be easily read from the access aisles.

V.B.1.b.(7). All pallets utilized in the storage of hazardous waste containers, irrespective of volume, shall be placed in rows with a minimum of two (2) feet of aisle space between rows, or the width necessary to get emergency equipment to any area of the aisle, whichever is greater.

V.B.1.b.(8). No containers or pallets may be stored directly over drain sumps.

V.B.1.c. Permitted Waste Storage

V.B.1.c.(1). Prior to storage of hazardous waste in the CSAs, the Permittee must perform a comprehensive chemical and physical analysis of a representative sample of the waste in accordance with LAC 33:V.1519.A.

V.B.1.c.(2). Subject to the terms of this permit, the Permittee is allowed to store containers containing hazardous wastes identified in the Part A hazardous waste permit application in excess of ninety (90) days at the CSAs indentified in Table V-B of this permit.

V.B.1.c.(3). At each CSA included in Table V-B, the Permittee is allowed to store a maximum volume of hazardous waste not to exceed the maximum permitted storage capacity specified in Table V-B of this permit.

V.B.1.d. Prohibited Waste Storage

The Permittee is prohibited from storing hazardous waste not listed in the Part A hazardous waste permit application. Non-hazardous wastes and other containerized materials shall be managed in accordance with the terms and conditions of this permit when stored in the CSAs. The Permittee is prohibited from the receipt of offsite generated hazardous waste for storage at the CSAs.

V.B.1.e. Containment Systems

V.B.1.e.(1). The Permittee shall design and operate secondary containment systems in compliance with LAC 33:V.2111.A and B. The Permittee shall manage any collected material as required by LAC 33:V.2111.B.6. Spilled or leaked waste and accumulated precipitation shall be managed in a timely manner in accordance with LAC 33:V.2111.B.5.

V.B.1.e.(2). Except as otherwise provided by LAC 33:V.2111.C, the Permittee shall always maintain enough secondary containment capacity to contain at least ten percent (10%) of the total volume of containers or the volume of the largest container, whichever is greater in accordance with LAC

33:V.2111.B.3. Containers that do not contain free liquids (per the Paint Filter Liquids Test) do not need to be considered in this determination.

V.B.1.f. Requirements for Ignitable, Reactive and Incompatible Wastes

The Permittee must place and store incompatible, ignitable, and reactive wastes only in accordance with LAC 33:V.1517, 2113, and 2115.

V.B.1.g. Inspection Schedules and Procedures

The Permittee must inspect all CSAs and all containers stored within the CSAs a minimum of once every seven (7) calendar days for leaks, deterioration of containers, and releases to or from the secondary containment systems in accordance with LAC 33:V.2109 and LAC 33:V.1509. Results of such inspections must be placed in the operating record in accordance with LAC 33:V.1529.B.8.

V.B.1.h. Leaks and Spills

V.B.1.h.(1). The Permittee shall manage spilled or leaked waste and accumulated precipitation in a timely manner in accordance with LAC 33:V.2111.B.5 and B.6.

V.B.1.h.(2). Within twenty-four (24) hours of detecting a reportable leak or reportable spill from any container(s), the Permittee shall report the leak or spill in accordance with either Condition II.E.16 (Emergency Unauthorized Discharge) or Condition II.E.17 (Non-Emergency Unauthorized Discharge) of this permit.

V.B.1.h.(3). The Permittee must manage any collected material (including, but not limited to, stormwater that is commingled with spills and leaks) as required by LAC 33:V.2111.B.6. All other stormwater shall be managed in accordance with LAC 33:V.1505.A.1 and LAC 33:Subpart IX (Water Quality), as applicable.

V.B.1.i. Recordkeeping

The Permittee shall place in the operating record the results of all waste analyses, trial tests, and any other documentation demonstrating compliance with the requirements of LAC 33:V.1517 and 2115.D.

V.B.1.j. Closure

V.B.1.j.(1). At closure, the Permittee shall clean close all CSAs by adhering to the procedures detailed in the approved closure plan referenced in Attachment 1 of this permit and as required by LAC 33:V.2117 and Chapter 35, Closure Requirements.

V.B.1.j.(2). At closure the Permittee must remove all hazardous waste, residues, and containers from the CSAs. All contaminated soils must also be removed.

V.B.1.j.(3). In the event the Permittee fails to achieve the clean closure performance standard (as specified in the approved closure plan) for a specific CSA, the Permittee shall submit a post-closure plan within ninety (90) days from the date that either the Permittee or the Administrative Authority determines the CSA must be closed as a landfill. The post-closure plan must meet the requirements of LAC 33:V.3523.B.

Table V-B
Container Storage Areas (CSAs)

Unit No. or Name	Dimensions (Feet)	Total Permitted Capacity	Required Containment Capacity
A	~100'X65' (6,500 ft^2)	600,000 pounds	None[1]
B	~90'X~52' (8,400 ft^2)	600,000 pounds	None[2]
C	~100'X~65' (6,000 ft^2)	250,000 pounds	None[2]
D-1	15.7'X55' (~870 ft^2)	12,000 gal[3]	6,000 gal
D-2	71.5'X31.5' (~2,250 ft^2)	12,000 gal[3]	6,000 gal
E	~129.5'X~170' trapezoidal (~23,472 ft^2)	208,931 gal	195,000[4] gal

[1] The container storage area meets LAC 33:V.2111.C.
[2] No secondary containment is required for storage areas with dry solids in the containers that are covered from the rain.
[3] Maximum storage capacity for D-1 and D-2 combined is 24,000 gallons.
[4] Includes direct precipitation and potential run-on per LAC 33:V.2111.B.3 and 4 assuming a 10 inch rainfall in a 24-hour period with use of the container storage area.

V.C. GENERAL REQUIREMETS FOR THE THERMAL TREATMENT UNITS (TTUs)

V.C.1. Permitted and Prohibited Wastes

V.C.1.a. The Permittee may only burn hazardous wastes specified in the Waste Analysis Plan and carrying the hazardous waste codes provided in the Part A permit application.

V.C.1.b. The Permittee is prohibited from burning the following wastes in the TTUs:

V.C.1.b.(1). Dioxin-containing wastes carrying the following wastes codes: F020, F021, F023, F026, F027, and F028.

V.C.1.b.(2). Polychlorinated biphenyls (PCBs) as defined in LAC 33:V.2203.A, unless approval is granted under the TSCA program for such wastes to be burned in the Solvents/EDC 1 Incinerator (F-700). All other TTUs are prohibited from burning TSCA wastes.

V.C.1.b.(3). Source material, special nuclear material, mixed waste, or naturally occurring radioactive materials (NORM) that is not exempt pursuant to LAC 33:XV.

V.C.1.b.(4). Explosive material, as defined by the Department of Transportation in 49 CFR Part 173.

V.C.1.b.(5). Municipal waste.

V.C.1.b.(6). Containerized gases.

V.C.1.b.(7). Medical/Infectious wastes as defined in 40 CFR 60.51.c.

V.C.1.b.(8). Metal bearing wastes listed in LAC 33:V.Chapter 22, Table 12, except as described in LAC 33:V.2207.C.

V.C.1.b.(9). Waste displaying the characteristic of reactivity as defined in LAC 33:V.4903.D.

V.C.1.c. The Permittee shall obtain a permit modification, as required under LAC 33:V.321, prior to burning any wastes not currently authorized under this permit.

V.C.2. Inspections

V.C.2.a. Requirements

V.C.2.a.(1). The Permittee shall inspect the TTUs, air pollution control equipment, and instrumentation in accordance with Table V.C-1 of this permit.

V.C.2.a.(2). The TTUs and associated equipment (pumps, valves, pipes, fuel storage tanks, and other ancillary equipment) will be subject to a daily thorough, visual inspection, when they contain hazardous waste. The purpose of these inspections will be to identify leaks, spills, fugitive emissions, and signs of tampering.

V.C.2.a.(3). The automatic waste feed cut off system and associated alarms must be tested at least weekly when hazardous waste is burned to verify operability, unless the applicant demonstrates to the Administrative Authority that weekly inspections will unduly restrict or upset operations and that less frequent inspections are adequate. Support for this demonstration shall be included in the operational record. At a minimum, operational testing of the automatic waste feed cut off system must be conducted at least monthly, (LAC 33:V.3005 F.3- F.4 and 3119).

V.C.2.b. Records

V.C.2.b.(1). Written inspection records shall be part of the operating record for this permit and are hence subject to LAC 33:V.1529 requirements. At a minimum, the record shall include the following information: (1) the date and time of the inspection, (2) inspector's name, (3) any inspection observations, and (4) date and nature of corrective action. The inspection record shall be completed in accordance with LAC 33:V.1509 and shall be available at all times to the Administrative Authority.

Electronic records may be maintained, in lieu of paper copies.

V.C.2.b.(2). A written record of the automatic waste feed cut-off system tests shall be part of the operating record for this permit and shall be available at all times to the Administrative Authority.

Electronic records may be maintained, in lieu of paper copies.

V.C.3. Monitoring and Calibration

V.C.3.a. Requirements

V.C.3.a.(1). The Permittee shall maintain, calibrate, and operate continuous monitors that monitor and record the operating conditions specified in Conditions V.C and V.D of this permit. The continuous monitoring

parameters shall be as specified in the Group A, B, and C Operating Parameter Limit Tables for each permitted TTU included in this permit. (LAC 33:V.3005.F and 3119).

V.C.3.a.(2). The Administrative Authority may request data be submitted in any format or units that facilitates the completion of air modeling, risk assessment, or compliance procedures.

V.C.3.a.(3). Monitoring samples and measurements shall be representative of the monitored activity and obtained and analyzed in accordance with Condition II.E.9 of this permit.

V.C.3.a.(4). The Permittee must calibrate the equipment specified in Tables V.D.1-3, V.D.2-3, V.D.3-3, and V.D.4-3 according to the manufacturer's specifications. Calibration procedures shall be included in the operating record of the facility and available at all times for review by the Administrative Authority.

V.C.3.a.(5). Hazardous waste may continue to be introduced into the TTUs during daily continuous emission monitoring system (CEMS) calibration check periods. The CEMS shall be maintained according to the following schedule: (1) at least daily, a calibration check of the instrument; (2) at least daily, a system audit; (3) at least quarterly, a calibration error test; and (4) at least annually, a performance specification test. The procedures for CEMS maintenance are outlined in 40 CFR 266 Appendix IX Condition 2.0, "Performance Specifications for Continuous Emission Monitoring Systems."

V.C.3.b. Records

In the operating record, the Permittee shall record and maintain in accordance with LAC 33:V.1529 all monitoring data compiled to satisfy the permit requirements. Minimum monitoring requirements are summarized in LAC 33:V.3005.F. In accordance with LAC 33:V.3005.F.2, all continuous monitors shall record data in units corresponding to the permit limit unless otherwise specified in the permit. Electronic records may be maintained, in lieu of paper copies.

V.C.4. Performance Standards

V.C.4.a. Requirements

The Permittee shall comply with the performance standards specified in Conditions V.D.1.a, V.D.2.a, V.D.3.a, and V.D.4.a of this permit when hazardous waste is burned in the TTUs (LAC 33:V.3009-3015 and 3109-3111).

V.C.4.b. Records

The Permittee shall record in the facility operating record <u>all</u> occasions on which waste is fed to the TTUs and the operating limits specified in this permit are

exceeded. Electronic records may be maintained, in lieu of paper copies.

V.C.5. Automatic Waste Feed Cut Off

V.C.5.a. Requirements

V.C.5.a.(1). The Permittee shall operate the automatic waste feed cut off systems to terminate feed to the TTU when monitored operating conditions deviate from the operating parameter limits specified in Tables V.D.1-1, V.D.2-1, V.D.3-1, and V.D.4-1 of this permit.

V.C.5.a.(2). When hazardous waste is present in the combustion chamber of a TTU, exhaust gases must be vented to the TTU's air pollution control systems. The air pollution control systems must be operated in accordance with all applicable permit requirements.

V.C.5.a.(3). Operating parameters for which permit limits are established must continue to be monitored following the cut off, and the hazardous waste feed shall not be restarted until the levels of those parameters that caused the automatic waste feed cut off are restored to permit limits. All other parameters must also be within permit limits.

V.C.5.a.(4). In the event of a malfunction of the automatic waste feed cut off system, the Permittee shall immediately cut off and/or lock out the waste feed to the TTUs.

V.C.5.b. Records

V.C.5.b.(1). The Permittee shall record in the facility operating record the date and time of all automatic waste feed cut off events. The records shall also include the known or suspected cause of the automatic waste feed cut off, the triggering parameters, root cause, the corrective actions taken, the duration of the event, and the date and time of restarting waste feed following the automatic waste feed cut off.

Electronic records may be maintained, in lieu of paper copies.

V.C.5.b.(2). The operating record shall be maintained in an organized manner for a period of not less than 3 years and be available at all times for inspection by the Administrative Authority (LAC 33:V.3005.H and 3119.D).

V.C.6. Reports

The Permittee shall report activation of the automatic waste feed cut off systems in the annual report described in Condition III.N.2 of this permit. The report shall include summaries of the date, cause, and remedial action for each waste feed cut off activation. The Permittee shall report in writing to the Administrative Authority if

there are more than ten (10) permit required waste feed cut offs per month for a particular TTU. This report shall include date, cause and remedial actions taken and must be submitted within five (5) calendar days of the tenth (10) exceedance.

V.C.7. Regulation of Residues

The Permittee shall regulate all hazardous waste combustion residues in accordance with LAC 33:V.3025.

TABLE V.C-1
COMBUSTION UNIT INSPECTIONS

Equipment/Instrument	Inspection Elements as Applicable to the Specific TTUs	Inspection Frequency
Burner system	Leaks in manifold	Daily
Waste feed system	Atomizing fluid pressure transducer	Daily
	Waste feed pressure transducer	Daily
	Waste feed flowmeter	Daily
Waste tank system	Tank integrity	Daily
	Level controls	Monthly
	Overflow alarms and controls	Monthly
	Secondary containment	Daily
Combustion Units (i.e.: BIFs, Incinerator and rotary kiln)	Fugitive emissions	Daily
	Refractory	Upon every entry into the combustion chamber
Continuous process monitors	Out-of-tolerance operational data[1]	Daily
Automatic waste feed cut off system	Operability	Monthly
Absorber and Scrubber Systems for BIFs and Incinerator	Condition of packing or trays	Annually
	Operation of spray nozzles/distributor trays and recirculation system	Annually
	Condition of mist eliminators	Annually

[1] Out-of-tolerance operational data for continuous process monitors means any unacceptable instrument performance discovered during routine operation and testing (e.g. out of calibration, instrument failure, frequent drift, inaccuracy, imprecision, etc.).

V.D. SPECIFIC OPERATING CONDITIONS FOR THE TTUs

V.D.1. Operating Conditions for the Chlorinated Methanes Boiler (R-750)

The R-750 Boiler shall be subject to the following provisions and operating conditions until such time the Permittee conducts a Comprehensive Performance Test (CPT) in accordance with the Hazardous Waste Combustors Maximum Achievable Control Technology (HWC-MACT) timelines and requirements. After the Administrative Authority issues a Finding of Compliance on the results of the CPT, this permit will be modified and the applicable provisions and operating conditions pertaining to the normal operation of the R-750 Boiler will be transferred to the Permittee's Title V Air Permit.

V.D.1.a. Performance Standards Requirements

V.D.1.a.(1). The R-750 Boiler shall achieve a Destruction and Removal Efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC). The DRE shall be determined by using the method specified in LAC 33:V.3009.A. The POHCs are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial burn.

V.D.1.a.(2). The Permittee shall control emissions of hydrogen chloride (HCl) such that the rate of emissions from the stack is no greater than 2.1 pounds per hour.

V.D.1.a.(3). The Permittee shall control emissions of chlorine (Cl_2) such that the rate of emissions from the stack is no greater than 0.25 pounds per hour.

V.D.1.a.(4). The emissions of particulate matter shall not exceed 0.08 grains per dry standard cubic foot of stack gas, corrected to 7 percent oxygen by volume, in accordance with the formulas specified in LAC 33:V.3011.

V.D.1.a.(5). The emissions of carbon monoxide, corrected to 7 percent oxygen, shall not exceed 100 parts per million by volume on an hourly rolling average in accordance with LAC 33:V.3009.B.

V.D.1.b. Process Operating Conditions

V.D.1.b.(1). Group A Parameter Limits

The Permittee shall operate the R-750 Boiler with a functional automatic waste feed cut off system which terminates waste feeds to the boiler when operating and process conditions deviate from the operating parameter limits prescribed in Table V.D.1-1 and/or the following additional requirements for which no operating parameter limits are specified:

V.D.1.b.(1).(a). Whenever hazardous waste is in the unit, the combustion chamber must be kept totally sealed to protect against the escape of fugitive emissions (LAC 33:V.3005.E.7).

V.D.1.b.(1).(b). The Permittee shall immediately stop the flow of hazardous waste into the boiler should sample flow to the CEMS cease (other than normal calibration periods).

V.D.1.b.(1).(c). The Permittee shall analyze values form the CEMS at a minimum of every fifteen (15) seconds. The Permittee must record these values every sixty (60) seconds in order to demonstrate compliance with monitoring requirements.

V.D.1.b.(1).(d). The Permittee must operate all Continuous Monitoring System (CMS) components consistent with the manufacturer's specifications.

V.D.1.b.(2). Group B and C Parameter Limits

Although the automatic waste feed cut off systems do not have set points for the Group B and Group C parameter limits, the Permittee shall operate the boiler without exceeding the Group B parameter limits in Table V.D.1-2. In addition, O_2 shall be monitored continuously in accordance with CEMS regulations. O_2 level is provided as a correction factor, and as such no limit for O_2 is provided under this condition.

Table V.D.1-1
Group A Operating Parameter Limits
Chlorinated Methanes Boiler (R-750)
Automatic Waste Feed Cut Offs

Control Parameter	Final Operating Limits Automatic Waste Feed Cut Off Point
Maximum total hazardous waste feed rate	1,215,000 grams/hr, hourly-rolling average
Minimum combustion zone temperature	1147 °C, hourly-rolling average
Maximum combustion zone temperature	1466 °C, hourly-rolling average
Maximum stack gas carbon monoxide	100 ppmv, corrected to 7% oxygen on a dry gas basis, hourly-rolling average
Maximum combustion air flow rate	2,793 scfm, hourly-rolling average
Minimum HCl absorber (C-750) blowdown rate	49,470 pounds per hour, hourly-rolling average
Minimum HCl absorber (C-750) L/G ratio	1.6, hourly-rolling average
Minimum chlorine (C-751) scrubber blowdown rate	32,760 pounds per hour, hourly-rolling average
Minimum chlorine (C-751) scrubber L/G ratio	1.17, hourly-rolling average
Minimum chlorine scrubber (C-751) effluent pH	8.6, hourly-rolling average

Table V.D.1-2
Group B and C Operating Parameter Limits
Chlorinated Methanes Boiler (R-750)

Control Parameter	Final Operating Limits
Minimum atomizing fluid pressure	40 psig, 1-minute average
Maximum ash feed rate	4,123 grams/hr, hourly-rolling average
Maximum emission rate limit for total Chromium (Tier III)	0.58 g/hr, hourly-rolling average
Maximum total chlorine and HCl feed rate (Tier III)	1,092,000 grams/hr, hourly-rolling average
Maximum Metals Feed Rate Total Feed Streams	
Maximum feed rate of Antimony (Adjusted Tier I)	198.7 g/hr, hourly-rolling average
*Maximum feed rate of Arsenic (Adjusted Tier I)	0.26 g/hr, hourly-rolling average
Maximum feed rate of Barium (Adjusted Tier I)	106.9 g/hr, hourly-rolling average
*Maximum feed rate of Beryllium (Adjusted Tier I)	0.17 g/hr, hourly-rolling average
*Maximum feed rate of Cadmium (Adjusted Tier I)	0.80 g/hr, hourly-rolling average
*Maximum feed rate of total Chromium (Tier III)	7.69 g/hr, hourly-rolling average
Maximum feed rate of Lead (Adjusted Tier I)	50.0 g/hr, hourly-rolling average
Maximum feed rate of Mercury (Adjusted Tier I)	32.0 g/hr, hourly-rolling average
Maximum feed rate of Silver (Adjusted Tier I)	166.7 g/hr, hourly-rolling average
Maximum feed rate of Thallium (Adjusted Tier I)	152.3 g/hr, hourly-rolling average

* The feed rates of arsenic, beryllium, cadmium, and total chromium are limited to levels such that the sum of the rations of the actual feed rate to the feed rate limits specified in V.D.1.b.(2).(c) shall not exceed 1.0, as provided by the following equation.

$$\sum_{i=1}^{n} AFR_{(i)}/FRL_{(i)} \leq 1.0$$

$AFR_{(i)}$ = **Actual Feed Rate (AFR)**
The actual feed rate of carcinogenic metals (i) introduced into the combustion chamber from all TTU feedstreams.

n = Number of Carcinogenic Metals.

$FRL_{(i)}$ = **Feed Rate Limit (FRL)**
The regulatory feed limit of carcinogenic metals (i) listed in Table V.D.1-2

TABLE V.D.1-3
CHLORINATED METHANES BOILER (R-750)
INSTRUMENTATION TO BE CALIBRATED ACCORDING TO MANUFACTURER'S SPECIFICATIONS

Control Parameter	Calibration frequency
D-750 Vent Flow Rate	Annual
D-751 Vent Flow Rate	Annual
Cellulose Vent Flow Rate	Annual
Vinyl 2 Vent Flow Rate	Annual
Hazardous Waste Feed Rate	Annual
Combustion Chamber Temperature	Annual
Stack Gas Flow Rate	N/A
Stack Gas Oxygen	Annual – RATA Quarterly - ACA
Stack Gas Carbon Monoxide	Annual – RATA Quarterly - ACA
Atomizing Steam Pressure	Annual
Steam Production Rate	N/A
C-750 HCl Absorber Pressure Drop	Annual
C-750 HCl Absorber L/G Ratio	N/A
C-750 HCl Absorber Makeup Flow Rate (Part of L)	Annual
C-751 Chlorine Scrubber Pressure Drop	Annual
C-751 Chlorine Scrubber Cell Effluent (Caustic) Flow Rate (Part of L)	Annual
C-751 Chlorine Scrubber Makeup Water Flow Rate (Part of L)	Annual
C-751 Chlorine Scrubber Flow Rate (L)	N/A
C-751 Chlorine Scrubber L/G Ratio	N/A
C-751 Chlorine Scrubber Effluent pH	Annual
Ash Feed Rate	N/A
Chlorine Feed Rate	N/A
Antimony Feed Rate	N/A
Arsenic Feed Rate	N/A
Barium Feed Rate	N/A
Beryllium Feed Rate	N/A
Cadmium Feed Rate	N/A
Chromium Feed Rate	N/A
Lead Feed Rate	N/A
Mercury Feed Rate	N/A
Silver Feed Rate	N/A
Thallium Feed Rate	N/A

V.D.2. Operating Conditions for the Vinyl II Plant Boilers (F-410 and F-420)

The F-410 and F-420 Boilers shall be subject to the following provisions and operating conditions until such time the Permittee conducts a Comprehensive Performance Test (CPT) in accordance with the Hazardous Waste Combustors Maximum Achievable Control Technology (HWC-MACT) timelines and requirements. After the Administrative Authority issues a Finding of Compliance on the results of the CPT, this permit will be modified and the applicable provisions and operating conditions pertaining to the normal operation of the F-410 and F-420 Boilers will be transferred to the Permittee's Title V Air Permit.

V.D.2.a. Performance Standards Requirements

V.D.2.a.(1). The F-410 and F-420 Boilers shall achieve a Destruction and Removal Efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC). The DRE shall be determined by using the method specified in LAC 33:V.3009.A. The POHCs are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial burn.

V.D.2.a.(2). The Permittee shall control emissions of hydrogen chloride (HCl) such that the rate of emissions from each stack is no greater than 2,270 grams per hour.

V.D.2.a.(3). The Permittee shall control emissions of chlorine (Cl_2) such that the rate of emissions from the stack is no greater than 91 grams per hour.

V.D.2.a.(4). The emissions of particulate matter shall not exceed 0.08 grains per dry standard cubic foot of stack gas, corrected to 7 percent oxygen by volume, in accordance with the formulas specified in LAC 33:V.3011.

V.D.2.a.(5). The emissions of carbon monoxide, corrected to 7 percent oxygen, shall not exceed 100 parts per million by volume on an hourly rolling average in accordance with LAC 33:V.3009.B.

V.D.2.b. Process Operating Conditions

V.D.2.b.(1). Group A Parameter Limits

The Permittee shall operate the F-410 and F-420 Boilers with a functional automatic waste feed cut off system which terminates waste feeds to the boilers when operating and process conditions deviate from the operating parameter limits prescribed in Table V.D.2-1 and/or the following additional requirements for which no operating parameter limits are specified:

V.D.2.b.(1).(a). Whenever hazardous waste is in the units, the combustion chamber must be kept totally sealed to protect against the escape of fugitive emissions (LAC 33:V.3005.E.7).

V.D.2.b.(1).(b). The Permittee shall immediately stop the flow of hazardous waste into the boiler should sample flow to the CEMS cease (other than normal calibration periods).

V.D.2.b.(1).(c). The Permittee shall analyze values form the CEMS at a minimum of every fifteen (15) seconds. The Permittee must record these values every sixty (60) seconds in order to demonstrate compliance with monitoring requirements.

V.D.2.b.(1).(d). The Permittee must operate all Continuous Monitoring System (CMS) components consistent with the manufacturer's specifications.

V.D.2.b.(2). Group B and C Parameter Limits

Although the automatic waste feed cut off systems do not have set points for the Group B and Group C parameter limits, the Permittee shall operate the boiler without exceeding the Group B parameter limits in Table V.D.2-2. In addition, O_2 shall be monitored continuously in accordance with CEMS regulations. O_2 level is provided as a correction factor, and as such, no limit for O_2 is provided under this condition.

Table V.D.2-1
Group A Operating Parameter Limits
Vinyl II Plant Boilers (F-410 and F-420)
Automatic Waste Feed Cut Offs

Control Parameter	Final Operating Limits Automatic Waste Feed Cut Off Point
Maximum total hazardous waste feed rate	1,680,000 grams/hr, hourly-rolling average
Minimum combustion zone temperature	1,142 °C, hourly-rolling average
Maximum combustion zone temperature	1,364 °C, hourly-rolling average
Maximum combustion air flow rate	7,626 scfm, hourly-rolling average
Maximum stack gas carbon monoxide	100 ppmv, corrected to 7% oxygen on a dry gas basis, hourly-rolling average
Minimum C-412/422 HCl Absorber blowdown flow rate	32,700 pounds per hour, hourly-rolling average
Minimum C-412/422 HCl Absorber L/G ratio	3.0, hourly-rolling average
Minimum C-413/423 Chlorine Scrubber blowdown flow rate	26,300 pounds per hour, hourly-rolling average
Minimum C-413/423 Chlorine Scrubber L/G ratio	3.2, hourly-rolling average
Minimum C-413/423 Chlorine Scrubber feed pH	8.0, hourly-rolling average

Table V.D.2-2
Group B and C Operating Parameter Limits
Vinyl II Plant Boilers (F-410 and F-420)

Control Parameter	Final Operating Limits Automatic Waste Feed Cut Off Point
Minimum atomizing fluid pressure	40 psig, 1-minute average
Maximum ash feed rate	7,080 grams/hr, hourly-rolling average
Maximum total chlorine and HCl feed rate (Tier III)	1,430,000 grams/hr, hourly-rolling average
Maximum emission rate limit for total Chromium (Tier III)	0.32 g/hr, hourly-rolling average
Maximum feed rate of Antimony (Adjusted Tier I)	4.77 g/hr, hourly-rolling average
*Maximum feed rate of Arsenic (Adjusted Tier I)	0.48 g/hr, hourly-rolling average
Maximum feed rate of Barium (Adjusted Tier I)	2.22 g/hr, hourly-rolling average
*Maximum feed rate of Beryllium (Adjusted Tier I)	0.16 g/hr, hourly-rolling average
*Maximum feed rate of Cadmium (Adjusted Tier I)	0.91 g/hr, hourly-rolling average
*Maximum feed rate of total Chromium (Tier III)	23.6 g/hr, hourly-rolling average
Maximum feed rate of Lead (Adjusted Tier I)	2.27 g/hr, hourly-rolling average
Maximum feed rate of Mercury (Adjusted Tier I)	12.39 g/hr, hourly-rolling average
Maximum feed rate of Silver (Adjusted Tier I)	11.28 g/hr, hourly-rolling average
Maximum feed rate of Thallium (Adjusted Tier I)	0.79 g/hr, hourly-rolling average

* The feed rates of arsenic, beryllium, cadmium, and total chromium are limited to levels such that the sum of the rations of the actual feed rate to the feed rate limits specified in Table V.D.2-2 shall not exceed 1.0, as provided by the following equation.

$$\sum_{i=1}^{n} AFR_{(i)}/FRL_{(i)} \leq 1.0$$

$AFR_{(i)}$ = **Actual Feed Rate (AFR)**
The actual feed rate of carcinogenic metal (i) introduced into the combustion chamber from all TTU feedstreams.

n = Number of Carcinogenic Metals.

$FRL_{(i)}$ = **Feed Rate Limit (FRL)**
The regulatory feed limit of carcinogenic metal (i) listed in Table V.D.2-2

TABLE V.D.2-3
VINYL II PLANT BOILERS (F-410 AND F-420)
INSTRUMENTATION TO BE CALIBRATED ACCORDING TO MANUFACTURER'S SPECIFICATIONS

Control Parameter	Calibration frequency
Hazardous Waste Feed Rate	Annual
Combustion Temperature	Annual
Combustion Air Flow Rate	Annual
Stack Gas Oxygen	Annual – RATA Quarterly - ACA
Stack Gas Carbon Monoxide	Annual – RATA Quarterly - ACA
Atomizing Steam Pressure	Annual
C-412/422 HCl Absorber Pressure Drop	Annual
C-412/422 HCl Absorber Blowdown Flow Rate	Annual
C-412/422 HCl Absorber L/G Ratio	N/A
C-412/422 HCL Absorber Recirculation Flow Rate (Part of L)	Annual
C-412/422 HCl Absorber Makeup Water Flow Rate (Part of L)	Annual
C-412/422 HCl Absorber Water Flow Rate (L of L/G)	N/A
C-413/423 Chlorine Scrubber Pressure Drop	Annual
C-413/423 Chlorine Scrubber Makeup Water Flow Rate (Alternate for Blowdown Flow Rate)	N/A
C-413/423 Chlorine Scrubber L/G Ratio	N/A
C-413/423 Chlorine Scrubber Effluent pH	Annual
C-413/423 Chlorine Scrubber Water Flow Rate (L of L/G)	N/A
C-413/423 Cell Effluent (Caustic) Flow Rate (Part of L)	Annual
C-413/423 Demister Water Flow Rate (Part of L)	Annual
C-413/423 Soft Water Makeup Flow Rate (Part of L)	Annual
C-413/423 Recirculation Flow Rate (Part of L)	Annual
Ash Feed Rate	N/A
Chlorine Feed Rate	N/A
Antimony Feed Rate	N/A
Arsenic Feed Rate	N/A
Barium Feed Rate	N/A
Beryllium Feed Rate	N/A
Cadmium Feed Rate	N/A
Chromium Feed Rate	N/A
Lead Feed Rate	N/A
Mercury Feed Rate	N/A
Silver Feed Rate	N/A
Thallium Feed Rate	N/A

V.D.3. Operating Conditions for the Glycol I Plant Boiler (R-4)

The R-4 Boiler shall be subject to the following provisions and operating conditions until such time the Permittee conducts a Comprehensive Performance Test (CPT) in accordance with the Hazardous Waste Combustors Maximum Achievable Control Technology (HWC-MACT) timelines and requirements. After the Administrative Authority issues a Finding of Compliance on the results of the CPT, this permit will be modified and the applicable provisions and operating conditions pertaining to the normal operation of the R-4 Boiler will be transferred to the Permittee's Title V Air Permit.

V.D.3.a. Performance Standards Requirements

V.D.3.a.(1) The R-4 Boiler shall achieve a Destruction and Removal Efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC). The DRE shall be determined by using the method specified in LAC 33:V.3009.A. The POHCs are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial burn.

V.D.3.a.(2). The Permittee shall control emissions of hydrogen chloride (HCl) such that the rate of emission from the stack is no greater than 90.8 grams per hour.

V.D.3.a.(3). The Permittee shall control emissions of chlorine (Cl_2) such that the rate of emissions from the stack is no greater than 91 grams per hour.

V.D.3.a.(4). The emissions of particulate matter shall not exceed 0.08 grains per dry standard cubic foot of stack gas, corrected to 7 percent oxygen by volume, in accordance with the formulas specified in LAC 33:V.3011.

V.D.3.a.(5). The emissions of carbon monoxide, corrected to 7 percent oxygen, shall not exceed 100 parts per million by volume on an hourly rolling average in accordance with LAC 33:V.3009.B.

V.D.3.b. Process Operating Conditions

V.D.3.b.(1). Group A Parameter Limits

The Permittee shall operate the R-4 Boiler with a functional automatic waste feed cut off system which terminates waste feeds to the boiler when operating and process conditions deviate from the operating parameter limits prescribed in Table V.D.3-1 and/or the following additional requirements for which no operating parameter limits are specified:

V.D.3.b.(1).(a). Whenever hazardous waste is in the unit, the combustion chamber must be kept totally sealed to protect against the escape of fugitive emissions (LAC 33:V.3005.E.7).

V.D.3.b.(1).(b). The Permittee shall immediately stop the flow of hazardous waste into the boiler should sample flow to the CEMS cease (other than normal calibration periods).

V.D.3.b.(1).(c). The Permittee shall analyze values form the CEMS at a minimum of every fifteen (15) seconds. The Permittee must record these values every sixty (60) seconds in order to demonstrate compliance with monitoring requirements.

V.D.3.b.(1).(d). The Permittee must operate all Continuous Monitoring System (CMS) components consistent with the manufacturer's specifications.

V.D.3.b.(2). Group B and C Parameter Limits

Although the automatic waste feed cut off systems do not have set points for the Group B and Group C parameter limits, the Permittee shall operate the boiler without exceeding the Group B parameter limits in Table V.D.3-2. In addition, O_2 shall be monitored continuously in accordance with CEMS regulations. O_2 level is provided as a correction factor, and as such, no limit for O_2 is provided under this condition.

Table V.D.3-1
Group A Operating Parameter Limits
Glycol I Plant Boiler (R-4)
Automatic Waste Feed Cut Offs

Control Parameter	Final Operating Limits Automatic Waste Feed Cut Off Point
Maximum total hazardous waste feed rate	1,634,700 grams/hr, hourly-rolling average
Minimum combustion zone temperature	1042 °C, hourly-rolling average
Maximum combustion air flow rate	8,917 scfm, hourly-rolling average
Maximum stack gas carbon monoxide	100 ppmv, corrected to 7% oxygen on a dry gas basis, hourly-rolling average
Minimum T-200 HCl Absorber blowdown water flow rate	22,370 #/hr, hourly-rolling average
Minimum T-200 HCl Absorber L/G	0.5, hourly-rolling average
Minimum T-201 Chlorine Scrubber blowdown water flow rate	35,380 #/hr, hourly-rolling average
Minimum T-201 Chlorine Scrubber L/G	1.1, hourly-rolling average
Minimum T-201 Chlorine Scrubber feed pH	8.0, hourly-rolling average

Table V.D.3-2
Group B and C Operating Parameter Limits
Glycol I Plant Boiler (R-4)

Control Parameter	Final Operating Limits Automatic Waste Feed Cut Off Point
Minimum atomizing fluid pressure	40 psig, 1-minute average
Maximum ash feed rate	2.95 lbs/hr, hourly-rolling average
Maximum total chlorine and HCl feed rate (Tier III)	1,680 lbs/hr, hourly-rolling average
Maximum Metals Feed Rate Total Feed Streams	
Maximum feed rate of Antimony (Adjusted Tier I)	46.8 g/hr, hourly-rolling average
*Maximum feed rate of Arsenic (Adjusted Tier I)	0.8 g/hr, hourly-rolling average
Maximum feed rate of Barium (Adjusted Tier I)	138 g/hr, hourly-rolling average
*Maximum feed rate of Beryllium (Adjusted Tier I)	0.19 g/hr, hourly-rolling average
*Maximum feed rate of Cadmium (Adjusted Tier I)	0.19 g/hr, hourly-rolling average
*Maximum feed rate of total Chromium (Adjusted Tier I)	0.3g/hr, hourly-rolling average
Maximum feed rate of Lead (Adjusted Tier I)	75.6 g/hr, hourly-rolling average
Maximum feed rate of Mercury (Adjusted Tier I)	49.7 g/hr, hourly-rolling average
Maximum feed rate of Silver (Adjusted Tier I)	160 g/hr, hourly-rolling average
Maximum feed rate of Thallium (Adjusted Tier I)	170 g/hr, hourly-rolling average

* The feed rates of arsenic, beryllium, cadmium, and total chromium are limited to levels such that the sum of the rations of the actual feed rate to the feed rate limits specified in Table V.D.3-2 shall not exceed 1.0, as provided by the following equation.

$$\sum_{i=1}^{n} AFR_{(i)}/FRL_{(i)} \leq 1.0$$

$AFR_{(i)}$ = **Actual Feed Rate (AFR)**
The actual feed rate of carcinogenic metal (i) introduced into the combustion chamber from all TTU feedstreams.

n = Number of Carcinogenic Metals.

$FRL_{(i)}$ = **Feed Rate Limit (FRL)**
The regulatory feed limit of carcinogenic metal (i) listed in Table V.D.3-2

TABLE V.D.3-3
GLYCOL I PLANT THERMAL TREATMENT UNIT (R-4)
INSTRUMENTATION TO BE CALIBRATED ACCORDING TO MANUFACTURER'S SPECIFICATIONS

Control Parameter	Calibration Frequency
Hazardous Waste Feed Rate	Annual
Combustion Temperature	Annual
Stack Gas Flow Rate	Annual
Stack Gas Oxygen	Annual – RATA Quarterly - ACA
Stack Gas Carbon Monoxide	Annual – RATA Quarterly - ACA
Atomizing Air Pressure	Annual
T-200 HCl Absorber Minimum L/G Ratio	N/A
T-200 HCl Absorber Minimum Blowdown Flow Rate	Annual
T-200 HCl Absorber Process Water Flow Rate (Part of L)	Annual
T-200 HCl Absorber Recirculation Flow Rate (Part of L)	Annual
T-200 HCl Absorber Water Flow Rate (L for L/G)	N/A
T-201 Chlorine Scrubber Effluent pH	Annual
T-201 Chlorine Scrubber Minimum Blowdown Flow Rate	Annual
T-201 Chlorine Scrubber Process Water Flow Rate (Part of L)	Annual
Scrubber System Minimum Differential Pressure	Annual
T-201 Chlorine Scrubber Recirculation Flow Rate (Part of L)	Annual
T-201 Chlorine Scrubber Demin Water Flow Rate (Part of L)	Annual
T-201 Chlorine Scrubber Cell Effluent (Caustic) Flow Rate (Part of L)	Annual
T-201 Chlorine Scrubber Water Flow Rate (L of L/G)	N/A
T-201 Chlorine Scrubber Minimum L/G Ratio	N/A
Ash Feed Rate	N/A
Chlorine Feed Rate	N/A
Antimony Feed Rate	N/A
Arsenic Feed Rate	N/A
Barium Feed Rate	N/A
Beryllium Feed Rate	N/A
Cadmium Feed Rate	N/A
Chromium Feed Rate	N/A
Lead Feed Rate	N/A
Mercury Feed Rate	N/A
Silver Feed Rate	N/A
Thallium Feed Rate	N/A

V.D.4. Operating Conditions for the Solvents/EDC Incinerator (F-700)

The F-700 Incinerator shall be subject to the following provisions and operating conditions until such time the Permittee conducts a Comprehensive Performance Test (CPT) in accordance with the Hazardous Waste Combustors Maximum Achievable Control Technology (HWC-MACT) timelines and requirements. After the Administrative Authority issues a Finding of Compliance on the results of the CPT, this permit will be modified and the applicable provisions and operating conditions pertaining to the normal operation of the F-700 Incinerator will be transferred to the Permittee's Title V Air Permit.

V.D.4.a. Performance Standards Requirements

V.D.4.a.(1). The F-700 Incinerator shall achieve a Destruction and Removal Efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC). The DRE shall be determined by using the method specified in LAC 33:V.3111.A.1. The POHCs are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial burn.

V.D.4.a.(2). The Permittee shall control emissions of hydrogen chloride (HCl) such that the rate of emission from the stack is no greater than 90.8 grams per hour.

V.D.4.a.(3). The Permittee shall control emissions of chlorine (Cl_2) such that the rate of emissions from the stack is no greater than 113.5 grams per hour.

V.D.4.a.(4). The emissions of particulate matter shall not exceed 0.08 grains per dry standard cubic foot of stack gas, corrected to 7 percent oxygen by volume, in accordance with the formulas specified in LAC 33:V.Chapter 31.

V.D.4.a.(5). The emissions of carbon monoxide, corrected to 7 percent oxygen, shall not exceed 100 parts per million by volume on an hourly rolling average.

V.D.4.b. Process Operating Conditions

V.D.4.b.(1). Group A Parameter Limits

The Permittee shall operate the Solvents/EDC Incinerator with a functional automatic waste feed cut off system which terminates waste feeds to the boiler when operating and process conditions deviate from the operating parameter limits prescribed in Table V.D.4-1 and/or the following additional requirements for which no operating parameter limits are specified:

V.D.4.b.(1).(a). Whenever hazardous waste is in the unit, the combustion chamber must be kept totally sealed to protect against the

escape of fugitive emissions (LAC 33:V.3005.E.7).

V.D.4.b.(1).(b). The Permittee shall immediately stop the flow of hazardous waste into the boiler should sample flow to the CEMS cease (other than normal calibration periods).

V.D.4.b.(1).(c). The Permittee shall analyze values form the CEMS at a minimum of every fifteen (15) seconds. The Permittee must record these values every sixty (60) seconds in order to demonstrate compliance with monitoring requirements.

V.D.4.b.(1).(d). The Permittee must operate all Continuous Monitoring System (CMS) components consistent with the manufacturer's specifications.

V.D.4.b.(2). Group B and C Parameter Limits

Although the automatic waste feed cut off systems do not have set points for the Group B and Group C parameter limits, the Permittee shall operate the incinerator without exceeding the Group B and Group C parameter limits in Table V.D.4-2. In addition, O_2 shall be monitored continuously in accordance with CEMS regulations. O_2 level is provided as a correction factor, and as such, no limit for O_2 is provided under this condition.

Table V.D.4-1
Group A Operating Parameter Limits
Solvent/EDC Incinerator (F-700)
Automatic Waste Feed Cut Offs

Control Parameter	Final Operating Limits Automatic Waste Feed Cut Off Point
Maximum total hazardous waste feed rate	5000 lbs/hr, hourly-rolling average
Minimum combustion zone temperature	Minimum temperature: 1042 °C, hourly-rolling average
Maximum combustion stack gas flow rate	3,891 acfm, hourly-rolling average
Maximum stack gas carbon monoxide	100 ppmv, corrected to 7% oxygen on a dry gas basis, hourly-rolling average
Minimum C-720 HCl Absorber makeup water flow rate	100 gpm, hourly-rolling average
Minimum C-720 HCl Absorber L/G	0.134 gpm/acfm, hourly-rolling average
Minimum Pressure Drop Across C-730 Chlorine Scrubber	2.0 psi, hourly-rolling average
Minimum C-730 Chlorine Scrubber Makeup Water Flow Rate	500 gpm, hourly-rolling average
Minimum C-730 Chlorine Scrubber L/G	0.257 gpm/acfm, hourly-rolling average
Minimum C-730 Chlorine Scrubber Effluent pH	8.8 hourly-rolling average

Table V.D.4-2
Group B and C Operating Parameter Limits[1]
Solvent/EDC Incinerator (F-700)

Control Parameter	Final Operating Limits Automatic Waste Feed Cut Off Point
Minimum Atomizing Fluid Pressure	40 psig, 1-minute average
Maximum Ash Feed Rate	1.52 lbs/hr, hourly-rolling average
Maximum Total Chlorine/Chloride Feed Rate (Tier III)	4,540 lbs/hr, hourly-rolling average
Maximum SVM (Cd & Pb)	0.004 lbs/hr, hourly-rolling average
Maximum LVM (As, Be & Cr)	0.014 lbs/hr, hourly-rolling average

[1] DEQ approved interim operating limits based upon comprehensive performance test (condition 1) and letters to Dow dated August 16, 2008 (EDMS Document # 36204218) and August 28, 2008 (EDMS Document # 36227930).

TABLE V.D.4-3 / SOLVENT EDC INCINERATOR (F-700) INSTRUMENTATION TO BE CALIBRATED ACCORDING TO MANUFACTURER'S SPECIFICATIONS

Control Parameter	Control Parameter
Hex Feed Flow	Annual
EDC 1 Heavies Feed Rate	Annual
Solvent Heavies Feed Rate	Annual
Glycol 1 Feed Rate	Annual
"Taffy" Feed Rate	Annual
Slim Nozzle Feed Rate	Annual
General Waste Feed Rate	Annual
D-42 Vent Flow Rate	Annual
K-102 Vent Flow Rate	Annual
Tet Hydrogen Vent Flow Rate	Annual
D-700 Vent Flow Rate	Annual
D-702 Vent Flow Rate	Annual
Hazardous Waste Feed Rate	N/A
Combustion Chamber Temperature (West/South)	Annual
Stack Gas Flow Rate	Annual
Stack Gas Oxygen	Annual – RATA Quarterly - ACA
Stack Gas Carbon Monoxide	Annual – RATA Quarterly - ACA
Steam Pressure to Hex Nozzle	Annual
Steam Pressure to Slim Nozzle	Annual
Air Pressure to "Taffy" Nozzle	Annual
Steam Pressure to General Waste Nozzle Steam Pressure	Annual
C-720 HCl Absorber Makeup Water Flow Rate	Annual
C-730 Chlorine Scrubber Makeup Water Flow Rate	Annual
C-730 Chlorine Scrubber Inlet Temperature	Annual
C-730 Chlorine Scrubber Effluent pH	Annual
C-730 Chlorine Scrubber L/G Ratio	N/A
C-720 HCl Absorber L/G Ratio	N/A
C-720 HCl Absorber Differential Pressure	Annual
C-730 Chlorine Scrubber Differential Pressure	Annual
Total Ash Feed Rate	N/A
Total Chlorine/Chloride Feed Rate	N/A
Mercury Feed Rate	N/A
Total SVM (Cd & Pb) Feed Rate	N/A
Total LVM (As, Be & Cr) Feed Rate	N/A

V.D.5. Operating Conditions for the Environmental Operations TTU (I-200)

The Environmental Operations TTU (I-200) is in the process of closure and no longer actively manages hazardous waste. All waste feed systems to I-200 have been dismantled. Therefore, no parameter limits (OPLs) will be specified for I-200. However, until clean closure of I-200 and all ancillary systems is verified by the Administrative Authority, I-200 will remain referenced in this permit as a permitted hazardous waste unit.

V.E. RISK-BASED CONDITIONS

(RESERVED)

V.F. BLOCK 80 HAZARDOUS WASTE LANDFILL

V.F.1. General Design, Construction, and Requirements

V.F.1.a. The design, construction, and operation of the landfill must comply with this permit, the Rules and Regulations as set forth in LAC 33:V.517 and LAC 33:V.Chapter 25, and as specified in the plans and specifications for design, construction, and operation as included in Attachment 1 of this permit. All plans and specifications for the design, construction, and operation of the hazardous waste landfill are incorporated by reference into this permit.

V.F.1.b. Any variance from or modification to the approved drawings, plans, and specifications incorporated by reference in this permit or the terms and conditions of this permit is prohibited without prior written approval from the Administrative Authority.

V.F.1.c. The Administrative Authority reserves the right to require the implementation of additional procedures if it is subsequently determined that a change is implemented without prior approval, as specified in Condition V.F.1.b.

V.F.2. General Operating Conditions

The Permittee shall operate and maintain the Block 80 Hazardous Waste Landfill to meet the following performance standards:

V.F.2.a. Operate and maintain a run-on control system capable of preventing flow onto the active portion of the landfill during peak discharge from a 24-hour, 25-year storm in accordance with LAC 33:V.2503.D. Any incidences of run-on entering the containment areas shall be reported and made a part of the Annual Report.

V.F.2.b. Operate and maintain a run-off management system to collect and control at least the water volume resulting, from a 24-hour, 25-year storm in accordance with LAC 33:V.2503.E. Any incidences of run-off not collected and controlled shall be reported and made a part of the Annual Report.

V.F.2.c. The Permittee may landfill only wastes which at a minimum meet the criteria specified in LAC 33:V.2503, 2511, 2513, 2515, 2517 and 2519.

V.F.2.d. The Permittee shall not place bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids (whether or not absorbents have been added) in the landfill.

V.F.2.e. All collection and holding facilities (sumps and tanks) associated with the run-on and run-off containment systems shall be emptied expeditiously to maintain the design capacity of the system as required by LAC 33:V.2503.F.

V.F.2.f. Waste within the landfill must be covered or otherwise managed to insure minimum wind dispersal as required by LAC 33:V.2503.G.

V.F.2.g. While in operation, the landfill shall be inspected weekly and after storms, as required under LAC 33:V.2507.C, to detect evidence of any of the following:

> **V.F.2.g.(1).** deterioration, malfunctions, or improper operation of run-on and run-off control systems;
>
> **V.F.2.g.(2).** the presence of liquids in leak detection systems;
>
> **V.F.2.g.(3).** proper functioning of wind dispersal control system (when applicable); and
>
> **V.F.2.g.(4).** the presence of leachate in and proper functioning of leachate collection and removal system.

V.F.2.h. Accumulated rainfall and groundwater must be removed from the active portions of the landfill in a timely manner.

V.F.2.i. The receiving and monitoring of wastes into the landfills shall be performed according to LAC 33:V.1527, and the Waste Analysis Plan (Attachment 1).

V.F.2.j. The leak detection system and the leachate collection and removal system must be properly maintained and inspected weekly and after storms to detect the presence of liquids and the proper functioning of the systems. If liquids are encountered at the level of greater than one (1) foot above the lip of the collection sump in a leachate collection system, it shall be removed to the lowest practical level. For both leachate collection and detection systems, records shall be maintained on the amount of fluid removed each week. Th e volume of fluid removed from each leachate collection and detection system must be reported quarterly.

V.F.2.k. The Permittee must maintain operating records as required by LAC 33:V.2509. At a minimum the accurate location of each waste load shall be recorded in the operating record within twenty-four (24) hours of being placed in the landfill. These records are to include a system of accurate tracking of each waste load throughout the facility. The tracking system must record: pre-acceptance information and analyses, the date of the pre-acceptance data, all internal transfers of wastes from receipt at the landfill to treatment (if applicable), storage and final disposal, all internal waste transfers for on-site generated wastes such as contaminated rainwater, landfill leachate, the contents, date, weight or volume and location of wastes disposed of in the landfill.

V.F.3. Permitted and Prohibited Waste

V.F.3.a. Permitted Waste

V.F.3.a.(1). Subject to the terms of this permit, the Permittee is allowed to dispose of ash generated by the treatment of hazardous waste in the Permittee's onsite thermal treatment units and as described in the Permittee's Part B Permit Application.

V.F.3.a.(2). The Permittee may request approval from the Administrative Authority to dispose of non-hazardous and hazardous debris generated from onsite turnaround and/or closure activities (e.g., refractory, fiberglass, and column packing) associated with the Permittee's thermal treatment units. Approval to dispose of non-hazardous and hazardous debris in the landfill will be granted by the Administrative Authority on a case-by-basis. Requests by the Permittee for Administrative Authority approval must be accompanied by the following information and data (e.g., analytical data, narratives, etc.):

V.F.3.a.(2).(a). detailed description(s) of the type, volume, and physical and chemical characteristics of the non-hazardous and hazardous debris;

V.F.3.a.(2).(b). drawings and descriptions depicting the specific location(s) within the landfill that the Permittee proposes to dispose of the non-hazardous and hazardous debris;

V.F.3.a.(2).(c). information and/or data demonstrating that the non-hazardous and hazardous debris has been properly decontaminated;

V.F.3.a.(2).(d). information and/or data demonstrating that the non-hazardous and hazardous debris is compatible with all wastes disposed of in the landfill; and

V.F.3.a.(2).(e). information and/or data demonstrating that disposal of the non-hazardous and hazardous debris will not compromise the stability of the landfill.

V.F.3.a.(3). The Administrative Authority reserves the right to require additional groundwater monitoring parameters to be added to the Block 80 Hazardous Waste Landfill groundwater monitoring program based upon profiles of non-hazardous and hazardous debris waste disposed of in the Block 80 Hazardous Waste Landfill on a case-by case basis.

V.F.4. Closure

Closure shall be in conformance with LAC 33:V.2521, LAC 33:V.Chapter 35, and the approved closure plan as referenced in Attachment 1.

V.F.4.a. At final closure, the Permittee must cover the landfill with a final cover designed and constructed to:

V.F.4.a.(1). provide long-term minimization of migration of liquids through the closed landfill;

V.F.4.a.(2). function with minimum maintenance;

V.F.4.a.(3). promote drainage and minimize erosion or abrasion of the cover;

V.F.4.a.(4). accommodate settling and subsidence so that the cover's integrity is maintained; and

V.F.4.a.(5). have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

V.F.5. Post-Closure

Upon closure certification and modification of this permit, post-closure shall be in conformance with LAC 33:V.2521, LAC 33:V.Chapter 35, and the approved post-closure plan as referenced in Attachment 1.

V.F.5.a. After final closure, the Permittee must comply with all post-closure requirements contained in LAC 33:V.3519-3527, including maintenance and monitoring throughout the post-closure care period (as specified in LAC 33:V.3521.A.1). The Permittee must:

V.F.5.a.(1). maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;

V.F.5.a.(2). maintain and monitor the leak detection system in accordance with LAC 33:V.2503.L.4.d, 2503.L.5, and 2507.D, where such a system is present between double liner systems and comply with all other applicable leak detection system requirements of LAC 33:V.Subpart 1;

V.F.5.a.(3). continue to operate the leachate collection and removal system until leachate is no longer detected;

V.F.5.a.(4). maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of LAC 33:V.Chapter 33;

V.F.5.a.(5). prevent run-on and run-off from eroding or otherwise damaging the final cover; and

V.F.5.a.(6). protect and maintain surveyed benchmarks used in complying with LAC 33:V.Chapter 33.

V.G. PERMIT CONDITIONS APPLICABLE TO PERMITTED CLOSED UNITS

V.G.1. Post-Closure Care Period

The post-closure care period will be in effect for the period of thirty (30) years, unless extended or shortened by the Administrative Authority, as specified in LAC 33:V.3521.A.1 and 2.

V.G.1.a. NWLF/CAMU: Closure certification report was submitted on January 17, 2007 and closure was verified on May 8, 2007. The post-closure care period will commence upon the effective date of this permit and in accordance with the approved Post-Closure Plan referenced in Attachment 1 of this permit.

V.G.2. Post-Closure Maintenance

The owner or operator must comply with all post-closure requirements contained in LAC 33:V.3519 through 3527 and Condition I II.P of this permit, including maintenance and monitoring throughout the post-closure care period specified in the permit under Condition V.G.1 and LAC 33:V.3521.A.1. The owner or operator must:

V.G.2.a. for all permitted units, maintain the integrity and effectiveness of the final cover, including making repairs as necessary to correct the effects of settling, subsidence, erosion, or other events;

V.G.2.b. for all permitted units, maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of LAC 33:V.Chapter 33;

V.G.2.c. for all permitted units, manag e a run-on and run-off control system to prevent erosion at and other damage to the final cover;

V.G.2.d. for all permitted units, maintain the cover with a final cover designed, constructed and maintained to:

V.G.2.d.(1). provide long-term minimization of migration of liquids through the landfill;

V.G.2.d.(2). function with minimal maintenance at all permitted units;

V.G.2.d.(3). promote drainage and minimize erosion or abrasion of the final cover at all permitted units;

V.G.2.d.(4). accommodate settling and subsidence, as necessary, so that the cover's integrity is maintained for all permitted units; and

V.G.2.d.(5). have a permeability less than or equal to the permeability of any bottom liner system or natural sub-soils present at the landfill.

V.G.2.e. The annual report shall include a Post-Closure activity report for the NWLF/CAMU.

V.G.3. Leachate Collection and Leak Detection Systems

V.G.3.a. The Permittee must continue to operate and maintain the NWLF/CAMU Leachate Recovery Trench System as described in the latest approved version of the "Remediation Plan – Northwest Landfill" referenced in Attachment 1. [Note: the "Remediation Plan – Northwest Landfill" was implemented prior to the unit's designation as the NWLF/CAMU].

V.G.3.b. The Permittee must continue to operate and maintain the NWLF/CAMU leak detection wells as described in the latest approved version of the "Remediation Plan – Northwest Landfill" referenced in Attachment 1.

VI. GROUNDWATER PROTECTION

VI.A. APPLICABILITY

The regulations of LAC 33:V.Chapter 33 (Groundwater Protection), and Louisiana Hazardous Waste Control Law Revised Statute R.S., 30:2171 of the Environmental Quality Act, R.S., 30:2001 et seq., and the provisions of Condition VI shall apply to groundwater protection programs at the units identified in Tables IV-D and IV-E of this permit. All requirements of Condition VI must be satisfied and shall apply until the Administrative Authority has accepted the certification of completion of post-closure care required by regulation and under Condition III.P.7 of this permit. This includes compliance, closure, and post-closure care periods.

The units referenced in Tables IV-D and IV-E of this permit are subject to groundwater monitoring under Detection Monitoring Programs. The Permittee must establish, expand or continue Compliance Monitoring and/or Corrective Action Programs for all regulated units whenever hazardous constituents from a regulated unit are "detected" in groundwater as defined in LAC 33:V.3303.A.1 and/or the groundwater protection standard is "exceeded" as defined in LAC 33:V.3303.A.2. The Compliance Monitoring and Corrective Action Monitoring Programs shall be in accordance with the requirements of LAC 33:V.Chapter 33 and as subsequently directed by the Administrative Authority.

VI.B. REQUIRED PROGRAMS

The regulated units referenced in Tables IV-D (Block 80 Hazardous Waste Landfill) and IV-E (NWLF/CAMU) are under an ongoing Detection Monitoring Program. The Permittee must continue to conduct the Detection Monitoring Program per Condition VI.H of this permit using the existing monitoring system specified in Condition VI and as stated in the most current approved Groundwater Detection Monitoring Plan referenced in Attachment 1.

In the event any groundwater point of compliance monitoring wells in Condition VI.D and Tables VI-B and VI-C of this permit exhibit statistically significant evidence of contamination as a result of a release from the regulated unit and as described in LAC 33:V.3317.F, the Permittee shall modify the permit in accordance with LAC 33:V.321 and Condition VI.J of this permit in order to establish a Compliance Monitoring Program (unless a demonstration under LAC 33:V.3317.G.6 has been satisfactorily documented by the Permittee). The establishment of concentration limits at the point of compliance does not exempt the Permittee from implementing corrective action to address contamination detected by monitoring wells (e.g., leak detection wells) that are not designated as point of compliance wells.

All wells and any associated piezometers described in Table VI-A of this permit must be maintained, protected from moving equipment, and cannot be abandoned unless exempted from the program at a later date by the Administrative Authority, or unless the integrity of the well or piezometer is threatened. In such a case, it must be replaced with a new well, in conformance with a work plan approved by the Administrative Authority (see Condition

VI.L – Construction and Abandonment of Monitoring Wells and Geotechnical Boreholes). The Permittee must include revised facility maps in the Annual Report, depicting all monitoring wells associated with the regulated units.

VI.C. GROUNDWATER PROTECTION STANDARD

The regulated units referenced in Tables VI-B and VI-C of this permit are currently monitored under Detection Monitoring Programs and, therefore, no groundwater protection standards are currently applicable. However, the Administrative Authority shall establish the groundwater protection standard when hazardous constituents from a regulated unit have been *detected* (as defined by LAC 33:V.3303.A.1). The groundwater protection standard shall be required during the Compliance Monitoring Program and/or Correction Action Program and will be the concentration limit that shall indicate when corrective action must begin and when it may be terminated.

If, at a later date, the Permittee is required to implement a Compliance Monitoring Program under the terms and conditions of this permit, the Permittee must comply with the conditions specified in this permit that are designed to ensure that hazardous constituents (Condition VI.D) detected (as defined by LAC 33.V.3303.A.1) do not exceed the concentration limits (Condition VI.D) in the uppermost permeable zones underlying the regulated units, beyond or below the point of compliance (Condition VI.E) during the compliance period (Condition VI.F).

VI.D. HAZARDOUS CONSTITUENTS, PARAMETERS, ANALYTICAL FREQUENCY AND CONCENTRATION LIMITS

The Permittee is required to monitor the point of compliance wells specified in Table VI-A for the hazardous constituents (or parameters) specified in Tables VI-B and VI-C. Groundwater at the point of compliance shall be monitored to detect potential changes in groundwater quality as compared against groundwater background concentrations (concentration of constituents in groundwater that represent the quality of groundwater not contaminated by hazardous waste activity at the site). The concentrations of hazardous constituents from point of compliance wells shall be compared against data on groundwater background concentrations in order to determine whether there is statistical significant evidence of in an increase in the concentration of hazardous constituents over background. If hazardous waste constituents are "detected" (as defined in LAC 33:V.3303.A.1) at the point of compliance as a result of a release from the regulated unit, the Permittee shall submit a permit modification (in accordance with LAC 33:V.321) to implement a Compliance Monitoring Program (unless a demonstration under LAC 33:V.3317.G.6 has been satisfactorily documented by the Permittee). At that time, the Administrative Authority shall establish concentration limits (or MCLs) for the hazardous waste constituents specified in Tables VI-B and VI-C. The concentration limits would also serve as the groundwater protection standard defined in LAC 33:V.3305.

VI.E. POINT OF COMPLIANCE

The point of compliance wells listed in Table VI-A are monitored as a part of ongoing Detection Monitoring Programs associated with the regulated units. If hazardous constituents are detected at the point of compliance (as defined in LAC 33:V.3303.A.1) as a result of a release from a regulated unit, then the groundwater protection standard of LAC 33:V.3305.A shall apply to wells at the point of compliance and beyond. If hazardous constituents are detected in the upper permeable zone underlying the waste management area, the next vertical aquifer or permeable zone must also be monitored.

If the concentration of any hazardous constituents exceed the groundwater protection standard (as described in LAC 33:V.3303.A.2) as a result of a release from the regulated unit, the Permittee shall institute a Corrective Action Program in accordance with LAC 33:V.3322. During the Corrective Action Program (i.e., until such time as hazardous constituents are no longer detected above the groundwater protection standard at the point of compliance and beyond), the groundwater quality at each monitoring well (including point of compliance wells, plume defining wells and recovery wells) identified in Table VI-A must be monitored in order to determine the effectiveness of the corrective action. Additional monitoring wells may be installed, as required.

Table VI-A
Monitoring Well Network

Well	Regulated Unit	Well Type	Zone Screened	Sampling Frequency
Well UH1	Block 80 HWLF	Upgradient	First Pervious[1]	Semi-Annually
Well DH2	Block 80 HWLF	POC	First Pervious[1]	Semi-Annually
Well DH3	Block 80 HWLF	POC	First Pervious[1]	Semi-Annually
Well DH4	Block 80 HWLF	POC	First Pervious[1]	Semi-Annually
Well DH5	Block 80 HWLF	POC	First Pervious[1]	Semi-Annually
Well UN1	NWLF/CAMU	Upgradient	Second Pervious[2]	Semi-Annually
Well UN2	NWLF/CAMU	Upgradient	Second Pervious[2]	Semi-Annually
Well DN3	NWLF/CAMU[2]	POC[3]	Second Pervious[2]	Semi-Annually
Well DN4	NWLF/CAMU[2]	POC[3]	Second Pervious[2]	Semi-Annually
Well DN6	NWLF/CAMU[2]	POC[3]	Second Pervious[2]	Semi-Annually
Well DN7	NWLF/CAMU[2]	POC[3]	Second Pervious[2]	Semi-Annually
Well DN8	NWLF/CAMU[2]	POC[3]	Second Pervious[2]	Semi-Annually
Well NN5	NWLF/CAMU	Monitoring Well	Plaquemine Aquifer	Semi-Annually
Well LD2	NWLF/CAMU	Leak Detection	Surface Soils[4]	Semi-Annually

Well	Regulated Unit	Well Type	Zone Screened	Sampling Frequency
Well LD3	NWLF/CAMU	Leak Detection	Surface Soils[4]	Semi-Annually
Well LD4	NWLF/CAMU	Leak Detection	Surface Soils[4]	Semi-Annually
Well LD5	NWLF/CAMU	Leak Detection	Surface Soils[4]	Semi-Annually
Well LD6	NWLF/CAMU	Leak Detection	Surface Soils[4]	Semi-Annually
Well LD7	NWLF/CAMU	Leak Detection	Surface Soils[4]	Semi-Annually
Well LD8	NWLF/CAMU	Leak Detection	Surface Soils[4]	Semi-Annually

[1]The First Pervious Zone is also known as the Shallow Pervious Zone.

[2]The Second Pervious Zone is also known as the Deep Pervious Zone.

[3]The First Pervious Zone is not continuous and is not present in some areas in the vicinity of the NWLF/CAMU. The Second Pervious Zone is the first continuous permeable zone underlying the NWLF/CAMU. Therefore, the point of compliance for the NWLF/CAMU has been established at the Second Pervious Zone.

[4] The Surface Soils Zone is a layer of surface soils approximately thirteen (13) feet below ground surface monitored by the Leak Detection Wells.

Table VI-B
Block 80 HWLF Groundwater Monitoring Parameters

Parameters	Container Type	Preservation Method	Analytical Method[2]	Reporting Concentration[3]
pH[1], Specific Conductivity[1], and Turbidity[1]	Glass/Plastic	Field Measure	N/A	N/A
Antimony[4]	Glass/Plastic	HNO_3 to pH <2	6010	See Footnote 3
Barium[4]	Glass/Plastic	HNO_3 to pH <2	6010	See Footnote 3
Cadmium[4]	Glass/Plastic	HNO_3 to pH <2	6010	See Footnote 3
Chromium[4]	Glass/Plastic	HNO_3 to pH <2	6010	See Footnote 3
Copper[4]	Glass/Plastic	HNO_3 to pH <2	6010	See Footnote 3
Iron[4]	Glass/Plastic	HNO_3 to pH <2	6010	See Footnote 3
Lead[4]	Glass/Plastic	HNO_3 to pH <2	6010	See Footnote 3
Selenium[4]	Glass/Plastic	HNO_3 to pH <2	6010	See Footnote 3
Zinc[4]	Glass/Plastic	HNO_3 to pH <2	6010	See Footnote 3

[1] These are groundwater quality parameters; statistical analysis is not required for these parameters.

[2] SW-846, 3rd Edition or subsequent updates will be utilized.

[3] The Permittee shall report any concentration at or above the laboratory's Reporting Limit (RL) in the Semi-Annual and Annual Groundwater Monitoring Reports. The RL is a laboratory-specific value which is the lowest concentration at which an analyte can be detected in a sample and its concentration reported by the laboratory with a reasonable degree of accuracy and precision. The concentrations of hazardous constituents from point of compliance wells shall be compared against data on groundwater background concentrations in order to determine whether there is statistically significant

evidence of in an increase in the concentration of hazardous constituents over background. In the event hazardous waste constituents are "detected" (as defined in LAC 33:V.3303.A.1) at the point of compliance as a result of a release from the regulated unit, the Permittee shall submit a permit modification (in accordance with LAC 33:V.321) to implement a Compliance Monitoring Program. At that time, this table will be revised by including a "Concentration Limit" as specified in Condition VI.D of this permit.

[4] All metals are monitored on a dissolved (i.e., filtered) basis.

Table VI-C
NWLF/CAMU Groundwater Monitoring Parameters

Parameter	Container Type	Preservation Method	Analytical Method[2]	Reporting Concentration[3]
pH[1], Specific Conductivity[1], and Turbidity[1]	Glass/Plastic	Field Measure	N/A	See Footnote 3
Chromium[4]	Glass/Plastic	HNO_3 to pH <2	6010	See Footnote 3
Mercury[4]	Glass/Plastic	HNO_3 to pH <2	7470	See Footnote 3
Base Neutrals [5]	Amber Glass, Teflon-lined cap	Cool to ≤ 6°C	8270	See Footnote 3
Volatile Organic Compounds[6] (VOCs)	VOC Vials	See Footnote 7	8260	See Footnote 3

[1] These are groundwater quality parameters; statistical analysis is not required for these parameters.

[2] SW-846, 3rd Edition or subsequent updates will be utilized.

[3] The Permittee shall report any concentrations at or above the Reporting Limit in the Semi-Annual and Annual Groundwater Monitoring Reports. The concentrations of hazardous constituents from point of compliance wells shall be compared against data on groundwater background concentrations in order to determine whether there is statistical significant evidence of in an increase in the concentration of hazardous constituents over background. In the event hazardous waste constituents are "detected" (as defined in LAC 33:V.3303.A.1) at the point of compliance as a result of a release from the regulated unit, the Permittee shall submit a permit modification (in accordance with LAC 33:V.321) to implement a Compliance Monitoring Program. At that time, this table will be revised by including a "Concentration Limit" as specified in Condition VI.D of this permit.

[4] All metals are monitored on a dissolved (i.e., filtered) basis.

[5] Base Neutrals specified in this table shall be the subset of semi-volatile compounds included in List VI-1

[6] The VOCs specified in this table shall be the subset of VOCs included in List VI-2.

[7] Cool to ≤ 6°C (if not preserved, sample to be analyzed within 7 days) HCl to pH<2, Cool to ≤ 6°C (if preserved, to be analyzed within 14 days).

Table VI-D
NWLF/CAMU Leak Detection Wells and Leachate Recovery Trench Groundwater Monitoring Parameters[1]

Parameter	Container Type	Preservation Method	Analytical Method[2]
pH[3], Specific Conductivity[3], and Turbidity[3]	Glass/Plastic	Field Measure	N/A
Base Neutrals[4]	Amber Glass, Teflon-lined cap	Cool to ≤ 6°C	8270
Volatile Organic Compounds (VOCs)[5]	VOC Vials	See Footnote 6	8260

[1] The Permittee shall continue to operate and maintain the NWLF/CAMU Leak Detection Wells and Leachate Recovery Trench until the termination of corrective action activities associated with the aforementioned systems is approved by the Administrative Authority. The Permittee shall continue to report the analytical results for groundwater sampled from the NWLF/CAMU Leak Detection Wells and Leachate Recovery Trench in the Semi-Annual and Annual Groundwater Monitoring Reports.

[2] SW-846, 3rd Edition or subsequent updates will be utilized.

[3] The sampling and analysis of these groundwater quality parameters applies only to the leak detection wells. The sampling and analysis of these groundwater quality parameters does not apply to groundwater recovered from the Leachate Recovery Trench.

[4] Base Neutrals specified in this table shall be the subset of semi-volatile compounds included in List VI-1.

[5] The VOCs specified in this table shall be the subset of VOCs included in List VI-2.

[6] Cool to ≤ 6°C (if not preserved, sample to be analyzed within 7 days) HCl to pH<2, Cool to ≤ 6°C (if preserved, to be analyzed within 14 days).

List VI-1
Base Neutral Fraction Groundwater Monitoring Parameters

The Base Neutral Fraction of the semi-volatile organic compound (SVOC) analysis specified in Tables VI-C and VI-D shall include the following parameters:

1,2,4-Trichlorobenzene
1,2-Diphenylhydrazine
2,4-Dinitrotoluene
2,6-Dinitrotoluene
2-Chloronaphthalene
2-Methylnapthalene
2-Nitroaniline
3,3'-Dichlorobenzidine
3-Nitroaniline
4-Bromophenyl phenyl ether
4-Chloroaniline
4-Chlorophenyl phenyl ether
4-Nitroaniline
Acenaphthene
Acenaphthylene
Aniline
Anthracene
Benzidine
Benzo[a]anthracene
Benzo[a]pyrene
Benzo[b]fluoranthene
Benzo[g,h,i]perylene
Benzo[k]fluoranthene
Benzyl Alcohol
bis(2-Chloroethoxy)methane
bis(2-Chloroethyl)ether
bis(2-Chloroisopropyl)ether
bis(2-Ethylhexyl)phthalate
Butyl benzyl phthalate
Carbazole
Chrysene
Dibenzo[a,h]anthracene
Dibenzofuran
Diethyl phthalate
Dimethyl phthalate
Dimethyl phthalate
Di-n-butyl phthalate
Di-n-octyl phthalate
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno[1,2,3-cd]pyrene
Isophorone
Naphthalene
Nitrobenzene
n-Nitrosodimethylamine
n-Nitroso-di-n-propylamine
n-Nitrosodiphenylamine
Phenanthrene
Pyrene
Pyridine

List VI-2
Volatile Organic Compounds (VOCs) Groundwater Monitoring Parameters

The VOC analysis specified in Tables VI-C and VI-D shall include the following parameters:

1,1,1-Trichloroethane
1,1,2,2-Tetrachloroethane
1,1,2-Trichloroethane
1,1-Dichloroethane
1,1-Dichloroethene
1,2-Dibromo-3-chloropropane
1,2-Dibromoethane
1,2-Dichlorobenzene
1,2-Dichloropropane
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2-Dichloroethane
2-Butanone
2-Chloroethyl vinyl ether
2-Hexanone
4-Methyl-2-pentanone
Acetone
Acrylonitrile
Allyl chloride
Benzene
Bromodichloromethane
Bromoform
Bromomethane
Carbon tetrachloride
Chlorobenzene
Chloroethane
Chloroform
Chloromethane
cis-1,2-Dichloroethylene
cis-1,3-Dichloropropene
Dibromochloromethane
Dibromomethane
Dichlorodifluoromethane
Diethyl ether
Ethylbenzene
Methylene chloride
Methyl-t-Butyl Ether
m-Xylene
o-Xylene
p-Xylene
Styrene
Tetrachloroethene
Toluene
trans-1,2-Dichloroethene
trans-1,3-Dichloropropene
Trichloroethene
Trichlorofluoromethane
Vinyl chloride

VI.F. COMPLIANCE PERIOD

In the event the Permittee is required to establish a groundwater protection standard associated with a Compliance Monitoring Program/Corrective Action Program for a regulated unit, a compliance period shall be established in accordance with LAC 33:V.3313.

VI.G. GENERAL REQUIREMENTS

VI.G.1. The Permittee's groundwater monitoring system for the previously identified hazardous waste management facilities must consist of all wells as listed in Table VI-A, unless changed in the future by the Administrative Authority through permit modification.

VI.G.2. The Permittee must maintain the structural and mechanical integrity of all wells and provide protection from accidental damage and surface infiltration, as well as implement a monitoring well inspection schedule. A written report on damage to any well must be submitted to the Administrative Authority in accordance with Condition II.E.22 of this permit.

VI.G.3. Upgradient wells must always yield groundwater samples from the uppermost water-bearing zone that are representative of groundwater that has not been affected by possible leakage from the waste management units. Downgradient and vertical point of compliance wells must yield groundwater samples from the water-bearing zones that represent the quality of groundwater beneath the facilities that flows to the point of compliance.

VI.G.4. The Permittee must conform to the latest approved Groundwater Detection Monitoring Plan referenced in Attachment 1.

VI.G.5. Each well must be measured for total depth and depth to water according to the frequencies specified in the Groundwater Detection Monitoring Plan referenced in Attachment 1 of this permit. Measurements must be to the nearest 0.1 foot, and the values must be recorded in the field notebook and reproduced and submitted in the Semi-Annual and Annual Groundwater Monitoring Reports. If 10% of the screened interval is blocked by sediments, the well must be redeveloped prior to the next required sampling event.

VI.G.6. Each well must be purged by evacuation to dryness or by removing a minimum of three casing volumes. The wells must be sampled immediately upon purging and/or when sufficient water for sampling has recharged the well. The Permittee shall sample the wells utilizing techniques specified in the Groundwater Detection Monitoring Plan referenced in Attachment 1 of this permit and approved by the Administrative Authority.

VI.G.7. Samples must be withdrawn using dedicated or adequately cleaned equipment for each well. No equipment or method may be used that will chemically alter or influence the sample. Samples must be withdrawn using dedicated or adequately cleaned equipment for each well. No equipment or method may be used that will chemically alter or influence the sample. The Permittee shall sample the wells utilizing sampling devices specified in the Groundwater Detection Monitoring Plan referenced in Attachment 1 of this permit and approved by the Administrative Authority. Care must be taken to avoid placing clean sampling equipment on the ground or on any contaminated surface.

VI.G.8. Groundwater samples shall be monitored and analyzed for turbidity and the results recorded in the field log. The results of turbidity analyses shall be reported in the Annual and Semi-Annual Groundwater Monitoring Reports required under Condition VI.M of this permit.

VI.G.9. The Permittee must measure pH and specific conductance as standard indicators of groundwater contamination, which will be used to indicate well integrity and possible groundwater contamination. The results of these analyses must be recorded in the field log book and interpreted.

VI.G.10. A chain of custody protocol must be employed that will allow for tracking possession and handling of samples from the time of collection through laboratory analysis. All sample containers must be labeled to prevent misidentification, have proper seals, and indicate the test parameters required.

VI.G.11. Sample preservation, handling and analysis must meet the specifications of LAC 33:V.3315.D and E and Test Methods for Evaluating Solid Waste Physical/Chemical Methods 3rd. Edition (EPA Publication Number SW-846, as amended) or an equivalent substitute (approved by the Administrative Authority prior to implementation). Containers, preservation methods and analytical limits are listed in Tables VI-B, VI-C, and VI-D of this permit.

VI.G.12. The Permittee must use one of the statistical procedures outlined in the most current approved facility Groundwater Detection Monitoring Plan or LAC 33:V.3315.H in determining whether background values or concentrations have been exceeded for the hazardous constituents specified in Tables VI-B and VI-C of this permit.

VI.G.13. Records of all sampling and analytical work must be maintained at the site during the life of the facilities, including post-closure care periods. An up-to-date field log book (or compilation of field sheets) must be kept at the site which documents (for each sample) the well identification number, total well depth, elevation of top of casing, water level, water color (visual), well evacuation procedures and equipment, sample withdrawal procedures and equipment, date, time sample identification numbers, field measurements (pH, specific conductance, etc.)

and methods, name of collector, field observations, the standing water volume in the well, and the total volume evacuated.

VI.H. DETECTION MONITORING PROGRAM

A Detection Monitoring Program is required whenever hazardous constituents have NOT been detected at the point of compliance for a regulated unit. The Permittee must continue or expand the Detection Monitoring Program as subsequently directed by the Administrative Authority and in accordance with the requirements of LAC 33:V.3317 until one of the following occurs: 1) a Compliance Monitoring Program and/or Corrective Action Program is required and the permit is modified accordingly; or 2) the post-closure monitoring period has ended for the regulated unit.

VI.H.1. The Permittee must utilize the groundwater monitoring system outlined in Conditions VI.B and VI.D and as required by LAC 33:V.3315 to monitor for indicator parameters (i.e., pH, specific conductance, and turbidity), waste constituents, or reaction products that provide a reliable indication of the presence of hazardous constituents.

VI.H.2. The Permittee shall sample the groundwater monitoring system according to the schedule specified in Table VI-A and the Groundwater Detection Monitoring Plan.

VI.H.3. The Permittee must determine whether there is statistically significant evidence of contamination for any indicator parameter or hazardous constituent specified in Condition VI.D. Statistical methods shall conform to Condition VI.G.12.

VI.H.4. Within sixty (60) days after the sampling event, the Permittee shall have complete analytical results and shall have determined whether there is statistically significant evidence of contamination for any indicator parameter or hazardous constituent. In doing so, the Permittee shall compile a report containing the test results, the statistical comparative data, groundwater potentiometric maps, graphs, and copies of the field log book notes and chain of custody where appropriate. This information shall be maintained at the site as provided in Condition VI.G.13, except that statistically significant evidence of contamination must be forwarded for review by the Administrative Authority in accordance with Condition VI.H.5. Other reporting requirements shall be in accordance with Condition VI.M.

VI.H.5. If the Permittee determines that there is statistically significant evidence of contamination for indicator parameters or hazardous constituents at any point of compliance well, the Permittee must do the following:

VI.H.5.a. Notify the Administrative Authority of this finding in writing within seven (7) days. This notification must indicate what indicator parameters or hazardous constituents have shown statistically significant evidence of contamination.

VI.H.5.b. Immediately sample the groundwater in all point of compliance wells and determine whether constituents listed in LAC 33:V.3325, Table 4 (or site-specific subset of LAC 33:V.3325, Table 4 constituents previously approved by the Administrative Authority) are present, and if so, in what concentrations. This sampling shall be conducted within seven (7) days of the determination that there is statistically significant evidence of contamination, unless written approval of a different timeframe is given by the Administrative Authority. Within forty-five (45) days after the sampling event, the Permittee shall submit a report to the Administrative Authority detailing whether constituents are present, and if so, in what concentrations, and should indicate whether the Permittee intends on resampling for any of the constituents pursuant to Condition VI.H.5.c. The report shall contain the test results, the statistical comparative data (for those constituents having established background concentrations only), groundwater potentiometric maps, graphs, copies of the field log book notes and chain of custody where appropriate.

VI.H.5.c. For any LAC 33:V.3325, Table 4 constituents (or site-specific subset of LAC 33:V.3325, Table 4 constituents previously approved by the Administrative Authority) found in the analysis pursuant to Condition VI.H.5.b above, the Permittee may resample within one month (or at an alternate site-specific schedule approved by the Administrative Authority) of the report submittal to the Administrative Authority and repeat the analysis for those constituents detected. Within forty-five (45) days after the sampling event, the Permittee shall submit a report to the Administrative Authority detailing whether constituents are present, and if so, in what concentrations. The report shall contain the test results, the statistical comparative data (for those constituents having established background concentrations only), groundwater potentiometric maps, graphs, and copies of the field log book notes and chain of custody where appropriate.

VI.H.5.c.(1). If the results of the second analysis confirm the initial results, then these constituents will form the basis for compliance monitoring.

VI.H.5.c.(2). If the Permittee does not resample for the constituents found pursuant to Condition VI.H.5.b above, the constituents found during this initial analysis will form the basis for compliance monitoring.

VI.H.5.d. Submit to the Administrative Authority within ninety (90) days an application for a permit modification to establish a Compliance Monitoring Program. The application must include:

VI.H.5.d.(1). An identification of the concentration of any LAC 33:V. 3325, Table 4 constituent (or site-specific subset of LAC 33:V.3325, Table 4 constituents previously approved by the Administrative Authority) detected in the groundwater at each point of compliance well;

VI.H.5.d.(2). Any proposed changes to the groundwater monitoring system necessary to meet the requirements of a Compliance Monitoring Program (LAC 33:V.3319) which shall also include the requirements for assessment;

VI.H.5.d.(3). Any proposed additions or changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical methods necessary to meet the requirements of a Compliance Monitoring Program (LAC 33:V.3319); and

VI.H.5.d.(4). For each hazardous constituent detected (as defined in LAC 33:V.3301.A.1) at the point of compliance, a proposed concentration limit under LAC 33:V.3309, or a notice of intent to seek an alternate concentration limit under LAC 33.V.3309.B. (All data necessary to justify an alternate concentration limit sought under LAC 33:V.3309.B must be submitted by the Permittee to the Administrative Authority within 180 days from the date of the confirmation of contamination).

VI.H.5.e. Submit to the Administrative Authority within 180 days an Engineering Feasibility Plan for a Corrective Action Program necessary to meet the requirement of LAC 33:V.3321. The plan will not be required if:

VI.H.5.e.(1). all hazardous constituents identified under Condition VI.H.5.b are listed in LAC 33:V.3309.A.3, Table 1, and their concentrations do not exceed the respective values given in that table; or

VI.H.5.e.(2). the Permittee has sought an alternate concentration limit under LAC 33:V.3309.B for every hazardous constituent identified under Condition VI.H.5.b.

VI.H.5.f. If the Permittee determines that there is a statistically significant difference for indicator parameters or hazardous constituents at any point of compliance well identified under Condition VI.H.3, the Permittee may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the groundwater. The Permittee may make a demonstration under this Condition in addition to, or in lieu of, submitting a permit modification application; however, the Permittee is not

relieved of the requirement to submit a permit modification application within the time specified in Condition VI.H.5.d unless the demonstration made under this Condition successfully shows that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under this Condition the Permittee must:

VI.H.5.f.(1). Notify the Administrative Authority in writing within seven (7) days of determining statistically significant evidence of contamination that the Permittee intends to make a demonstration under this Condition;

VI.H.5.f.(2). Within ninety (90) days, submit a report to the Administrative Authority that demonstrates that a source other than a regulated unit caused the contamination or that the contamination resulted from error in sampling, analysis, or evaluation;

VI.H.5.f.(3). Within ninety (90) days, submit to the Administrative Authority a permit modification application to make any appropriate changes to the Detection Monitoring Program; and

VI.H.5.f.(4). Continue to monitor in accordance with the established Detection Monitoring Program.

VI.H.6. If the Permittee determines that the Detection Monitoring Program no longer satisfies the requirements of this permit, the Permittee, within ninety (90) days, shall submit an application for a permit modification to make any appropriate changes to the program. Any time the Administrative Authority determines that the Detection Monitoring Program does not satisfy the requirements of this permit, the Permittee shall, within 90 days of notification of such determination, submit an application for a permit modification to make any appropriate changes to the program.

VI.I. LEAK DETECTION MONITORING

VI.I.1. The Permittee must maintain and operate the Leak Detection Monitoring system associated with the NWLF/CAMU.

VI.I.2. The Permittee must sample and analyze groundwater from the leak detection wells referenced in Table VI-A for the monitoring parameters specified in Table VI-D in accordance with the approved Groundwater Detection Monitoring Plan referenced in Attachment 1.

VI.I.3. The Permittee must maintain and operate the NWLF/CAMU Leachate Recovery Trench System in accordance with the approved NWLF Corrective Action Plan (note: the NWLF Corrective Action Plan was approved prior to the unit's designation as a CAMU).

VI.J. COMPLIANCE MONITORING

(RESERVED). Permittee currently in the Detection Monitoring Program as per Condition VI.H.

VI.K. CORRECTIVE ACTION PROGRAM

(RESERVED) Permittee currently in the Detection Monitoring Program as per Condition VI.H.

VI.L. CONSTRUCTION AND ABANDONMENT OF MONITORING WELLS AND GEOTECHNICAL BOREHOLES

The construction and abandonment of groundwater monitoring wells must conform to the standards and guidelines specified in the latest version of the "CONSTRUCTION OF GEOTECHNICAL BOREHOLES AND GROUNDWATER MONITORING SYSTEMS HANDBOOK". This document is printed by and available from the Louisiana Department of Transportation and Development (DOTD), Water Resources Section, P.O. Box 94245, Baton Rouge, Louisiana 70804 9245. The document is also available online at http://www.dotd.state.la.us/intermodal/wells/wellhandbook.com.

A work plan for the construction of a new well must be submitted to the Administrative Authority for approval as the entire groundwater monitoring system must be approved. Any required new well should be installed within thirty (30) days of approval of the work plan by the Administrative Authority. Upon completion of new or replacement well, a copy of DOTD GW 1 S, DOTD Well Registration Short Form, is to be provided to the Administrative Authority.

The Permittee must provide for the sealing of any vertical migration path resulting from exploratory boring, leachate collection or detection systems and/or groundwater monitoring programs as provided in LAC 33:V.3323. A work plan for the plugging and abandonment of a well must be submitted for approval by the Administrative Authority, whenever such migration pathways are discovered. Upon completion of well abandonment, a copy of DOTD GW 2, DOTD Well Plugging and Abandonment Form, is to be provided to the Administrative Authority.

VI.M. REPORTING AND NOTIFICATION REQUIRMENTS

VI.M.1. Semi-Annual Groundwater Report

The Permittee shall submit a Semi-Annual Groundwater Report by September 1st of each year. The report shall include the following:

VI.M.1.a. a table showing well number, well depth, interval screened, zone monitored, well diameter, screen and casing material (and the type of pump, if applicable) for all wells;

VI.M.1.b. a facility map showing all wells (e.g., up-gradient, point of compliance, assessment, plume defining and monitored attenuation) and identifying zones in which wells are screened;

VI.M.1.c. a scaled potentiometric surface showing well locations, groundwater elevations with respect to mean sea level for each monitored zone;

VI.M.1.d. a statistical method shall be used in evaluating data for each hazardous constituent, as approved by the Administrative Authority;

VI.M.1.e. For those hazardous constituents specified in Table VI-B and VI-C that have been detected as defined in LAC 33:V.3303.A.1 at the point of compliance as a result of a release from the regulated unit, the Permittee shall provide graphical representation of data pursuant to the statistical method employed for those constituents. The graphical representation must include:

VI.M.1.e.(1). contaminant concentration isopleth maps;

VI.M.1.e.(2). contaminant concentration versus time graphs;

VI.M.1.f. a discussion of any significant changes in the data from the last reporting period;

VI.M.1.g. a discussion of the down time for any well or part of the system and actions taken to return the system to normal operations and maximum efficiency; and

VI.M.1.h. evaluation of the effectiveness and progress of any corrective action associated with the permitted unit.

VI.M.2. Annual Groundwater Report

An Annual Groundwater Report must be submitted each year no later than March 1, as required by LAC 33:V.1529.D.8. This report must summarize all groundwater activities for the preceding calendar year including an evaluation of the monitoring strategy in relation to the direction of groundwater flow and locations of wells associated with the facilities. Applicable calculations must also include: groundwater flow contaminant migration rates (for those hazardous constituents that have been detected at the point of compliance or exceeded the groundwater protection standard as a result of a release from the regulated unit); statistical comparisons, and any other information as it regards corrective action required by this permit. The report shall

also include the second Semi-Annual Groundwater Monitoring Report as specified in Condition VI.M.1.

VI.M.3. Notification of Statistically Significant Evidence of Contamination

The Permittee must notify the Administrative Authority in accordance with Conditions VI.H when there is statistically significant evidence of contamination for chemical parameters or hazardous constituents.

VI.M.4. Notification of Release to SPOC

In the event of a release in, into, within, or on any groundwaters of the state, (i.e., any confirmation of contamination in any previously uncontaminated saturated subsurface strata) the Permittee must notify the Department within twenty-four (24) hours of confirming statistically significant evidence of a release. Notification shall be made to the Office of Environmental Compliance, Emergency and Radiological Services Division, Single Point of Contact (SPOC) in accordance with LAC 33:309.L.7 and Condition II.E.18 of this permit. This requirement is in addition to notification requirements to the Administrative Authority discussed in Conditions VI.H.

HSWA/CAS

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LIST OF ATTACHMENTS

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VII. GENERAL CONDITIONS PURSUANT TO THE HAZARDOUS AND SOLID WASTE AMENDMENTS

VII.A. STANDARD CONDITIONS

VII.A.1. Waste Minimization

Annually, by March 1, for the previous year ending December 31, the Permittee shall enter into the operating record as required by LAC 33:V.1529.B.19, a statement certified according to LAC 33:V.513.A specifying that the Permittee has a program in place to reduce the volume and toxicity of hazardous wastes generated by the facility's operation to the degree determined by the Permittee to be economically practicable; and that the proposed method of treatment, storage, or practicable disposal method that is currently available to the Permittee minimizes the present and future threat to human health and the environment. A current description of the program shall be maintained in the operating record and a copy of the annual certified statement shall be submitted to the Administrative Authority. The following criteria should be considered for the program:

VII.A.1.a. Any written policy or statement that outlines goals, objectives, and/or methods for source reduction and recycling of hazardous waste at the facility;

VII.A.1.b. Any employee training or incentive programs designed to identify and implement source reduction and recycling opportunities;

VII.A.1.c. An itemized list of the dollar amounts of capital expenditures (plant and equipment) and operating costs devoted to source reduction and recycling of hazardous waste;

VII.A.1.d. Factors that have prevented implementation of source reduction and/or recycling;

VII.A.1.e. Sources of information on source reduction and/or recycling received at the facility (e.g., local government, trade associations, suppliers, etc.);

VII.A.1.f. An investigation of additional waste minimization efforts that could be implemented at the facility. This investigation would analyze the potential for reducing the quantity and toxicity of each waste stream through production reformulation, recycling, and all other appropriate means. The analysis would include an assessment of the technical feasibility, cost, and potential waste reduction for each option;

VII.A.1.g. A flow chart or matrix detailing all hazardous wastes the facility produces by quantity, type, and building/area;

VII.A.1.h. A demonstration of the need to use those processes that produce a particular hazardous waste due to a lack of alternative processes or available technology that would produce less hazardous waste;

VII.A.1.i. A description of the waste minimization methodology employed for each related process at the facility. The description should show whether source reduction or recycling is being employed;

VII.A.1.j. A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years; and

VII.A.1.k. The Permittee may meet the requirements for waste minimization by developing an Environmental Management System according to the EPA document, Integrated Environmental Management System Implementation Guide, EPA 744-R-00-011, October 2000, found on the EPA website at www.epa.gov/opptintr/dfe/pubs/iems/iems_guide/index.htm.

VII.A.2. Dust Suppression

Pursuant to LAC 33:V.4139.B.4, and the Toxic Substances Control Act, the Permittee shall not use waste or used oil or any other material which is contaminated with dioxin, polychlorinated biphenyls (PCBs), or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment.

VII.A.3. Failure to Disclose

The Permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts at any time may be cause for termination or modification of this Permit in accordance with LAC 33:323.B.2 and 3.

VII.A.4. Suspension, Modification, or Revocation and Reissuance, and Termination of Permit

This Permit may be modified, revoked and reissued, or terminated for cause as specified in LAC 33:V.323. The filing of a request by the Permittee for a permit modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any permit condition.

VII.A.4.a. If the Administrative Authority tentatively decides to modify or revoke and reissue a permit under LAC 33:V.321.C. or 323, a draft permit shall be prepared incorporating the proposed changes. The Administrative Authority may request additional information and, in the case of a modified permit, may require the submission of an updated permit application.

VII.A.4.b. The Permittee may initiate permit modification proceedings under LAC 33:V.321.C. All applicable requirements and procedures as specified in LAC 33:V.321.C shall be followed.

VII.A.4.c. Modifications of this Permit do not constitute a reissuance of the Permit.

VII.A.5. Permit Review

This Permit may be reviewed by the Administrative Authority five years after the date of permit issuance and may be modified as necessary as provided for in LAC 33:V.321.C. Nothing in this section shall preclude the Administrative Authority from reviewing and modifying the Permit at any time during its term.

VII.A.6. Compliance with Permit

Compliance with a RCRA permit during its term constitutes compliance, for purposes of enforcement, with subtitle C of RCRA except for those requirements not included in the permit which:

VII.A.6.a. Become effective by statute;

VII.A.6.b. Are promulgated under LAC 33:V.Chapter 22 restricting the placement of hazardous wastes in or on the land; or

VII.A.6.c. Are promulgated under LAC 33:V.Chapters 23, 25 and 29 regarding leak detection systems for new and replacement surface impoundment, waste pile, and landfill units, and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detection system requirements include double liners, construction quality assurance (CQA) programs, monitoring action leakage rates, and response action plans, and will be implemented through the procedures of LAC 33:V.321.C Class 1 permit modifications.

VII.A.7. Specific Waste Ban

VII.A.7.a. The Permittee shall not place in any land disposal unit the wastes specified in LAC 33:V. Chapter 22 after the effective date of the prohibition unless the Administrative Authority has established disposal or treatment standards for the hazardous waste and the Permittee meets such standards and other applicable conditions of this Permit.

VII.A.7.b. The Permittee may store wastes restricted under LAC 33:V.Chapter 22 solely for the purpose of accumulating quantities necessary to facilitate proper recovery, treatment, or disposal provided that it meets the requirements of LAC 33:V.2205 including, but not limited to, clearly marking each tank or container.

VII.A.7.c. The Permittee is required to comply with all applicable requirements of LAC 33:V.2245 as amended. Changes to the Waste Analysis Plan will be considered permit modifications at the request of the Permittee, pursuant to LAC 33:V.321.C.

VII.A.7.d. The Permittee shall review the waste analysis plan and analyze the waste when a process changes to determine whether the waste meets applicable treatment standards. Results shall be maintained in the operating record pursuant to Condition III.C.1 and 2.

VII.A.8. Information Submittal for the Corrective Action Strategy

Failure to comply with any condition of the Permit, including information submittals, constitutes a violation of the Permit and is grounds for enforcement action, permit amendment, termination, revocation, suspension, or denial of permit renewal application. Falsification of any submitted information is grounds for termination of this Permit (LAC 33:V.323.B.3).

The Permittee shall ensure that all plans, reports, notifications, and other submissions to the Administrative Authority required by this Permit using the Corrective Action Strategy are signed and certified in accordance with LAC 33:V.Chapter 5, Subchapter B. All submittals required under the corrective action strategy must conform to those requirements outlined in the RECAP (see Condition VIII of this permit). Variance from content and/or formatting guidelines provided under the RECAP shall be requested by the Permittee prior to submittal to the Administrative Authority, as deemed necessary or as appropriate as part of the Corrective Action Strategy set forth in Condition VIII of this permit. Approval or disapproval of such a request with further guidance on content and formatting will be provided by the Administrative Authority, as deemed necessary. Five (5) copies each of these plans, reports, notifications or other submissions and one (1) electronic copy (3.5" IBM compatible disk or CD-ROM) of all portions thereof which are in word processing format shall be submitted to the Administrative Authority by Certified Mail or hand delivered to:

Louisiana Department of Environmental Quality
Office of Environmental Assessment
Environmental Technology Division
P.O. Box 4314
Baton Rouge, LA 70821-4314

A summary of the planned reporting milestones pursuant to the corrective action requirements of this Permit is found in Condition VIII, Table 1.

VII.A.9. Data Retention

All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken

pursuant to this Permit shall be maintained at the facility during the term of this Permit, including any reissued Permits.

VII.A.10. Management of Wastes

All solid wastes which are managed pursuant to a remedial measure taken under the corrective action process or as an interim measure addressing a release or the threat of a release from a solid waste management unit shall be managed in a manner protective of human health and the environment and in compliance with all applicable Federal, State and local requirements. As a response to the Louisiana legislature mandate La. R.S. 30:2272 (Act 1092 of the 1995 Regular Session) to develop minimum remediation standards, the LDEQ promulgated the Risk Evaluation Corrective Action Program (RECAP). RECAP's tiered approach to risk evaluation and corrective action establishes not only across the board numerical standards for most media, but also allows for the development of more site-specific numerical standards, as warranted. The Permittee is required to comply with all applicable requirements of RECAP. Approval of units for managing wastes and conditions for operating the units shall be granted through the permitting process.

[Note: Condition VII.A.10 is applicable to previously-approved remedial measures and/or corrective action activities only when warranted by new information and/or data (not available to the Administrative Authority at the time it rendered decisions regarding the specific measures and/or activities) relevant to the previously-approved remedial measures and/or corrective action activities.

VII.B. EMISSION STANDARDS - PROCESS VENTS, EQUIPMENT LEAKS, TANKS, SURFACE IMPOUNDMENTS, AND CONTAINERS (AA-BB-CC AIR REGULATIONS)

VII.B.1. Performance Standards for Equipment Leaks

VII.B.1.a. Operating Requirements

The Permittee shall comply with the applicable requirements under LAC 33:V. Chapter 17 Subchapter B – Equipment Leaks – for all equipment associated with operations that treat, store, or dispose of hazardous waste with organic concentrations equal to or greater than 10 percent by weight.

VII.B.1.b. Monitoring Requirements

The Permittee shall monitor the following equipment for proper operation: pumps in light service, LAC 33:V.1719.A; compressors, LAC 33:V.1721; pressure relief devices in gas/vapor service, LAC 33:V.1723; open-ended valves or lines, LAC 33:V.1727; valves in gas/vapor service or in light liquid service, LAC 33:V.1737; and pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors, LAC 33:V.1731.

VII.B.1.c. Recordkeeping Requirements

The Permittee shall maintain an up-to-date list identifying each piece of equipment to which LAC 33:V.Chapter 17.Subchapter B applies, and record all information required by LAC 33:V.1743.

VII.B.1.d. Reporting Requirements

A semiannual report shall be submitted to the Administrative Authority in accordance with the requirements of LAC 33:V.1745, based on the date of submittal of the annual report for the facility. A report is not required for a 6-month period during which all devices listed in Condition VII.B.1.b are operated such that during no period of twenty four (24) hours or longer did the devices operate continuously in noncompliance with the applicable operating conditions defined in LAC 33:V.Chapter 17.Subchapter B.

VII.B.2. Performance Standards for Tanks, Surface Impoundments, and Containers

VII.B.2.a. Operating Requirements

VII.B.2.a.(1). The Permittee shall comply with the applicable requirements of LAC 33:V. Chapter 17, Subchapter C.

VII.B.2.a.(2). The Permittee shall install and maintain all regulated units and associated emission control technology in accordance with the detailed plans, schedules, information, and reports as contained in the Part B Permit Application.

VII.B.2.a.(3). The Permittee shall, upon request, identify all less than 90-day accumulation tanks or containers, which contain or contact hazardous wastes with organic concentrations equal to or greater than 10 percent by weight and identify the emission control system requirements under LAC 33:V.1703 to 1715.

VII.B.2.b. Monitoring Requirements

VII.B.2.b.(1). The pollution control methods used for tanks shall be inspected on a periodic basis.

VII.B.2.b.(2). Tanks meeting Level 1 controls shall be inspected at least once every year, LAC 33:V.1755.C.4.

VII.B.2.b.(3). Tanks meeting Level 2 controls shall be inspected in accordance with LAC 33:V.1755.E.3 for internal floating roofs, LAC 33:V.1755.F.3 for external floating roofs, LAC 33:V.1755.G.3 for air

emission control equipment, and LAC 33.V.1755.I.4 for closed vent control systems.

VII.B.2.b.(4). The pollution control methods used for containers shall be inspected according to the applicable inspection frequency.

VII.B.2.b.(5). Level 1 controls shall be inspected in accordance with LAC 33:V.1759.C.4.

VII.B.2.b.(6). Level 2 controls shall be inspected in accordance with LAC 33:V.1759.D.4.

VII.B.2.b.(7). Level 3 controls shall be inspected in accordance with LAC 33:V.1759.E.4.

VII.B.2.c. Recordkeeping Requirements

Air emission control design documentation shall be maintained in the facility operating record until the equipment is no longer in service. Records must be prepared and maintained for the various equipment and systems used at the facility.

VII.B.2.c.(1). Tanks using air emission control records must meet LAC 33:V.1765.B requirements.

VII.B.2.c.(2). Container storage areas using Level 3 controls must meet LAC 33:V.1765.D requirements.

VII.B.2.c.(3). Closed-vent system and control device systems meeting LAC 33:V.1761 must meet LAC 33:V.1765.E requirements.

VII.B.2.c.(4). Facilities exempted by LAC 33:V.1751.C must meet LAC 33:V.1765.F requirements.

VII.B.2.c.(5). Components identified as "unsafe to inspect and monitor" in accordance with LAC 33:V.1755.L and 1757.G must meet LAC 33:V.1765.G requirements.

VII.B.2.c.(6). F acilities that are governed by this Chapter and use alternate control systems meeting the emission control standards of 40 CFR 60, Subpart VV or 40 CFR 61, Subpart V must meet LAC 33:V.1765.H requirements.

VII.B.2.c.(7). All tanks or containers not using air emission controls in accordance with LAC 33:V.1747.D must meet LAC 33:V.1765.I requirements.

VII.B.2.d. Reporting Requirements

VII.B.2.d.(1). For each tank, surface impoundment, or container which manages hazardous waste that is exempted from using air emission controls, a written report shall be submitted to the Administrative Authority within fifteen (15) days of each occurrence when hazardous waste is placed in the waste management unit in noncompliance with the conditions of LAC 33:V.1751.C, as applicable. The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent reoccurrence of the noncompliance.

VII.B.2.d.(2). For control devices used in accordance with the requirements of LAC 33:V.1735, a semiannual written report shall be submitted to the Administrative Authority, based on the date of submittal of the annual report, except as provided for in noncompliance situations. The report shall describe each occurrence during the previous six (6)-month period when a control device is operated continuously for twenty-four (24) hours or longer in noncompliance with the applicable operating values defined in LAC 33:V.1713.C.4 or when a flare is operated with visible emissions as defined in LAC 33:V.1707.D. The written report shall include the EPA identification number, facility name and address, an explanation why the control device could not be returned to compliance within 24 hours, and actions taken to correct the noncompliance.

VII.B.2.d.(3). The report to the Administrative Authority in accordance with the requirements of VII.B.2.d.(1) and (2). above is not required for a six (6)-month period during which all control devices subject to LAC 33:V, Subchapter C are operated such that during no period of twenty-four (24) hour or longer did control devices operate continuously in noncompliance with the applicable operating values defined in LAC 33:V.1713.C.4 or a flare operate with visible emissions as defined in LAC 33:V.1707.D.

VII.B.2.d.(4). All reports shall be signed and dated by an authorized representative of the Permittee as per LAC 33:V.507.

VII.C. SPECIFIC CONDITION - CLOSURE

Pursuant to Section 3005(j)(1) of the Hazardous and Solid Waste Amendments of 1984, the Permittee shall close any closing units in accordance with the following provisions:

VII.C.1. Other than consolidation of any wastes from the sites in conformance with LAC 33:V.Chapter 22, Land Disposal Restrictions, the Permittee shall not place waste prohibited by LAC 33:V.Chapter 22 into any closing units;

VII.C.2. The Permittee shall perform unit closures in accordance with the Closure Plan(s) as approved at the time of closure, and which meet(s) all relevant State and Federal closure requirements at the time of closure; and

VII.C.3. The Permittee shall notify the Administrative Authority in writing at least sixty (60) days prior to commencement of closure.

VIII. SPECIAL CONDITIONS PURSUANT TO HAZARDOUS AND SOLID WASTE AMENDMENTS—CORRECTIVE ACTION STRATEGY

Corrective Action for Releases: Section 3004(u) of RCRA, as amended by the Hazardous and Solid Waste Amendments (HSWA), and LAC 33:V.3322 require that permits issued after November 8, 1984, address corrective action for releases of hazardous waste or hazardous constituents from any solid waste management unit at the facility, regardless of when the waste was placed in the unit.

EPA's traditional RCRA corrective action approach is structured around several elements common to most activities. In the first phase, RCRA facility assessment (RFA), EPA or the authorized state assesses the facility to identify releases and determine the need for corrective action. In the second phase, RCRA facility investigation (RFI), the facility conducts a more detailed investigation to determine the nature and extent of contaminants released to groundwater, surface water, air, and soil. If remedial action is needed, a third phase, corrective measures study (CMS), is started. During this phase, the facility conducts a study, which when completed, describes the advantages, disadvantages, and costs of various cleanup options. After selection of a final remedy, the fourth phase, corrective measures implementation (CMI), is initiated. The facility is required to design, construct, operate, maintain, and monitor the final remedy(s).

The Corrective Action Strategy (CAS) is an alternate corrective action approach that can be implemented during any phase of corrective action for a "release area" resulting from a release or releases from a facility. The Permittee shall use the CAS approach as the framework for corrective action to clarify, facilitate and expedite the process, and shall use the **Louisiana Department of Environmental Quality Risk Evaluation/Corrective Action Program (RECAP)** for screening and media-specific cleanup standards. EPA has interpreted the term "release" to mean, "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment." (50 FR 2873, July 15, 1985). The CAS refers to "release areas" as solid waste management units (SWMUs) and areas of concern (AOCs) while the RECAP refers to release areas as areas of investigation (AOIs). SWMUs and AOCs may also be referred to as "AOIs" when investigated and managed under the RECAP.

The Groundwater Corrective Action Agreement entered into by and between the Louisiana Department of Environmental Quality and The Dow Chemical Company on or about March 20, 1991, following public notice on June 13 and 14, 1990 and public review and comment thereafter (the "Groundwater Corrective Action Agreement") is recognized as an integral and key part of the facility's CAS. Notwithstanding anything to the contrary stated herein, any releases of hazardous waste or hazardous constituents or other constituents, including those from or in connection with any SWMU, release area, AOC, or AOI, that are subject to the Groundwater Corrective Action Agreement shall continue to be governed by and subject to the Groundwater Corrective Action Agreement. The aforementioned Groundwater Corrective Action Agreement is incorporated by reference into this permit as noted in Attachment 1 of this permit.

VIII.A. ALTERNATE CORRECTIVE ACTION

VIII.A.1. Introduction to CAS

This Permit will utilize the CAS Guidance Document (www.epa.gov/Arkansas/6pd/rcra_c/pd-o/riskman.htm) developed by the U.S. Environmental Protection Agency (EPA) Region 6 whenever the Administrative Authority determines that such guidance will serve to facilitate the corrective action that is required under applicable law. The CAS Guidance Document shall be utilized to the fullest extent practicable for planning and implementation of the corrective action. The CAS in this Permit shall not supersede existing Federal, State, and local regulations. The two primary objectives are to prioritize corrective action at the facility, and streamline corrective action administrative procedures, resulting in the protection of human health and the environment.

The CAS is a performance-based approach; using data quality objectives, investigations begin with the endpoint in mind. The CAS is a risk management strategy that can be implemented during any phase of corrective action. However, the CAS need not be applied to work that has already been completed to the satisfaction of the Administrative Authority. Performance standards are established at the beginning of the corrective action process, allowing earlier and more focused implementation. Releases are screened using RECAP screening numbers to determine the priority of corrective action, and remedial alternatives are selected on the basis of their ability to achieve and maintain the established performance standards.

There is no one specific path through the CAS process. The CAS is a facility-wide approach, focusing corrective action on releases that pose the greatest risk first. Screening releases will also enable some areas of interest to qualify for no further action at this time (Condition VIII.A.3.a.), thus resources can be used to best benefit the protection of human health and the environment. The CAS process also considers activities previously conducted under the traditional RCRA corrective action process and other corrective action mechanisms approved by the Administrative Authority. Appendix 1 of this permit contains a summary of corrective action activities completed to date and also describes where the Permittee is in the CAS process at the time of issuance of this permit. The applicability of various provisions of the CAS will depend on where the Permittee is in the CAS process as detailed in Appendix 1.

The traditional RCRA corrective action process and reports (i.e., RFIs, CMSs, CMIs, etc.) are not elements of the CAS. However, the use of information and reports from the traditional corrective action process, if available, is encouraged, in addition to new site-specific information.

The Administrative Authority, through an agency-initiated permit modification, may remove the CAS as the means of facility-wide corrective action in the case of the failure of the Permittee to disclose information, abide by the terms and conditions of this permit, adhere to agreed schedules, or show adequate progress; or should an

impasse occur between the Permittee and the Administrative Authority. Likewise, upon granting a request by the Permittee to modify the permit in this regard, the Administrative Authority may remove the CAS as the means of facility-wide corrective action. In such cases, the Administrative Authority will institute other means of corrective action (such as traditional corrective action) at the facility through modification of this permit.

VIII.A.2. Performance Standards

Expectations for the outcome of corrective action at a facility are established in the CAS by three performance standards as defined in Conditions VIII.A.2.a through c. The Permittee's proposed performance standards shall be presented during the scoping meeting. The Permittee must justify the proposed performance standards through evaluation and documentation of land use, groundwater designation (current and reasonably expected future use), types of receptors present, exposure pathways, etc.; as described in RECAP, Chapter 2. Through the application of the performance standards and RECAP, the Permittee and Administrative Authority shall determine whether a release must be addressed through corrective action, and whether implemented corrective actions are protective of human health and the environment.
The Permittee shall submit the performance standards in writing along with the Conceptual Site Model (Condition VIII.D) within one-hundred and twenty (120) days after the scoping meeting. The Administrative Authority may either approve the performance standards proposed by the Permittee or establish performance standards that the Administrative Authority deems necessary to protect human health and the environment.

The three CAS performance standards are defined below. The order in which the performance standards are listed does not indicate that one performance standard takes priority over another. All applicable performance standards must be achieved by the Permittee.

VIII.A.2.a. Source Control Performance Standard

Source control refers to the control of materials that include or contain hazardous wastes or hazardous constituents that act as a reservoir for migration of contamination to soil, sediment, groundwater, surface water, or air, or as a source for direct exposure.

The facility must determine if source material is present. Removal, containment, treatment, or a combination of the three, must be evaluated on a case-by-case basis. Controlling source material is a predominating issue in the CAS, and must be addressed to ensure protectiveness over time. Prioritization of the SWMUs and AOCs does not mean avoidance of controlling source materials.

VIII.A.2.b. Statutory and Regulatory Performance Standard

Applicable statutory and regulatory requirements (Federal, State, and local) must be identified. These requirements may dictate media-specific contaminant levels (e.g., maximum contaminant levels (MCLs) in drinking water) that must be achieved and may become a performance standard for the Permittee.

VIII.A.2.c. Final Risk Goal Performance Standard

The final risk goal is the level of protection to be achieved and maintained by the Permittee. The final risk goal shall be based on site-specific issues including land use, special subpopulations, contaminant concentrations based on acceptable risk, location at which the levels are measured, and the remediation time frame, as specified by RECAP.

One final risk goal may apply to the entire facility, but it is more likely that different releases will require different final risk goals due to variations in location of releases, land use, proximity of receptors, etc. The final risk goal will be based on sound risk assessment methodologies (Condition VIII.A.3).

VIII.A.3. Use of RECAP

The latest edition of the RECAP document shall be used by the Permittee to determine the need for further corrective actions under this permit. The RECAP consists of a tiered framework comprised of a Screening Option (SO), and three Management Options (MO). The tiered management options allow site evaluation and corrective action efforts to be tailored to site conditions and risks. As the MO level increases, the approach becomes more site-specific and hence, the level of effort required to meet the objectives of the Option increases.

The RECAP shall be used by the Permittee to evaluate data quality and data usability (RECAP Section 2.4 and 2.5), to determine the identity of an AOI as described in RECAP Section 2.6, and for estimations of Area of Investigation Concentrations and Groundwater Compliance Concentrations for each media as defined in RECAP Section 2.8.

The RECAP shall be used by the Permittee to evaluate land use as described in RECAP Section 2.9, and groundwater/aquifer use as described in RECAP Section 2.10.

The RECAP shall be used by the Permittee to prioritize AOCs, SWMUs, and AOIs that require remediation so site investigations are focused on the release areas that pose the greatest risk. As the CSM is compiled, the Permittee shall assess historical data (RECAP Section 2.5) and use the following management options, as appropriate, to address each release site.

VIII.A.3.a. Screening Option

The Permittee shall use the Screening Standards (SS) which are LDEQ-derived screening numbers for soil and groundwater for non-industrial and industrial land use scenarios. The SS shall be used to demonstrate that an AOI does not pose a threat to human health and the environment and, hence does not require further action at this time (NFA-ATT) or that further evaluation is warranted under a higher Management Option.

VIII.A.3.b. Management Option 1

The Permittee shall use Management Option 1 (MO-1) which provides a RECAP standard (RS) derived for non-industrial and industrial exposure scenarios using currently recommended default exposure parameters and toxicity values. Under MO-1, an AOI may warrant a NFA-ATT determination, or if an exposure, source, or compliance concentration detected at the AOI exceeds a MO-1 limiting RS, then the Permittee may; (1) remediate to the MO-1 limiting RS (and comply with closure/post closure requirements for MO-1), or (2) proceed with a MO-2 or MO-3 evaluation.

VIII.A.3.c. Management Option 2

The Permittee shall use Management Option 2 (MO-2) which provides for the development of soil and groundwater RS using site-specific data with specified analytical models to evaluate constituent fate and transport at the AOI. The results of this evaluation shall be used in conjunction with standard reasonable maximum exposure (RME) assumptions to identify site-specific MO-2 RS. Under MO-2, an AOI may warrant a NFA-ATT determination, or if an exposure, source, or compliance concentration detected at the AOI exceeds a MO-2 limiting RS, then the Permittee may; (1) remediate to the MO-2 limiting RS (and comply with closure/post closure requirements for MO-2), or (2) proceed with a MO-3 evaluation.

VIII.A.3.d. Management Option 3

The Permittee shall use Management Option 3 (MO-3) which provides the option of using site-specific data for the evaluation of exposure and the evaluation of environmental fate and transport at the AOI. The results of the site-specific evaluation may be to develop site-specific MO-3 RS. Under MO-3, an AOI may warrant a NFA-ATT determination, or if an exposure, source, or compliance concentration detected at the AOI exceeds a MO-3 limiting RS, then the Permittee shall; (1) remediate to the MO-3 RS, (2) conduct confirmatory sampling, and (3) comply with closure/post closure requirements for MO-3.

VIII.A.4. Corrective Action for Releases Beyond Facility Boundary

Section 3004(v) of RCRA as amended by HSWA, and State regulations promulgated as LAC 33:V.3322.C require corrective actions beyond the facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where offsite access is denied.

VIII.A.5. Financial Responsibility

Assurances of financial responsibility for corrective action shall be provided by the Permittee as specified in the Permit following major modification for remedy selection. The Administrative Authority reserves the right to require financial assurance prior to remedy selection based upon facility compliance history, the extent and degree of contamination, financial health of the Permittee, and input from the public.

VIII.A.6. Summary of Corrective Action Activities

A summary of the corrective action activities associated with the facility is provided in Condition VIII, Appendix 1 of this permit. AOCs and SWMUs that are currently being managed or proposed for management under a prescribed corrective action program (e.g., groundwater order, corrective action order, CERCLA) are identified in Condition VIII, Appendix 1, Table 1 of this permit.

VIII.A.7. Approval of Alternate Schedule

The Permittee may submit a written request for an alternate schedule for a submittal deadline as presented in Condition VIII, Table 1. The request should propose a specific alternate schedule and include an explanation as to why the alternate schedule is necessary. The Administrative Authority will consider site-specific criteria in either approving or disapproving the request for an alternate schedule.

VIII.B. PROJECT DEVELOPMENT AND SCOPING MEETING

VIII.B.1. Notice of Intent

The Permittee must submit to the Administrative Authority a Notice of Intent to conduct corrective action using the CAS within sixty (60) days of the effective date of this permit. The notice of intent should state the following in a concise manner:

VIII.B.1.a. General information regarding facility location;

VIII.B.1.b. General information regarding the facility's operational history;

VIII.B.1.c. General discussion on how the Permittee will proceed through the CAS;

VIII.B.1.d. Brief description of proposed performance standards for corrective action; and

VIII.B.1.e. Propose a date for a scoping meeting between the Permittee and the Administrative Authority to be held within sixty (60) days of the date of the Notice of Intent.

VIII.B.2. Scoping Meeting

The scoping meeting will serve as the first CAS milestone where the Permittee and the Administrative Authority identify expectations concerning CAS implementation. The length and extent of the meeting will depend on the complexity of the site. Agreements on land use, groundwater classification, the level of detail required in the conceptual site model (see Condition VIII.D) and expectations for remediation goals will be discussed during the scoping meeting(s). During the scoping meeting the Permittee will present the following information to the Administrative Authority:

VIII.B.2.a. A conceptual site model (if one already has been developed);

VIII.B.2.b. Discussions on history of corrective action at the facility, including facility investigations, risk evaluations or risk assessments, interim measure/stabilizations and final remedies implemented;

VIII.B.2.c. Proposed performance standards for the facility with justification, and potential risk management approaches;

VIII.B.2.d. Discussions on how the Permittee plans to use the CAS to meet its corrective action obligations, including permitting and compliance issues;

VIII.B.2.e. A Communication Strategy Plan that specifies where in the CAS process the Permittee is currently and how the Permittee will provide information about future progress at the facility to the Administrative Authority (i.e., progress reports, conference calls, routine meetings, etc.);

VIII.B.2.f. Site-specific concerns (i.e., sensitive environments or special subpopulations);

VIII.B.2.g. Need for interim measures or stabilization activities, if necessary; and

VIII.B.2.h. Schedule for submittal of the CAS Investigation Workplan and proposed schedule for conducting and completing CAS requirements, including public participation.

Information plans and reports that have already been developed by the Permittee during the corrective action process can be referenced during the scoping meeting. The Permittee must coordinate with the Administrative Authority in order to determine the date, time, and location of the scoping meeting.

VIII.C. REPORTING REQUIREMENTS

VIII.C.1. The Permittee shall submit, in accordance with Condition VII.A.8, signed reports of all activities conducted pursuant to the provisions of this Permit as required by the Administrative Authority. The reporting schedule shall be determined on a case-by-case basis by the Administrative Authority. The Administrative Authority shall consider previously established reporting requirements and shall take steps to streamline reporting requirements and avoid duplicative reporting. These reports shall contain, as applicable to the stage of corrective action, the information required by CAS, as well as the following:

VIII.C.1.a. A description of the work completed and an estimate of the percentage of work completed;

VIII.C.1.b. Summaries of all findings, including summaries of laboratory data;

VIII.C.1.c. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems;

VIII.C.1.d. Projected work for the next reporting period;

VIII.C.1.e. Summaries of contacts pertaining to corrective action or environmental matters with representatives of the local community, public interest groups or State government during the reporting period;

VIII.C.1.f. Changes in key project personnel during the reporting period; and

VIII.C.1.g. Summaries of all changes made in implementation during the reporting period.

VIII.C.2. Copies of other reports relating to or having bearing upon the corrective action work (e.g., inspection reports, drilling logs and laboratory data) shall be made available to the Administrative Authority upon request.

VIII.C.3. In addition to the written reports as required in Condition VIII.C.1 and VIII.C.2 above, at the request of the Administrative Authority, the Permittee shall provide status review through briefings with the Administrative Authority.

VIII.C.4. The determination and approval of remedy selections, schedules of submittals and minor changes to any corrective action workplans may be made by the

Administrative Authority during the scoping meeting or status review briefings as described in Condition VIII.C.3.

VIII.D. SPECIFIC CONDITION – CONCEPTUAL SITE MODEL (CSM)

No later than 120 days after the scoping meeting, the Permittee shall submit to the Administrative Authority a CSM (along with the Performance Standards detailed in Condition VIII.A.2) or an update of any CSM submitted at the scoping meeting providing background information and the current conditions at the facility. The level of detail required for the CSM will be discussed during the scoping meeting. At a minimum, the CSM must address current site conditions, land use, known and/or potential constituent source(s), routes of constituent migration, exposure media (i.e., soil, surface waters, groundwater), exposure points, points of compliance and pathways, receptors and source media to be evaluated under the RECAP. The CSM must include a completed Figure 8 (LAC 33:I.Chapter 13). The Permittee may include completed investigations, existing data, or previously submitted documents in the CSM by reference. References must include the names, dates, and brief summaries of the documents.

If a CSM has been previously developed, the scoping meeting will also provide the opportunity for the Permittee and Administrative Authority to consider and identify all data gaps in the CSM. The initial CSM shall be considered the "base document" to be prepared and updated by the facility as new information is gathered during investigations. The CSM shall be used by the facility to make decisions regarding risk management options, ecological risk, and monitored natural attenuation determinations (RECAP Section 2.16), or technical impracticability (TI) waiver determinations, when appropriate.

The Administrative Authority reserves the right to require revisions to the CSM based upon data resulting from ongoing investigations and activities. Revisions to the CSM may also be required for newly identified SWMUs or AOCs according to Condition VIII.L of this permit (See Appendix 1, Ongoing Corrective Action) and based on new information and information not previously considered by the Administrative Authority.

The CSM shall be divided into Profiles as detailed in Conditions VIII.D.1 through 6. If the Permittee chooses to use existing data and documents in the CSM, it may not be necessary to prepare the Profiles as detailed in Conditions VIII.D.1 through 6. However, the existing documents and data must provide sufficient information and detail which corresponds to the information required by the Facility, Land Use and Exposure, Physical, Release, Ecological, and Risk Management Profiles.

VIII.D.1. Facility Profile

The Permittee shall include in the CSM a Facility Profile which shall summarize the regional location, pertinent boundary features, general facility structures, process areas, and locations of solid waste management units or other potential sources of contaminant migration from the routine and systematic releases of hazardous constituents to the environment (e.g., truck or railcar loading/unloading areas). The

Permittee shall also include historical features that may be potential release areas because of past management practices. The Facility Profile shall include:

VIII.D.1.a. Map(s) and other documents depicting the following information (all maps shall be consistent with the requirements set forth in LAC 33:V Chapter 5 and be of sufficient detail and accuracy to locate and report all current site conditions):

VIII.D.1.a.(1). General geographic location;

VIII.D.1.a.(2). Property lines with the owners of all adjacent property clearly indicated;

VIII.D.1.a.(3). Facility structures, process areas and maintenance areas;

VIII.D.1.a.(4). Any other potential release areas shall be delineated, such as railcar loading/unloading areas or any other AOI as described in RECAP Section 2.6; and

VIII.D.1.a.(5). Locations of historical features that may be potential release areas or any areas of past solid and hazardous waste generation, treatment, storage or disposal activities.

VIII.D.1.b. The Facility Profile shall also include a description of ownership and operation of the facility.

VIII.D.1.c. The Permittee shall provide pertinent information for those spills that have not been asse ssed and reported to the Administrative Authority during facility investigations, addressed by facility spill contingency plans, or previously remediated or deemed for no further action. The information must include at minimum, approximate dates or periods of past waste spills, identification of the materials spilled, the amount spilled, the location where spilled, and a description of the response actions conducted (local, state, federal, or private party response units), including any inspection reports or technical reports generated as a result of the response.

VIII.D.2. Land Use and Exposure Profile

The Permittee shall include in the CSM a Land Use and Exposure Profile which includes surrounding land uses (industrial and non-industrial, as described in RECAP Sections 2.9.1 and 2.9.2), resource use locations (water supply wells, surface water intakes, etc.), beneficial resource determinations (groundwater classifications as described in RECAP Section 2.10), natural resources (wetlands, etc.), sensitive subpopulation types and locations (schools, hospitals, nursing homes, day care centers, etc.), applicable exposure scenarios, and applicable exposure pathways

identifying the specific sources, releases, migration mechanisms, exposure media, exposure routes and receptors. The Land Use and Exposure Profile shall include:

VIII.D.2.a. Map(s) and other documents depicting the following information (all maps shall be consistent with the requirements set forth in LAC 33:V Chapter 5 and be of sufficient detail and accuracy to locate and report all current site conditions):

VIII.D.2.a.(1). Surrounding land uses, resource use locations, and natural resources/wetlands;

VIII.D.2.a.(2). Locations of sensitive subpopulations; and

VIII.D.2.a.(3). An exposure pathway flowchart which outlines sources, migration pathways, exposure media and potential receptors as depicted in Figure 8 (CMS example) of the RECAP.

VIII.D.3. Physical Profile

The Permittee shall include in the CSM a Physical Profile which shall describe the factors that may affect releases, fate and transport, and receptors, including; topography, surface water features, geology, and hydrogeology. The Physical Profile shall include:

VIII.D.3.a. Map(s) and other documents depicting the following information (all maps shall be consistent with the requirements set forth in LAC 33:V.Chapter 5 and be of sufficient detail and accuracy to locate and report all current site conditions):

VIII.D.3.a.(1). Topographic maps with a contour interval of five (5) or ten (10) feet, a scale of one inch to 100 feet (1:100), including hills, gradients, and surface vegetation or pavement;

VIII.D.3.a.(2). Surface water features including routes of all drainage ditches, waterways, direction of flow, and how they migrate to other surface water bodies such as canals and lakes;

VIII.D.3.a.(3). Regional geology including faulting and recharge areas, as well as local geology depicting surface features such as soil types, outcrops, faulting, and other surface features;

VIII.D.3.a.(4). Subsurface geology including stratigraphy, continuity (locations of facies changes, if known), faulting and other characteristics;

VIII.D.3.a.(5). Maps with hydrogeologic information identifying water-bearing zones, hydrologic parameters such as transmissivity,

and conductivity. Also locations and thicknesses of aquitards or impermeable strata; and

VIII.D.3.a.(6). Locations of soil borings and production and groundwater monitoring wells, including well log information, and construction of cross-sections which correlate substrata. Wells shall be clearly labeled with ground and top of casing elevations (can be applied as an attachment).

VIII.D.4. Release Profile

The Permittee shall include in the CSM a Release Profile which shall describe the known extent of contaminants in the environment, including sources, contaminants of concern (COC), areas of investigations, distribution and magnitude of known COCs with corresponding sampling locations, and results of fate and transport modeling depicting potential future extent/magnitude of COCs. The Release Profile shall include:

VIII.D.4.a. Map(s) and other documents depicting the following information (all maps shall be consistent with the requirements set forth in LAC 33:V. Chapter 5 and be of sufficient detail and accuracy to locate and report all current site conditions):

VIII.D.4.a.(1). Estimations of source concentrations, exposure concentrations and compliance concentrations for each affected media as defined in Section 2.8 of RECAP;

VIII.D.4.a.(2). Isopleth maps depicting lateral extent and concentrations of COCs;

VIII.D.4.a.(3). Results of fate and transport modeling showing potential exposure concentrations and locations; and

VIII.D.4.a.(4). Locations of potential sources including past or present waste units or disposal areas and all SWMUs/AOCs.

VIII.D.4.b. Table(s) depicting the following information for each SWMU/AOC, including but not limited to: location; type of unit/disposal/release area; design features; operating practices (past and present); period of operation; age of unit/disposal/release area; general physical condition; and method of closure.

VIII.D.4.c. Table(s) depicting the following waste/contaminant characteristics for those areas referenced in Condition VIII.D.4.b, including but not limited to: type of waste placed in the unit (hazardous classification, quantity, chemical composition), physical and chemical characteristics (physical form, description, temperature, pH, general chemical class, molecular weight, density, boiling point, viscosity, solubility in water, solubility in solvents,

cohesiveness, vapor pressure); and migration and dispersal characteristics of the waste (sorption coefficients, biodegradability, photodegradation rates, hydrolysis rates, chemical transformations).

VIII.D.5. Ecological Profile

The Permittee shall include in the CSM an Ecological Profile that shall describe the physical relationship between the developed and undeveloped portions of the facility, the use and level of disturbance of the undeveloped property, and the type of ecological receptors present in relation to completed exposure pathways. When compiling data for the Ecological Profile, current, as well as, future impacts to receptors and/or their habitats shall be considered. The Ecological Profile shall include:

VIII.D.5.a. A history and description of the developed property on the facility, including structures, process areas, waste management units, and property boundaries;

VIII.D.5.b. A history and description of the undeveloped property, including habitat type (wetland, grassy area, forest, ponds, etc.). Include a description of the primary use, degree and nature of any disturbance, along with proximity to drainage ditches, waterways and landfill areas;

VIII.D.5.c. A description of the site receptors in relation to habitat type, including endangered or protected species, mammals, birds, fish, etc.;

VIII.D.5.d. A description of the relationship between release areas and habitat areas, specifically relating chemicals of potential ecological concern (COEC) to ecological receptors;

VIII.D.5.e. An ecological checklist as described in Section 7.0 of RECAP. An ecological checklist (presented in Appendix C, Form 18 of the RECAP) shall be used to determine if a tier 1 (screening level) Ecological Risk Assessment (ERA) is warranted.

VIII.D.6. Risk Management Profile

The Permittee shall include in the CSM a Risk Management Profile that shall describe how each AOI at the facility will be managed for the protection of human health and the environment. The Risk Management Profile will serve as documentation of the results of the site ranking system (described in Section 2.2 of RECAP). The Risk Management Profile will also document the criteria and verify that the SO, MO-1, MO-2 or MO-3 is appropriate for application at each AOI. The Risk Management Profile shall include:

VIII.D.6.a. A table for tracking the management options for each AOI, and the determination made, whether an AOI is deemed for no further action at

this time (NFA-ATT) or is going to use either the SO, MO-1, MO-2 or MO-3 management option.

VIII.D.6.b. A list of identified site-wide data gaps for further investigation.

VIII.D.6.c. Documentation of all interim measures which have been or are being undertaken at the facility, including under State or Federal compliance orders, other than those specified in the Permit. This documentation shall include the objectives of the interim measures and how the measure is mitigating a potential threat to human health or the environment and/or is consistent with and integrated into requirements for a long term remedial solution.

VIII.E. INTERIM MEASURES

VIII.E.1. If at any time during the term of this Permit, the Administrative Authority determines that a release or potential release of hazardous constituents from a SWMU/AOC poses a threat to human health and the environment, the Administrative Authority may require interim measures. The Administrative Authority shall determine the specific measure(s) or require the Permittee to propose a measure(s). The interim measure(s) may include a permit modification, a schedule for implementation, and an Interim Measures Workplan. The Administrative Authority may modify this Permit according to LAC 33:V.321 to incorporate interim measures into the Permit. However, depending upon the nature of the interim measures, a permit modification may not be required.

VIII.E.2. The Permittee may propose interim measures at any time by submittal of an Interim Measures Workplan subject to the approval of the Administrative Authority.

VIII.E.3. The Administrative Authority shall notify the Permittee in writing of the requirement to perform interim measures and may require the submittal of an Interim Measures Workplan. The following factors will be considered by the Administrative Authority in determining the need for interim measures and the need for permit modification:

VIII.E.3.a. Time required to develop and implement a final remedy;

VIII.E.3.b. Actual and potential exposure to human and environmental receptors;

VIII.E.3.c. Actual and potential contamination of drinking water supplies and sensitive ecosystems;

VIII.E.3.d. The potential for further degradation of the medium in the absence of interim measures;

VIII.E.3.e. Presence of hazardous wastes in containers that may pose a threat of release;

VIII.E.3.f. Presence and concentration of hazardous waste including hazardous constituents in soil that has the potential to migrate to groundwater or surface water;

VIII.E.3.g. Weather conditions that may affect the current levels of contamination;

VIII.E.3.h. Risks of fire, explosion, or accident; and

VIII.E.3.i. Other situations that may pose threats to human health and the environment.

VIII.E.4. Upon approval of the Interim Measures Workplan and completion of the interim measure(s) implementation, the Permittee will submit a report to the Administrative Authority describing the completed work.

VIII.E.5. At anytime during or after the interim measure(s), including the issuance of an NFA-ATT, the Administrative Authority may require the Permittee to submit the SWMUs/AOCs for further corrective action.

VIII.F. CAS (CORRECTIVE ACTION STRATEGY) INVESTIGATION WORKPLAN

VIII.F.1. The CAS Investigation Workplan that describes site investigation activities for corrective action shall be submitted to the Administrative Authority within 180 days after the scoping meeting between the Permittee and the Administrative Authority. The CAS Investigation Workplan must address releases of hazardous waste or hazardous constituents to all media, unless otherwise indicated, for those SWMUs/AOCs listed in Appendix 1, Table 1. The focus of the site investigation phase for corrective action is to collect data to fill in data gaps identified in the CSM. The corrective action investigations may be conducted in phases if warranted by site conditions, contingent upon approval by the Administrative Authority.

VIII.F.1.a. The CAS Investigation Workplan shall describe the management options (MO) for each AOI/release area, data quality objectives for achieving each management option, and proposals for release characterizations (sampling and analysis/quality assurance plans) to support the data quality objectives (DQOs). (DQOs are determined based on the end use of the data to be collected, and the DQO development process should be integrated into project planning and refined throughout the CAS implementation. DQOs shall be used to 1) ensure that environmental data are scientifically valid, defensible, and of an appropriate level of quality given the intended use, and 2) expedite site investigations. The CAS Investigation Workplan is required to have DQOs that are developed to support the performance standard for each

release.) The CAS Investigation Workplan shall detail all proposed activities and procedures to be conducted at the facility, the schedule for implementing and completing such investigations, the qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the site investigations. The scope of work for the site investigation can be found in RECAP Appendix B.

VIII.F.1.b. The CAS Investigation Workplan shall describe sampling, data collection quality assurance, data management procedures (including formats for documenting and tracking data and other results of investigations) and health and safety procedures.

VIII.F.1.c. Development of the CAS Investigation Workplan and reporting of data shall be consistent with the latest version of the following EPA and State guidance documents or the equivalent thereof:

VIII.F.1.c.(1). Guidance for the Data Quality Assessment, Practical Methods for Data Analysis. QA97 Version EPA QA/G-9. January 1998;

VIII.F.1.c.(2). Guidance for the Data Quality Objectives Process. EPA QA/G-4. September 1994;

VIII.F.1.c.(3). Data Quality Objectives Remedial Response Activities. EPA/540/G87-003. March 1987;

VIII.F.1.c.(4). Guid ance on Quality Assurance Project Plans. EPA QA/G-5. February 1998;

VIII.F.1.c.(5). Interim EPA Data Requirements for Quality Assurance Project Plans. EPA Region 6, Office of Quality Assurance. May 1994;

VIII.F.1.c.(6). 29 CFR 1910.120 (b) for the elements to Health and Safety plans;

VIII.F.1.c.(7). RCRA Groundwater Monitoring: Draft Technical Guidance EPA/530-R-93-001 November 1992;

VIII.F.1.c.(8). Test Methods for Evaluating Solid Waste, Physical/Chemical Methods; SW-846, 3rd Edition. November 1992, with revisions;

VIII.F.1.c.(9). The LDEQ Handbook - **Construction of Geotechnical Boreholes and Groundwater Monitoring Systems," prepared by the LDEQ and the Louisiana Department of Transportation and Development.** This document is printed by and available from the Louisiana Department of Transportation and Development, Water

Resources Section, P. O. Box 94245, Baton Rouge, Louisiana 70804-9245; and

VIII.F.1.c.(10). The LAC 33:I.Chapter 13 and Louisiana Department of Environmental Quality Risk Evaluation/Corrective Action Program (RECAP).

VIII.F.2. After the Permittee submits the CAS Investigation Workplan; the Administrative Authority will approve, disapprove, or otherwise modify the CAS Investigation Workplan in writing. All approved workplans become enforceable components of this Permit.

In event of disapproval (in whole or in part) of the workplan, the Administrative Authority shall specify deficiencies in writing. The Permittee shall modify the CAS Investigation Workplan to correct these within the time frame specified in the notification of disapproval by the Administrative Authority. The modified workplan shall be submitted in writing to the Administrative Authority for review. Should the Permittee take exception to all or part of the disapproval, the Permittee shall submit a written statement of the ground for the exception within fourteen (14) days of receipt of the disapproval.

VIII.F.3. The Administrative Authority shall review for approval, as part of the CAS Investigation Workplan or as a new workplan, any plans developed pursuant to Condition VIII.L addressing further investigations of newly-identified SWMUs/AOCs, or Condition VIII.M addressing new releases from previously-identified SWMUs/AOCs.

VIII.G. IMPLEMENTATION OF SITE INVESTIGATION ACTIVITIES UNDER CAS

No later than fourteen (14) days after the Permittee has received written approval from the Administrative Authority for the CAS Investigation Workplan, the Permittee shall implement the site investigation activities according to the schedules and in accordance with the approved CAS Investigation Workplan and the following:

VIII.G.1. The Permittee shall notify the Administrative Authority at least 10 working days prior to any field sampling, field-testing, or field monitoring activity required by this Permit to give LDEQ personnel the opportunity to observe investigation procedures and/or split samples.

VIII.G.2. Deviations from the approved CAS Investigation Workplan, which are necessary during implementation, must be approved by the Administrative Authority and fully documented and described in the progress reports (Condition VIII.C), RECAP Report (Condition VIII.H) and the final Risk Management Plan (Condition VIII.J).

VIII.H. RECAP REPORT

Within ninety (90) days after completion of the site investigation the Permittee shall submit a RECAP Report to the Administrative Authority for approval. The RECAP Report shall document the results of the site investigation activities, and the evaluation of the impacts from releases. The Administrative Authority will review and evaluate the report and provide the Permittee with written notification of the report's approval or a notice of deficiency. If the Administrative Authority determines the RECAP Report does not fully meet the objectives stated in the CAS Investigation Workplan (Permit Condition VIII.F), the Administrative Authority shall notify the Permittee in writing of the report's deficiencies, and specify a due date for submittal of a revised Final Report to the Administrative Authority.

VIII.H.1. The Permittee shall screen site-specific data using the appropriate RECAP standard (RS) for each AOI (depending on the MO), evaluate impacts from releases with exposure scenario evaluations, and update the Risk Management Profile of the CSM.

VIII.H.2. The report shall include, but not be limited to, the following:

VIII.H.2.a. Documentation of site investigation activities and results;

VIII.H.2.b. Evaluation of exposure scenarios to document impacts from releases;

VIII.H.2.c. Deviations from the CAS Investigation Workplan;

VIII.H.2.d. Results of screening activities using RECAP standards (RS), including SO, MO-1, MO-2, or MO-3 RS for each media;

VIII.H.2.e. The revised CSM with updated profiles which incorporate investigation and screening results; and

VIII.H.2.f. Proposed revisions to performance standards based on new information (e.g., change in land use, difference in expected receptors and/or exposure, or other differences in site conditions), if warranted.

VIII.I. REMEDIAL ALTERNATIVES STUDY

Upon completion and approval of the RECAP Report, the Permittee shall proceed with the evaluation of remedial alternatives to complete corrective action for each AOI according to the performance standards described in Condition VIII.A.2. The remedial alternatives shall be submitted to the Administrative Authority in the Remedial Alternatives Study (RAS) within ninety (90) days of the Administrative Authority's approval of the RECAP Report. In the Remedial Alternatives Study, the Permittee shall identify and evaluate various potential remedies that would meet the performance-based corrective action objectives and propose one or more specific remedies based on an evaluation of applicable data and available

corrective action technologies. The RAS shall be prepared in a manner that addresses the extent and nature of the contamination at the facility.

VIII.I.1. The Permittee shall evaluate remedies for each AOI that shall:

VIII.I.1.a. attain compliance with corrective action objectives for releases of hazardous waste and/or hazardous constituents, as established in the Conceptual Site Model or in later investigations approved by the Administrative Authority;

VIII.I.1.b. control sources of releases;

VIII.I.1.c. meet acceptable waste management requirements;

VIII.I.1.d. protect human health and the environment; and

VIII.I.1.e. meet applicable statutory and regulatory requirements (as noted in Condition VIII.A.2.b).

VIII.I.2. The Permittee shall evaluate the use of presumptive remedies and innovative technologies to achieve the appropriate remedial performance standards for each AOI.

VIII.I.3. The Permittee shall review the current interim measures/ stabilization activities to evaluate if these measures meet all the criteria for final remedy.

VIII.I.4. If under certain site-specific conditions, or when it is not technically or economically feasible to attain the corrective action objectives, the Permittee may propose to use institutional controls to supplement treatment or containment-based remedial actions upon approval of the Administrative Authority (Section 2.15 of RECAP).

VIII.I.5. The RAS shall at a minimum include:

VIII.I.5.a. An evaluation of the performance reliability, ease of implementation, and the potential impacts of the potential remedies;

VIII.I.5.b. An assessment of the effectiveness of potential remedies in achieving adequate control of sources and meeting remedial performance standards;

VIII.I.5.c. An assessment of the costs of implementation for potential remedies;

VIII.I.5.d. An assessment of the time required to begin and complete the remedy;

VIII.I.5.e. An explanation of the rationale for the remedy proposed for each AOI or group of AOIs; and

VIII.I.5.f. An assessment of institutional requirements (e.g., state permit requirements that may impact remedy implementation).

VIII.I.6. The Administrative Authority will review and evaluate the RAS and provide the Permittee with written notification of the study's approval or a notice of deficiency. If the Administrative Authority determines the RAS does not fully meet the requirements detailed in Conditions VIII.I.1 through VIII.I.5, the Administrative Authority shall notify the Permittee in writing of the RAS's deficiencies, and specify a due date for submittal of a revised RAS to the Administrative Authority. In addition, the Administrative Authority may require the Permittee to evaluate additional remedies or particular elements of one or more proposed remedies.

VIII.J. RISK MANAGEMENT PLAN

Within ninety (90) days of the Administrative Authority's approval of the RAS, the remedy/remedies proposed for selection shall be documented and submitted in the Risk Management Plan. The Permittee shall propose corrective action remedies in accordance with Chapter IV of the RCRA Corrective Action Plan (Final), May 1994, OSWER Directive 9902.3-2A or as directed by the Administrative Authority.

VIII.J.1. The Risk Management Plan shall at a minimum include:

VIII.J.1.a. A summary of the remedial alternatives for each AOI and the rationale used for remedy selection;

VIII.J.1.b. The final CSM with proposed remedies, including locations of AOIs addressed by a risk management activity, COC concentrations that represent the long-term fate and transport of residual COCs and the exposure pathways affected by the risk management activity;

VIII.J.1.c. Cost estimates and implementation schedules for proposed final remedies;

VIII.J.1.d. Proposed remedy design and implementation precautions, including special technical problems, additional engineering data required, permits and regulatory requirements, property access, easements and right-of-way requirements, special health and safety requirements, and community relations activities;

VIII.J.1.e. Remedy performance criteria and monitoring:

The Permittee shall identify specific criteria (such as land use changes, fate and transport model verification and constructed remedy performance) that will be evaluated to demonstrate that the risk management activity

implemented will remain protective. A schedule for periodic performance review (such as monitoring data summaries, including graphical and statistical analyses) shall be established to demonstrate that the implemented activities are consistently achieving and maintaining desired results. Further, a mechanism shall be established to re-evaluate risk management activities in the event the implemented action does not achieve and maintain the performance standards;

VIII.J.1.f. Contingency plans; and

VIII.J.1.g. Description and schedules for performance reviews.

VIII.J.2. After the Permittee submits the Risk Management Plan, the Administrative Authority will review and evaluate the plan and subsequently either inform the Permittee in writing that the plan is acceptable for public review or issue a notice of deficiency.

VIII.J.3. If the Administrative Authority determines the Risk Management Plan does not fully meet the remedial objectives, the Administrative Authority shall notify the Permittee in writing of the plan's deficiencies and specify a due date for submittal of a revised Final Risk Management Plan. In addition, the Administrative Authority may require the Permittee to evaluate additional remedies or particular elements of one or more proposed remedies.

VIII.J.4. After the Administrative Authority has determined the Risk Management Plan is acceptable for public review, the Administrative Authority shall inform the Permittee in writing and instruct the Permittee to submit the plan as a Class 3 permit modification request in accordance with the requirements of LAC 33:V.321.C.3.

VIII.J.5. After conclusion of a sixty (60) day comment period, the Administrative Authority will either grant or deny the Class 3 permit modification request. In addition the Administrative Authority must consider and respond to all significant comments received during the sixty (60) day comment period.

VIII.J.6. If the Class 3 Modification request is granted, the Administrative Authority shall prepare a draft permit incorporating the proposed changes in accordance with LAC 33:V.703.C and solicit public comment on the draft permit modification according to Condition VIII.N.3 of this permit.

VIII.J.7. If, after considering all public comments, the Administrative Authority determines that the Risk Management Plan is adequate and complete, the Administrative Authority will issue a public notice for final approval the Class 3 permit modification. The resultant modified permit will include schedules for remedy implementation as well as financial assurance provisions as required by Condition VIII.A.5 of this permit.

VIII.K. DETERMINATION OF NO FURTHER ACTION

VIII.K.1. NFA-ATT Determinations for Specific SWMUs/AOCs

VIII.K.1.a. Based on the results of the site investigations, screening, risk evaluations and risk management activities, the Permittee may request a NFA-ATT determination for a specific SWMU/AOC by submittal of a Class 1[1] permit modification ([1] requiring Administrative Authority approval) request under LAC 33:V.321.C.1. The NFA-ATT request must contain information demonstrating that there are no releases of hazardous constituents from a particular SWMU/AOC that pose a threat to human health and/or the environment.

The basis for the determination of NFA-ATT shall follow the guidelines as described in the RECAP (Section 1.2.1 of RECAP) for each AOI, depending on the MO used.

VIII.K.1.b. If, based upon review of the Permittee's request for a permit modification, the results of the site investigations, and other information the Administrative Authority determines that releases or suspected releases from an individual SWMU/AOC which were investigated either are non-existent or do not pose a threat to human health and/or the environment, the Administrative Authority may grant the requested modification.

VIII.K.1.c. In accordance with LAC 33:V.321.C.1.a.ii, the Permittee must notify the facility mailing list within ninety (90) days of the Administrative Authority's approval of the Class 1[1] permit modification request.

VIII.K.2. Facility-Wide NFA-ATT Determination

VIII.K.2.a. Upon the completion of all activities specified in the Risk Management Plan and after all SWMUs and AOCs at the facility have been remediated according to the standards dictated by the selected RECAP MO, the Permittee shall submit a summary report supporting a determination of NFA-ATT on a facility-wide basis.

VIII.K.2.b. The summary report must include a historical narrative for each SWMU/AOC at the site that includes a summary of the investigation, sampling & analysis, remedial, and confirmatory sampling activities leading to the NFA-ATT request. The basis for the determination of NFA-ATT shall follow the guidelines as described in the RECAP (Section 1.2.1 of RECAP) for each AOI, depending on the MO used. The facility-wide NFA-ATT determination must consider any newly-identified SWMUs/AOCs discovered after submittal of the Risk Management Plan.

VIII.K.2.c. The Administrative Authority will review and evaluate the summary report and subsequently either inform the Permittee in writing that the report is acceptable for public review or issue a notice of deficiency.

VIII.K.2.d. If the Administrative Authority determines the summary report does not fully demonstrate that all remedial objectives have been satisfied, the Administrative Authority shall notify the Permittee in writing of the summary report's deficiencies and specify a due date for submittal of a revised summary report.

VIII.K.2.e. After the Administrative Authority has determined the facility-wide NFA-ATT summary report is acceptable for public review, the Administrative Authority shall inform the Permittee in writing and instruct the Permittee to submit the summary report as a Class 3 permit modification request in accordance with the requirements of LAC 33:V.321.C.3.

VIII.K.2.f. After conclusion of a sixty (60) day comment period, the Administrative Authority will either grant or deny the Class 3 permit modification request. In addition the Administrative Authority must consider and respond to all significant comments received during the sixty (60) day comment period.

VIII.K.2.g. If, based upon review of the Permittee's Class 3 permit modification request, the results of the site investigations, confirmatory sampling, and other pertinent information, the Administrative Authority determines that all SWMUs and AOCs have been remediated to the selected MO and no further action at the facility is warranted, the Administrative Authority will grant the modification request.

VIII.K.2.h. If the Class 3 Modification request is granted, the Administrative Authority shall prepare a draft permit incorporating the proposed changes in accordance with LAC 33:V.703.C and solicit public comment on the draft permit modification according to Condition VIII.N.4 of this permit.

VIII.K.2.i. If, after considering all public comments, the Administrative Authority determines that all activities specified in the Risk Management Plan have been completed and that all SWMUs and AOCs have been remediated to the selected MO, the Class 3 permit modification for facility-wide NFA-ATT will receive final approval. The CAS permit conditions will remain a part of the modified permit in the event that the remedial actions taken fail to maintain the established performance standard and to address any SWMUs/AOCs discovered at a later date.

VIII.K.3. Continued Monitoring

If necessary to protect human health and/or the environment, a determination of NFA-ATT shall not preclude the Administrative Authority from requiring continued

monitoring of air, soil, groundwater, or surface water, when site-specific circumstances indicate that releases of hazardous waste or hazardous constituents are likely to occur.

VIII.K.4. Additional Investigations

A determination of NFA-ATT shall not preclude the Administrative Authority from requiring further investigations, studies, or remediation at a later date, if new information, data or subsequent analysis (not available to the Administrative Authority at the time the NFA-ATT determination was rendered) indicates a release or likelihood of a release from a SWMU/AOC at the facility that is likely to pose a threat to human health and/or the environment. In such a case, the Administrative Authority shall initiate a modification to the Permit according to LAC 33:V.321.

VIII.L. NOTIFICATION REQUIREMENTS FOR AND ASSESSMENT OF NEWLY-IDENTIFIED SWMUs AND POTENTIAL AOCs

VIII.L.1. The Permittee shall notify the Administrative Authority, in writing, of any newly-identified SWMUs and potential AOCs (i.e., a unit or area not specifically identified during previous corrective action assessments, RFA, etc.), discovered in the course of groundwater monitoring, field investigations, environmental audits, or other means, no later than thirty (30) days after discovery. The Permittee shall also notify the Administrative Authority of any newly-constructed land-based SWMUs (including but not limited to, surface impoundments, waste piles, landfills, land treatment units) and newly-constructed SWMUs where any release of hazardous constituents may be difficult to identify (e.g., underground storage tanks) no later than thirty (30) days after construction. The notification shall include the following items, to the extent available:

VIII.L.1.a. The location of the newly-identified SWMU or potential AOC on the topographic map required under LAC 33:V.517.B. Indicate all existing units (in relation to other SWMUs/AOCs);

VIII.L.1.b. The type and function of the unit;

VIII.L.1.c. The general dimensions, capacities, and structural description of the unit (supply any available drawings);

VIII.L.1.d. The period during which the unit was operated;

VIII.L.1.e. The specifics, to the extent available, on all wastes that have been or are being managed at the SWMU or potential AOC; and

VIII.L.1.f. Results of any sampling and analysis required for the purpose of determining whether releases of hazardous waste including hazardous constituents have occurred, are occurring, or are likely to occur from the SWMU/AOC.

VIII.L.2. Based on the information provided in the notification, the Administrative Authority will determine whether or not the area is a newly-identified SWMU or AOC. If the area is determined to be a newly-identified SWMU or AOC, the Administrative Authority will inform the Permittee in writing and request that the Permittee submit a Class 1[1] permit modification request under LAC 33:V.321.C.1 to add the newly-identified SWMU/AOC to Appendix 1, Table 1 of this permit.

Further, the Administrative Authority will determine the need for further investigations or corrective measures at any newly identified SWMU or AOC. If the Administrative Authority determines that such investigations are needed, the Administrative Authority may require the Permittee to prepare a plan for such investigations. The plan for investigation of SWMU or AOC will be reviewed for approval as part of the current CAS Investigation Workplan or a new CAS Investigation Workplan. The results of the investigation of any newly-discovered SWMU/AOC shall be incorporated into the CSM.

VIII.M. NOTIFICATION REQUIREMENTS FOR NEWLY-DISCOVERED RELEASES AT A SWMU OR AOC

The Permittee shall notify the Administrative Authority of any release(s) from a SWMU or AOC of hazardous waste or hazardous constituents discovered during the course of groundwater monitoring, field investigation, environmental auditing, or other means. The notification must be in accordance with the procedures specified in Conditions II.E.16 through II.E.20 of this permit and based upon the nature, extent, and severity of the release. Such newly-discovered releases may be from newly-identified SWMUs or AOCs, newly-constructed SWMUs, or from SWMUs or AOCs for which, based on the findings of the CSM, completed RECAP Report, or investigation of an AOC, the Administrative Authority had previously determined no further investigation was necessary. The notification shall include information concerning actual and/or potential impacts beyond the facility boundary and on human health and the environment, if available at the time of the notification.

The Administrative Authority may require further investigation and/or interim measures for the newly-identified release(s), and may require the Permittee to prepare a plan for the investigation and/or interim measure. The plan will be reviewed for approval as part of the CAS Investigation Workplan or a new CAS Investigation Workplan. The Permit will be modified to incorporate the investigation, according to the Class 1[1] permit modification ([1] requiring Administrative Authority approval) procedures under LAC 33:V.321. The results of the investigation of any newly-identified release(s) shall be incorporated into the CSM.

VIII.N. PUBLIC PARTICIPATION REQUIREMENTS

Public participation is an essential element in the implementation of any corrective action program at the facility. The CAS promotes the early and continued involvement of stakeholders in site remediation activity during permit issuance, renewal, or modification. The public is invited to review and comment on the corrective action requirements contained in any draft permitting decisions or draft permit modification documents and the associated

plans and reports submitted by the Permittee. The Administrative Authority reserves the right to require more extensive public participation requirements based upon site-specific conditions and other relevant factors (e.g., compliance history, potential offsite impact, community interest, etc.). At a minimum, the public participation requirements shall include the following.

VIII.N.1. NFA-ATT Determinations for Specific SWMUs/AOCs

Based on the results of the site investigations, screening, risk evaluations and risk management activities, the Permittee may request a NFA-ATT determination for a specific SWMU/AOC by submittal of a Class 1[1] permit modification request ([1] requiring Administrative Authority approval) under LAC 33:V.321.C.1. The Permittee must notify the facility mailing list within 90 days of the Administrative Authority's approval of the Class 1[1] permit modification request, in accordance with LAC 33:V.321.C.1.a.ii and Condition VIII.K.1.c of this permit.

VIII.N.2. Draft Permitting Decision

The public may review and comment on the terms and conditions of the CAS during the public notice and comment period of the draft permitting decision. The Administrative Authority shall issue public notice upon preparation of the draft permitting decision in accordance with LAC 33:V.715. During the forty-five (45) day public comment period, the Administrative Authority will accept public comments on the draft permitting decision. At the end of the public comment period, the Administrative Authority will consider and address all public comments and make any necessary revisions to the draft permitting decision. After addressing all public comments, the Administrative Authority will issue a public notice for issuance of the final permitting decision. The final permitting decision will include a "Responsiveness Summary" detailing all comments received on the draft permitting decision and the actions taken (if necessary) to correct the draft before issuance of the final permitting decision.

VIII.N.3. Final Remedy Selection

The public may review and comment on the terms and conditions of the Risk Management Plan as described in Conditions VIII.J.4 through VIII.J.7 of this permit. If after addressing all public comments the Administrative Authority determines that the Risk Management Plan is satisfactory, the Administrative Authority will prepare a draft permit modification document in accordance with LAC 33:V.703.C.

The draft permit modification document will include a "Basis of Decision". The "Basis of Decision" will identify the proposed remedy for corrective action at the site and the reasons for its selection, describe all other remedies that were considered, and solicit for public review and comments on the Risk Management Plan included in the draft permit modification document.

After addressing all public comments, the Administrative Authority will issue a public notice for issuance of the final permit modification. The final permit modification will include a "Responsiveness Summary" detailing all comments received on the draft permit modification and the actions taken (if necessary) to correct the draft before issuance of the final permit modification.

VIII.N.4. Facility-Wide NFA-ATT

Upon the completion of all activities specified in the Risk Management Plan and after all facility remedial objectives have been met, the Permittee may submit a summary report for a determination of NFA-ATT on a facility-wide basis in accordance with Condition VIII.K.2 of this permit. The public may review and comment on the summary report as described in Condition VIII.K.2.b. If after addressing all public comments the Administrative Authority determines that all SWMUs and AOCs have been remediated to the selected MO and no further action at the facility is warranted, the Administrative Authority will prepare a draft permit modification document in accordance with LAC 33:V.703.C.
The draft permit modification document will include a "Basis of Decision". The "Basis of Decision" will provide a summary detailing contamination sources, site investigations, the MO selected for the facility, facility remedial standards, remedial actions, and sampling results demonstrating that the facility remedial standards have been achieved.

After addressing all public comments, the Administrative Authority will issue a public notice for issuance of the final permit modification. The final permit modification will include a "Responsiveness Summary" detailing all comments received on the draft permit modification and the actions taken (if necessary) to correct the draft before issuance of the final permit modification.

Table 1: Corrective Action Strategy Notification and Reporting Requirements

Below is a summary of the major notifications and reports that may be required by the Administrative Authority under the Corrective Action Strategy of this Permit in the event of releases requiring RCRA corrective action. The Administrative Authority will notify the Permittee of the notification and reporting requirements during the scoping meeting or another applicable stage of the corrective action process.

ACTION	DUE DATE
Submit Notice of Intent to request use of the CAS to the Administrative Authority for review and comment (Condition VIII.B.1)	Within sixty (60) days of the effective date of this permit (if facility corrective action is required)
CAS Scoping Meeting held between facility and Administrative Authority (Condition VIII.B.2)	Within sixty (60) days of submittal of the Notice of Intent
Submit Progress Reports on all activities to the Administrative Authority (Condition VIII.C.1)	Schedule to be determined by the Administrative Authority on a case-by-case basis
Make available other reports relating to corrective action to the Administrative Authority (Condition VIII.C.2)	Upon request of the Administrative Authority
Provide briefings to the Administrative Authority (Condition VIII.C.3)	As necessary and upon request by the Administrative Authority
Submit Conceptual Site Model (CSM) (Condition VIII.D) and facility Performance Standards (Condition VIII.A.2) to the Administrative Authority	Within one-hundred and twenty (120) days after the scoping meeting
Perform Interim Measures (Condition VIII.E)	As determined by the Administrative Authority on a case by case basis
Submit Corrective Action Strategy (CAS) Workplan for the facility investigation to the Administrative Authority (Condition VIII.F)	Within one-hundred and eighty (180) days after the CAS Scoping Meeting
Implement site investigation activities under CAS Investigation Workplan according to approved schedule (Condition VIII.G)	Within fourteen (14) days of receipt of approval by the Administrative Authority
Submit RECAP Report to the Administrative Authority (Condition VIII.H)	Within ninety (90) days of completion of the site investigation
Submittal of Remedial Alternatives Study (RAS) to the Administrative Authority (Condition VIII.I)	Within ninety (90) days of completion of approval of the RECAP Report by the Administrative Authority
Submit Risk Management Plan to the Administrative Authority (Condition VIII.J)	Within ninety (90) days of approval of the RAS by the Administrative Authority
Submit requests for unit specific and facility-wide NFA-ATT determinations to the Administrative Authority (Condition VIII.K)	As necessary
Notification of newly-identified SWMUs and potential AOCs (Condition VIII.L)	Thirty (30) days after discovery
Notification of newly-discovered releases (Condition VIII.M)	According to the requirements of Conditions II.E.16 through II.E.20 of this permit

APPENDIX 1

APPENDIX 1: SUMMARY OF CORRECTIVE ACTION ACTIVITIES

The intent of Appendix 1 is to provide an overview of the history and current status of the corrective action process at the site at the time of issuance of the final permit and may not necessarily provide a definitive regulatory determination for a particular SWMU, AOC, or any other onsite area of release. The classification of an individual SWMU, AOC, or any other onsite release area is subject to change by the Administrative Authority based on future site-specific conditions and future available information available to the Administrative Authority.

Site Geological and Hydrogeological Background

The Dow Chemical Company's ("Dow") Plaquemine facility is located on backswamp and lacustrine deposits from the Holocene era with a thin veneer of natural levee deposits. These backswamp and lacustrine deposits occur to a depth of approximately 100 ft below ground surface (bgs) and are composed of soft- to-medium gray clays, silty clays, and clayey silt and silty sand lenses, seams, and layers. Layers of decayed organic material are common in these layers. Below these Holocene deposits is the Plaquemine Aquifer of the Pleistocene era, which is encountered approximately 100 feet below land surface in the area of the Plaquemine facility. The Plaquemine Aquifer consists of medium to coarse sand and gravel that are occasionally overlain by silty sand. The Plaquemine facility is typically described as being underlain by two shallow, low permeable water bearing zones (first pervious zone and second pervious zone) and the deeper underlying aquifer (Plaquemine Aquifer). The first pervious zone is a 10 foot thick zone that occurs at approximately 10 to 20 feet bgs; the deep pervious zone is a 20 foot thick zone that occurs at approximately 40 to 60 feet bgs.

Historical Background

A RCRA Facility Assessment (RFA), dated August 1986, was prepared for EPA Region VI by A.T. Kearney, Inc. The RFA identified 44 units, referred to as Solid Waste Management Units or SWMUs at Dow's Plaquemine facility. SWMUs were grouped into categories based on similarities in location, associated production processes, or similar construction and use. Many of the SWMUs identified in the RFA were or contained units that were interim status units or permitted units managed under the Solid Waste or Hazardous Waste programs. In addition, many of the SWMUs identified in the RFA were designated as requiring neither further investigation nor corrective action at the time the RFA was conducted.

However, the RFA identified several units for which additional information/data, additional investigation, or activities were requested or required. The units included:

- Environmental Operations Area – Surface Impoundments EC-1 (SWMU #1)
- Light Hydrocarbons I, II and III Area – LHC III Surface Impoundment (SWMU #21) and API Separator (SWMU #23)
- Polyethylene B – Closed Surface Impoundment (SWMU #32) and Rainwater Collection Pond (SWMU #33)
- Coal Slurry Production Plant Surface Impoundment (SWMU #34)
- Block 49 Landfill (SWMU #39).

[Note: A complete listing of the SWMUs identified by the 1986 RFA and their respective categories can be found on page 7 of The RFA Report, EDMS Document #22058157.]

None of these units were listed as regulated under RCRA in the RFA. Additionally, the recommended actions for these units were associated primarily with waste stream characterization, regulatory status determination, housekeeping and verification of clean closure through review of existing data. Following the RFA and consistent with the recommendations of the RFA, additional steps were taken by the facility for these identified units.

Though listed as SWMU #39, Block 49 was not identified in the RFA as a site that needed further action under the HSWA amendments to the RCRA program because, as noted in the RFA, it was a site that was being investigated and remediated under a state program. Corrective action activities associated with SWMU #39 (Block 49 Landfill) are ongoing as described below in this appendix.

By the 1980's, Dow, in cooperation with the LDEQ, had initiated voluntary assessments, investigations and corrective action plans to address historical releases at the site. Dow then took steps to incorporate a site-wide approach for corrective action and to facilitate and expedite the corrective action process.

In March 1991, LDEQ and Dow entered into the Groundwater Corrective Action Agreement (GW-89-003). The Groundwater Corrective Action Agreement was entered into by the LDEQ and Dow following the issuance of a previous groundwater corrective action order (GWO-89-003) by LDEQ to Dow on September 26, 1989. The key terms and conditions of Groundwater Corrective Action Agreement GW-89-003 (the completed details of the agreement can be found in EDMS Document #1095105) are summarized below:

1. Requirements that Dow investigate the extent of groundwater contamination for the following:
    - Brine Area
    - PDC Area
    - EDC Product Storage Tank Area
    - Environmental Operations Area
    - Any future release(s) of waste constituents to groundwater at Dow's Plaquemine facility
    - Any future discovery of historical release(s) of waste constituents to groundwater, including those identified by Dow's voluntary plant-wide assessment program.
2. Incorporation of previously approved assessments, investigations, and corrective action plans (to date).
3. Utilizing the best available technology, Dow was to determine the hydrogeology of any and all assessment areas by use of geological cross sections, isopachs, flow models, etc.
4. Determination by Dow of the limits of vertical and horizontal contamination of any and all assessment areas.

5. Following LDEQ approval of Dow's onsite environmental assessments, requirement that Dow conduct Remedial Investigation and Feasibility Studies (RI/FS) for any areas not under LDEQ-approved corrective action.
6. Requirement that Dow monitor and evaluate each corrective action for effective plume management on a quarterly basis and summarize the results in a quarterly report to be submitted to LDEQ by January 31, April 30, July 31, and October 31 of each calendar year.

The various onsite releases at Dow's Plaquemine facility have historically been managed under various enforceable documents due to differences in: dates of release discovery; completion dates for assessment investigations; and the nature and extent of the releases. As a result, Dow's site-wide corrective action program as overseen by LDEQ has not mirrored the traditional RCRA corrective action approach. Steps were taken by Dow and the LDEQ to approach and implement corrective action in a progressive and expedited manner. Therefore, while various elements of the traditional RCRA corrective action approach such as the RCRA Facility Investigation (RFI) and Corrective Measures Study (CMS) have not been conducted, corrective actions were undertaken pursuant to enforceable documents that govern the execution, maintenance, and reporting of the corrective action activities at the site and address investigation, assessment, and remedy implementation. These enforceable documents include: the Hazardous Waste Operating Permit; the Groundwater Corrective Action Agreement; the Northwest Landfill/Corrective Action Management Unit Permit; and numerous LDEQ-approved assessment and corrective action plans.

The use of multiple enforceable documents has resulted in the use of different terminology being used to name and categorize the various release areas. Release area categories include: **SWMUs** (as described in the 1986 RFA and 1989 Hazardous Waste Operating Permit); **Groundwater Corrective Action Agreement Sites** (as described in or subject to the 1991Groundwater Corrective Action Agreement); and **Corrective Action Sites** (release areas discovered under Dow's voluntary plant-wide assessment program and managed under and/or subject to although not specifically named in the 1991 Groundwater Corrective Action Agreement). Below, a brief description of each release area is provided. The release areas are grouped according to release categories as noted above.

SWMUs

The 700 Railyard

This area (identified as a SWMU) is located between two sets of railroad tracks. The 700 Railyard site was once used as a temporary holding area for solid and hazardous waste. The 700 Railyard was identified in April 1990 and it contained two discrete disposal areas containing debris such as concrete and chlorine cells. Investigations in the area of the 700 Railyard also confirmed the presence of hexachlorinated organic compounds.

Area investigations identified the nature and extent of contamination. The impacted area was determined to include soil between depths of 1 to 4 feet below ground surface in a 1.5 acre area and soils to a depth of 8 feet at one location within this

defined area. Constituents of concern (COCs) included several volatile and semi-volatile chlorinated organic compounds.

Dow implemented the "700 Railyard Corrective Action Plan" that provided for the excavation of contaminated soil, subsequent backfilling of the area with uncontaminated soil, and disposing of contaminated soil in the permitted Corrective Action Management Unit (CAMU) under Permit Number LAD 008187080-CAMU-1 which became effective on June 3, 2002. Under the aforementioned CAMU permit, Dow's onsite Northwest Landfill received excavated remediation wastes and was re-designated as the Northwest Landfill/CAMU.

Concentrations of COCs remaining at the 700 Railyard are below the site-specific limiting RECAP standards. Based upon the data presented in the October 2005 "700 Railyard Corrective Action Plan Implementation Report", the LDEQ issued a No Further Action determination for the 700 Railyard in correspondence dated June 18, 2007.

Block 49

This area (identified as a SWMU) is an inactive landfill site located within Block 49 of Dow's Plaquemine facility. The landfill contains:

- Heavy bottom tars from Solvents and Vinyl I
- Chlorinated polyethylene
- Methylcellulose pulp
- Waste Oil
- Chlorine taffy
- Mercury contaminated soil

Investigations of this area were conducted in October 1983, February 1985, and January 1986 and resulted in the following conclusions:

- Confirmed shallow soil contamination up to 250 feet out from perimeter of the landfill
- The extent of vertical migration extended to as much as 37 feet from the bottom of the disposal cells
- No evidence of contamination of the Plaquemine Aquifer
- Free phase liquid organic contamination was present in the soil beneath the disposal pits

Dow is implementing the approved "Remedial Action Plan" for Block 49 which provides for: 1) containment of lateral and vertical movements of contaminants and 2) recovering and disposing of contaminants through the operation of a recovery well system including 5 horizontal recovery wells. Under the ongoing corrective action remedy, organics are thermally destroyed in the onsite Solvents Incinerator and the water is treated before being discharged through an NPDES outfall. The

implementation of the Block 49 "Remedial Action Plan" is ongoing. Dow reports corrective action activities relative to Block 49 in the Groundwater Corrective Action Agreement quarterly reports.

Corrective Action Sites

Lighthouse Road

The Lighthouse Road site is located on Dow's property within the batture of the Mississippi River and the impacted area at this site was determined to extend from approximately 70 feet east of the toe of the Mississippi River levee eastward, terminating more than 90 feet west of the Mississippi River channel. The Lighthouse Road site was the subject of numerous investigations performed from 1986 to 1993. Dow submitted the "Lighthouse Road RECAP Assessment and Corrective Action Plan" (including NOD responses) in January 2004 and the plan was approved by LDEQ and USEPA in correspondence dated May 5, 2004. The terms and conditions of the CAMU Permit LAD 008187080-CAMU-1 allowed for soils excavated from the Lighthouse Road area (and also 700 Railyard) to be disposed of in the Northwest Landfill/CAMU. Excavation activities at Lighthouse Road began in September 23, 2004.

Corrective action activities at Lighthouse Road included excavation of contaminated soil, pre-excavation soil sampling and analysis, post-removal soil confirmation sampling and analysis, and post-remediation shallow groundwater sampling and analysis. Dow submitted the "Lighthouse Road Corrective Action Plan Implementation Report" that addressed the results of corrective action activities performed at the site on March 1, 2007. Based upon the data presented in the "Lighthouse Road Corrective Action Plan Implementation Report", the LDEQ issued a No Further Action (for soils only) determination for Lighthouse Road in correspondence dated June 20, 2008.

At the request of the Administrative Authority and pursuant to a Supplemental Groundwater Plan, Dow performed sampling of the multiple depths of the Plaquemine Aquifer at locations in the vicinity of the Lighthouse Road site, including a location upgradient of the site. Dow performed sampling of multiple depths of the Plaquemine Aquifer around the excavation. Data from this sampling was submitted in a document titled "Supplemental Groundwater Sampling in the Vicinity of the Lighthouse Road Site" dated March 1, 2007. Volatile organic compounds were detected above the maximum contaminant levels (MCLs).

Chlorine Plant

The Chlorine Plant is an area that included a hazardous waste surface impoundment that was closed in 1987. The surface impoundment's monitoring wells indicated elevated chloride levels. The area surrounding the surface impoundment was assessed in September 1988 utilizing conductivity cone penetrometer soundings. The "Brine

Assessment and Remediation Plan" was submitted in October 1989 and was approved by LDEQ in March 1990.

A groundwater recovery system was installed and began operating in December 1990. The recovery system consists of seven recovery wells in the shallow pervious zone. Recovered groundwater is routed to Dow's brine treatment system and is utilized in the production of chlorine. The recovery system was shut down in February 2003 (for maintenance) and, as agreed to by LDEQ, will remain out of operation as LDEQ evaluates the "RECAP Low-Level Contamination Areas Human Health Risk Assessment" report that addresses this and several other release areas. Four (4) monitoring wells in the Chlorine Plant area are sampled semi-annually (one of the wells is sampled quarterly) and analyzed for chlorides. Dow reports corrective action activities related to the Chlorine Plant in the Groundwater Corrective Action Agreement quarterly reports.

Groundwater Corrective Action Agreement Sites

PDC Spill Sites #1 & #2

Two (2) historic propylene dichloride (PDC) releases from isolated railcar incidents resulted in remedial activities being required at PDC Spill Sites #1 and #2. Over 21 million pounds of PDC contaminated soils were excavated and incinerated onsite as a result of the spills. Incineration of contaminated soil was completed in October 1989. French drain systems were installed at both sites and recovered groundwater was steam stripped. Under the ongoing corrective action remedy, recovered groundwater is steam stripped. Dow has received LDEQ approval to close both French drain collection systems at Site #1 and Site #2.

Site #1 is located within the area referred to as Priority Area 1 (in the "Priority Areas 1 & 2 and Vinyl II Corrective Action Plan" submitted in June 1994). In accordance with the approved corrective action plan, 14 horizontal recovery wells were constructed and put into operation on December 13, 1996 and Dow ceased recovery efforts at Site #1 French drains on October 30, 1997.

Implementation of the corrective action remedy is ongoing for Site #1, as Dow continues to operate the Site #1 horizontal recovery well system in the area that includes Site #1. The groundwater monitoring reports for PDC Spill Site #1 have been consolidated with Priority Areas 1 & 2 in the Groundwater Corrective Action Agreement quarterly reports.

Site #2 is located southwest of Block 80 near the railyard. A closure plan for the French drain collection system at Site #2 was submitted on May 11, 1993, and was approved by the LDEQ on August 27, 1993. The Site #2 closure was completed during October 1993.

Environmental Operations Plant Chloride Site

Historical chloride contamination resulting from the earlier operation of the EC-1 Solid Waste Surface Impoundment was confirmed during the subsurface investigation conducted in October and November 1986 in the vicinity of the Environmental Operations Plant (EOP). The purpose of the investigation was to delineate the extent of chloride contamination in the shallow soils around the impoundment. Elevated conductivity readings were observed in the shallow pervious zone on the southeast (Dow coordinates) side of the impoundment where the piping, valves and pumps were located.

Under the "Chloride Remediation Plan", submitted to LDEQ in March 1988, three chloride recovery wells were installed in 1989. As has been reported to and discussed with LDEQ, the three recovery wells are currently inactive and inoperable. The wells remain inactive pending LDEQ's evaluation of the "RECAP Low-Level Contamination Areas Human Health Risk Assessment" report. Dow reports corrective action activities related to the Environmental Operations Plant Chloride Site in the Groundwater Corrective Action Agreement quarterly reports.

Vinyl II Plant (EDC Storage Tank Area)

In May 1989, ethylene dichloride (EDC) was detected in a subsurface drainage pipe beneath the Vinyl II Plant. The area assessment delineated the extent of the plume and confirmed that the source of contamination was two (2) EDC storage tanks. Under the "Vinyl II Remediation Plan" submitted to LDEQ in June 1989 and revised in June 1990, a series of vertical recovery wells were installed and began operating in June 1991.

Additional assessment was conducted during Dow's voluntary facility-wide groundwater assessment investigation. Upon completion of the aforementioned groundwater assessment, Dow submitted the "Priority Areas 1 & 2 and Vinyl II Corrective Action Plan" to LDEQ in June 1994. The plan proposed the installation of four horizontal recovery wells and a French drain and which would replace the existing remediation system. The "Priority Areas 1 & 2 and Vinyl II Corrective Action Plan" was approved by LDEQ in December 1994. The Vinyl II remediation system (four horizontal wells and French drain) began operation in the 3rd quarter 1995. Under the ongoing corrective action remedy, organics are thermally destroyed in the onsite Solvents Incinerator and the water is treated before being discharged through an NPDES outfall.

Dow also utilizes four monitoring wells at the Vinyl II Plant to monitor both the shallow and deep pervious zones. The wells are sampled quarterly and the results are included in the Groundwater Corrective Action Agreement quarterly reports.

Priority Areas 1 & 2

Dow's voluntary facility-wide groundwater assessment investigation confirmed organic contamination in the area of Dow's Plaquemine facility designated as Priority Areas 1 & 2. Priority Areas 1 & 2 encompass the following plants at Dow's Plaquemine facility:

- Glycol I
- Solvents
- EDC I
- Chlorine
- R&D
- Tank Farm I
- Polyethylene A

Releases were the result of past practices and a perchlorethylene spill which occurred in December 1993. Dow submitted the "Priority Areas 1 & 2 and Vinyl II Corrective Action Plan" to LDEQ in June 1994. The plan was approved by LDEQ in December 1994. Fourteen horizontal recovery wells were installed in Priority Areas 1 & 2 and the recovery system began operating in December 1996. Implementation of the Priority Areas 1 & 2 corrective action remedy is ongoing. Dow reports corrective action activities related to Priority Areas 1 & 2 in the Groundwater Corrective Action Agreement quarterly reports.

Phase II Mid-Plant Area

Dow's voluntary facility-wide groundwater assessment investigation confirmed organic contamination in the area of Dow's Plaquemine facility designated as the Phase II Mid-Plant Area. The Phase II Mid-Plant Area consists of the following blocks or plants within Dow's Plaquemine facility:

- LGTI
- Light Hydrocarbons III
- Methanes
- Naptha Storage
- Railroad Tank Car Cleaning Area

The contamination in these areas of Dow's Plaquemine facility is attributed to past activities within the production plants, material staging areas, and equipment cleaning areas. Dow submitted the "Phase II Corrective Action Plan" to LDEQ in December 1995. This plan addressed contaminated areas not previously addressed in the "Priority Areas 1 & 2 and Vinyl II Corrective Action Plan" and was approved by LDEQ in March 1996. As stipulated in the plan, Dow installed seven horizontal recovery wells and two French drains. The horizontal recovery wells were installed by the 2nd quarter of 1996 and the French drains were installed by the 4th quarter of 1997. Following the installation of all ancillary equipment, the recovery system began

operation in late 1998. Implementation of the Phase II Mid-Plant Area corrective action remedy is ongoing. Dow reports corrective action activities related to the Phase II Mid-Plant Area in the Groundwater Corrective Action Agreement quarterly reports.

The RECAP Low-Level Contamination Areas Human Health Risk Assessment

Utilizing a facility-wide approach to risk-based remediation, Dow submitted the "RECAP Low-Level Contamination Areas Human Health Risk Assessment" to LDEQ in October 2001. The risk assessment addressed areas of low-level contamination not otherwise addressed by active remediation or pending corrective action plans and was also submitted to meet one of the requirements of the "Priority Areas 1 & 2 and Vinyl II Corrective Action Plan" and the "Phase II Corrective Action Plan". It was revised in May 2005 and was supplemented in August 2006.

The low-level contamination areas addressed by the "RECAP Low-Level Contamination Areas Human Health Risk Assessment" include:

- Block 29 Caustic Plant
- Block 45 Cellulose Plant
- Block 26 Chlorine Plant
- Block 36 Chlor-Alkali II Plant
- Block 19 Chlorinated Polyethylene Plant
- Block 80 Environmental Operations Plant
- Block 30 Equipment Yard
- Block 53 Glycol II Plant
- Block 55 Glycol Ethers Plant
- Blocks 38 & 39 Light Hydrocarbons I Plant
- Block 9 Polyethylene B Plant
- Block 28 Power I Plant
- Block 37 Power II Plant
- Block 25 Research & Development Plant
- Block 70 Storage and Handling Plant

The supplemented report also includes information about 13 additional areas which were investigated as part of the facility-wide groundwater assessment as follows:

- Block 56 Cell Service Area
- Block 89 Sand Blast Area
- Block 65 Slag Area
- Block 41 Stock Area
- Block 120 Tankfarm II
- Block 43 Vector Plant
- Block 35 Environmental Services Block
- Block 41 Fire Training Area
- Block 18 Water Treatment Plant
- Block 48 Light Hydrocarbons II Plant
- Block 83 Pipeline Administrative Area

- Block 13 Plantation House Area
- Block 86 Poly C Plant

Several of the low-level contamination areas did not require evaluation under RECAP, and in many cases, the RECAP evaluation did not result in the identification of COCs. In areas where COCs were identified, the COCs varied by area and included volatile constituents, semi-volatile constituents, and chlorides.

Summary and Status of Release Areas with Ongoing Corrective Action Activities

Corrective action activities are ongoing for the release areas (SWMUs, Groundwater Corrective Action Agreement Sites, and Corrective Action Sites) described below. After COC concentrations in impacted environmental media within the boundaries or a particular release area fall below applicable RECAP standards (a period of performance monitoring may be required), Dow may submit a Class1[1] permit modification requesting a NFA-ATT determination for the specific release area. If the LDEQ determines the request for a NFA-ATT determination satisfies all applicable criteria, LDEQ will render a NFA-ATT determination and the termination of corrective action activities for the specific release area. Subsequent performance monitoring may be required to assure the long-term efficacy of corrective action.

Those areas for which implementation of the corrective action remedy corresponds to the implementation of the Risk Management Plan in the CAS process will not be subject to steps in the CAS process which are preliminary to the Risk Management Plan implementation. Those areas for which a NFA-ATT determination has been issued will not be subject to steps in the CAS process which are preliminary to a NFA-ATT determination unless warranted by new information, data, and/or analytical results that was not available to the Administrative Authority at the time of the determination.

Block 49 Landfill (SWMU): The corrective action remedy has been implemented in accordance with the Block 49 Landfill "Remedial Action Plan". The selected corrective action remedy is the recovery of hazardous organic constituents from groundwater via a system of recovery wells. Organics are thermally destroyed in the onsite Solvents Incinerator and the water is treated before being discharged through an NPDES outfall. The implementation of the corrective action remedy corresponds to the implementation of the Risk Management Plan in the CAS process. Organic contaminated groundwater continues to be recovered from the recovery well system. Dow must continue to implement, maintain, and monitor the performance of the selected corrective action remedy.

Chlorine Plant (Corrective Action Site): The corrective action remedy has been implemented in accordance with the Chlorine Plant "Brine Assessment and Remediation Plan". The selected corrective action remedy is the recovery of chloride contamination via a system of recovery wells. Recovered groundwater is routed to Dow's brine treatment system and is utilized in the production of chlorine. The implementation of the corrective action remedy corresponds to the implementation of the Risk Management Plan in the CAS process. The recovery system was shut down in February 2003 (for maintenance) and, as agreed to by LDEQ, will remain out of operation as LDEQ evaluates this and several other release areas. Four (4) monitoring wells in the Chlorine Plant area are sampled semi-annually and analyzed for chlorides. The "RECAP Low-Level Contamination Areas Human Health Risk Assessment" report has, to date, not been approved by LDEQ.

PDC Spill Sites #1 & #2 (Groundwater Corrective Action Site): The corrective action remedy has been implemented in accordance with the "Priority Areas 1 & 2 Corrective Action Plan". Under the approved corrective action plan, 14 horizontal recovery wells were constructed and put into operation on December 13, 1996 and Dow ceased recovery efforts at

the Site #1 French drains on October 30, 1997. Implementation of the corrective action remedy is ongoing for Site #1, as Dow continues to operate the horizontal recovery wells in the area that includes Site #1.

The implementation of the corrective action remedy corresponds to the implementation of the Risk Management Plan in the CAS process. Under the ongoing corrective action remedy for *Site #1*, organics are thermally destroyed in the onsite Solvents Incinerator and the water is treated before being discharged through an NPDES outfall.

Environmental Operations Plant Chloride Site: The corrective action remedy has been implemented in accordance with the "Chloride Remediation Plan". The implementation of the corrective action remedy corresponds to the implementation of the Risk Management Plan in the CAS process. Under the "Chloride Remediation Plan", submitted to LDEQ in March 1988, three chloride recovery wells were installed in 1989. The three recovery wells are currently inactive and inoperable. The wells remain inactive pending LDEQ's evaluation of the "RECAP Low-Level Contamination Areas Human Health Risk Assessment" report. The "RECAP Low-Level Contamination Areas Human Health Risk Assessment" report has, to date, not been approved by LDEQ.

Vinyl II Plant: The corrective action remedy has been implemented in accordance with the "Priority Areas 1 & 2 and Vinyl II Corrective Action Plan". Under the "Priority Areas 1 & 2 and Vinyl II Corrective Action Plan", four horizontal recovery wells and a French drain were installed. The implementation of the corrective action remedy corresponds to the implementation of the Risk Management Plan in the CAS process. Under the ongoing corrective action remedy, organics are thermally destroyed in the onsite Solvents Incinerator and the water is treated before being discharged through an NPDES outfall.

Priority Areas 1 & 2: The corrective action remedy has been implemented in accordance with the "Priority Areas 1 & 2 and Vinyl II Corrective Action Plan". The implementation of the corrective action remedy corresponds to the implementation of the Risk Management Plan in the CAS process. As specified in the "Priority Areas 1 & 2 and Vinyl II Corrective Action Plan", fourteen horizontal recovery wells were installed in Priority Areas 1 & 2 and the recovery system began operating in December 1996. Under the ongoing corrective action remedy, organics are thermally destroyed in the onsite Solvents Incinerator and the water is treated before being discharged through an NPDES outfall.

Phase II Mid-Plant Area: The corrective action remedy has been implemented in accordance with the "Phase II Corrective Action Plan". The implementation of the corrective action remedy corresponds to the implementation of the Risk Management Plan in the CAS process. Under the "Phase II Corrective Action Plan", Dow installed seven horizontal recovery wells and two French drains. The recovery system began operation in late 1998. Under the ongoing corrective action remedy, organics are thermally destroyed in the onsite Solvents Incinerator and the water is treated before being discharged through an NPDES outfall.

Additional SWMU/AOC/Release Area Information or Data to Be Provided by Permittee

In order to reconcile historical and ongoing onsite corrective action activities with the 1986 RFA, Dow must provide response information demonstrating that comments included in the RFA have been adequately addressed for the following SWMUs: #1, #2, #21, #23, #32, #33, and #34. [Note: corrective action activities associated with SWMU #39 (Block 49 Landfill) are ongoing as previously described in this appendix.]

Additional CAS-Related Corrective Action Submittals and Requirements

Utilization of the CAS process to manage onsite corrective action activities has necessitated the need for additional submittals to be provided by Dow to LDEQ as well as revisions to the current onsite corrective action program to meet CAS requirements. These additional submittals and requirements are noted below:

- A Notice of Intent (as described in Condition VIII.B.1) must be submitted within sixty (60) days of the effective date of this permit.
- A Scoping Meeting (as described in Condition VIII.B.2) between Dow and LDEQ must be conducted within sixty (60) days of the submittal of the Notice of Intent.
- A Conceptual Site Model (CSM) must be submitted within one-hundred and twenty (120) days after the Scoping Meeting.
- Performance standards specifying site-wide and area-specific corrective action objectives must be established in accordance with Conditions VII.A.2.a-c of this permit. Deadline date to be determined after the Scoping Meeting has been held and the CSM has been submitted.
- Procedures must be developed and implemented to assess the efficacy of the selected corrective action remedy or remedies (e.g., remedy performance monitoring and performance reviews). Deadline date to be determined after the Scoping Meeting has bee held and the CSM has been submitted.

TABLE 1, SUMMARY OF CORRECTIVE ACTION ACTIVITIES

SWMU or Release Area Number/ Name	*AOC/SWMU/Release Area Description*	*Status of CA Activity*	*Corrective Action*	*EDMS Document ID# / Approval Date*
The 700 Railyard (SWMU)	This SWMU has been remediated. COC concentrations remaining at the 700 Railyard are below the site specific limiting RECAP standards.	NFA-ATT Corrective action activities have been terminated.	Excavation of contaminated soil, disposal of excavated contaminated soil in the NWLF/CAMU, and backfilling of area with uncontaminated soil.	LDEQ issued a No Further Action determination: 06/18/2007 #36063112
Block 49 Landfill (SWMU)	This SWMU is an inactive landfill located within Block 49 of Dow's Plaquemine facility with free phase liquid organic contamination present in the soil beneath the disposal pits.	Implementation of the corrective action remedy is ongoing.	Recovery well system, steam stripping of recovered groundwater, and thermal treatment of organic contaminants.	Remedial Action Plan:12/12/86 #1048658 LDEQ approval: 3/12/87 # 1047243
Lighthouse Road (Corrective Action Site)	This release area is located on Dow's property and within the batture of the Mississippi River. Contaminated soils were excavated and placed in the NWLF/CAMU. Remediation of contaminated soils was managed under the Lighthouse Road RECAP Assessment and Corrective Action Plan approved by LDEQ and EPA. At the request of the Administrative Authority and pursuant to a Supplemental Groundwater Plan, Dow performed sampling of multiple depths of the Plaquemine Aquifer at locations in the vicinity of the Lighthouse Road site, including a location upgradient of the site. The "Supplemental Groundwater Sampling	Corrective action activities were conducted pursuant to the Lighthouse Road RECAP Assessment and Corrective Action Plan. A NFA-ATT for soils has been issued. Contamination of the Plaquemine Aquifer in the vicinity of the Lighthouse Road Site has not yet been addressed.	Excavation of contaminated soil, disposal of excavated contaminated soil in the NWLF/CAMU, and backfilling the area with uncontaminated soil.	Following its review of the Lighthouse Road Corrective Action Implementation Report LDEQ issued a No Further Action determination for soils: 06/20/2008 #37067945 LDEQ approval of Supplemental Groundwater Sampling Plan 05/05/04 #31584422 Supplemental Groundwater Sampling in the Vicinity of the Lighthouse Road Site" 03/01/07 #35781349

SWMU or Release Area Number/ Name	*AOC/SWMU/Release Area Description*	*Status of CA Activity*	*Corrective Action*	*EDMS Document ID# / Approval Date*
Lighthouse Road (Corrective Action Site)	in the Vicinity of the Lighthouse Road Site" dated March 1, 2007 indicated volatile organic compounds were detected above the maximum contaminant levels (MCLs).			
Chlorine Plant (Corrective Action Site)	The Chlorine Plant is a release area exhibiting elevated chloride concentrations in shallow groundwater. The area included a hazardous waste surface impoundment that was closed in 1987. Remediation is managed under the Brine Assessment and Remediation Plan.	The operation of the recovery well system has been temporarily terminated while LDEQ considers the RECAP Low-Level Contamination Areas Human Health Risk Assessment.	Recovery well system. Recovered groundwater is routed to the brine treatment system and is utilized in the production of chlorine.	Brine Assessment and Remediation Plan: 10/5/89 #1045436 LDEQ approval: 03/08/90 #1048857
PDC Spill Sites #1 & # 2 (Groundwater Corrective Action Agreement Site)	Two (2) distinct propylene dichloride (PDC) release areas resulting from railcar incidents. Site #1 is located in Priority Area 1. Site #2 is located southwest of Block 80. The remediation of PDC Spill Sites #1 and #2 were managed under the Priority Areas 1 & 2 and Vinyl II Corrective Action Plan.	Over 21 million pounds of contaminated soils were excavated and incinerated onsite in the RCRA permitted rotary kiln. The French drains at Sites #1 and #2 have been closed (with LDEQ approval). Site #1: the implementation of the corrective action remedy (recovery well system) is ongoing under the Priority Areas 1 & 2 and Vinyl II Corrective Action Plan. Site #2: Corrective action activities have been terminated.	Site #1 - Excavation and incineration of contaminated soil and the installation and operation of a French drain and the subsequent installation and operation of a horizontal recovery well system. Site #2 - Excavation and incineration of contaminated soil and the installation of a French drain.	Priority Areas 1 & 2 and Vinyl II Corrective Action Plan: 6/17/94 #563064 LDEQ Approval: 12/12/94 #1042158 LDEQ approval of termination of corrective action activities at Site #2: 08/27/93 #1094975

SWMU or Release Area Number/ Name	*AOC/SWMU/Release Area Description*	*Status of CA Activity*	*Corrective Action*	*EDMS Document ID# / Approval Date*
Env. Operations Plant (Groundwater Corrective Action Agreement Site)	An area of chloride contamination in an area in the vicinity of the Environmental Operations Plant. Remediation is managed under the Chloride Remediation Plan.	The operation of the recovery well system has been temporarily terminated while LDEQ considers the RECAP Low-Level Contamination Areas Human Health Risk Assessment.	Recovery well system.	Chloride Remediation Plan: 03/29/88 # 1108349 LDEQ Approval 3/08/90 #1048857
Vinyl II – EDC Storage Tank Area (Groundwater Corrective Action Agreement Site)	An area of EDC contamination resulting from a leak in two (2) EDC storage tanks. Remediation is managed under the Priority Areas 1 & 2 and Vinyl II Corrective Action Plan.	The implementation of the horizontal recovery well system is ongoing under the Priority Areas 1 & 2 and Vinyl II Corrective Action Plan.	The installation and operation of a French drain and a horizontal recovery well system.	Priority Areas 1 & 2 and Vinyl II Corrective Action Plan: 6/17/94 #563064 LDEQ Approval: 12/12/94 #1042158
Priority Areas 1 & 2 (Groundwater Corrective Action Agreement Site)	Priority Areas 1 and 2 contain several blocks or plants operating at the Plaquemine facility (see unit description). Within the boundaries of Priority Areas 1 and 2, are several releases areas that were the result of past operation practices. Remediation is managed under the Priority Areas 1 & 2 and Vinyl II Corrective Action Plan.	The implementation of the horizontal recovery well system is ongoing under the Priority Areas 1 & 2 and Vinyl II Corrective Action Plan.	The installation and operation of a French drain and a horizontal recovery well system.	Priority Areas 1 & 2 and Vinyl II Corrective Action Plan: 6/17/94 #563064 LDEQ Approval: 12/12/94 #1042158
Phase II Mid-Plant Area (Groundwater Corrective Action Agreement Site)	The Phase II Mid-Plant Area contains several blocks or plants operating at the Plaquemine facility (see unit description). Within the boundaries of Phase II Mid-Plant Area are several releases areas that were the result of past operation practices. Remediation is managed under Phase II Corrective Action Plan.	The implementation of the horizontal recovery well system is ongoing under the Phase II Corrective Action Plan.	The installation and operation of a French drains and horizontal recovery well system.	Phase II Corrective Action Plan: 12/12/95 #22893184 LDEQ Approval: 3/25/96 #1042718

SWMU or Release Area Number/ Name	*AOC/SWMU/Release Area Description*	*Status of CA Activity*	*Corrective Action*	*EDMS Document ID# / Approval Date*
Areas Addressed by RECAP Low-Level Contamination Areas Human Health Risk Assessment	Dow submitted the "RECAP Low-Level Contamination Areas Human Health Risk Assessment" to LDEQ in October 2001. The risk assessment addressed areas of low level contamination not otherwise addressed by active remediation or pending corrective action plans. It was revised in May 2005 and was supplemented in August 2006. LDEQ last issued a notice of deficiency (NOD) for the report dated April 24, 2008.	RECAP Report submitted; NOD pending	TBD*	RECAP Low-Level Contamination Areas Human Health Risk Assessment: 10/25/01 Low-Level Contamination Areas RECAP: 05/23/05 Supplemental Information Low-Level Contamination Areas RECAP: 08/10/06 LDEQ Notice of Deficiency: 04/24/08

* "To Be Determined" – The need for corrective action will be determined through the Risk Evaluation Corrective Action Program.

ATTACHMENT 1

ATTACHMENT 1
LIST OF FACILITY DOCUMENTS INCORPORATED IN THE PERMIT BY REFERENCE
LAD008187080-OP-1-RN-1
AI#1409

DOCUMENT TYPE	DOCUMENT DATE	ELECTRONIC DATABASE MANAGEMENT SYSTEM (EDMS) DOCUMENT ID	COMMENTS
Arrangement with local authorities	05/13/2005	32874188	Hazardous Waste Permit Renewal Application; Volume 2; Exhibit 7; Section 6.5; pages 73-74 of the EDMS Document 32874188
Waste Analysis Plan	12/18/2007	36482307	Response to NOD1, pages 167-334 of the EDMS Document 36482307
Contingency Plan	12/03/2007	36455532	Contingency Plan Revision; Volume 2; Exhibit 7; pages 1-29 of the EDMS Document 36455532
Security Plan	05/13/2005	32874188	Hazardous Waste Permit Renewal Application; Volume 2; Exhibit 5; pages 12-17 of the EDMS Document 32874188
Personnel Training Plan[1]	05/13/2005 12/18/2007	32874188 36482307	Hazardous Waste Permit Renewal Application; Volume 2; Exhibit 4; pages 6-11 of the EDMS Document 32874188 Response to NOD1, pages 148-153 of the EDMS Document 36482307
Inspection Plan and Schedule[1]	05/13/2005 12/18/2007	32874288 36482307	Hazardous Waste Permit Renewal Application; Volume 2; Exhibit 11; Attachment D, page 49 of the EDMS Document 32874288 Response to NOD1, pages 344-353 and 456-457 of the EDMS Document 36482307
Groundwater Detection Monitoring Plan[1]	05/13/2005 12/18/2007 05/28/2008	32874188 36482307 36925743	Hazardous Waste Permit Renewal Application; Volume 7; Exhibit 13; pages 84-94 and 99-181 of the EDMS Document 32874188 Response to NOD1, page 415-416 and 459 of the EDMS Document 36482307 Response to NOD2, pages 22-27 of the EDMS Document 36925743
Landfill Operation, Design, and Material Specifications[1]	05/13/2005 12/18/2007	32874188 36482307	Hazardous Waste Permit Renewal Application; Volume 5; Exhibit 10; pages 6-80 and 87-116 of the EDMS Document 32874188 Response to NOD1, pages 385-409 and of the EDMS Document 36482307
Closure Plans[1]	05/28/2008	36925743	Response to NOD2; pages 107-115 (Block80 HWLF), pages 116-139 (CSAs A, B, C, D, and E), pages 140-157 (F-700 Incinerator), pages 158-174 (R-4 Boiler), pages 175-192 (F-410 and F-420 Boilers), pages 193-209 (R-750 Boiler), pages 210-236 (Vinyl II Tanks), pages 237-267 (Solvents/EDC Hazardous Waste Storage Tanks), and pages 268-288 (Chlorinated Methanes Tanks) of the EDMS Document 36925743

DOCUMENT TYPE	APPLICATION /DOCUMENT DATE	ELECTRONIC DATABASE MANAGEMENT SYSTEM (EDMS) DOCUMENT ID	COMMENTS
Remediation Plan – Northwest Landfill	8/27/1991	1093380	Pages 1-12 (of 12) of the EDMS Document 1093380
Closure Cost Estimates[1]	05/28/2008	36925743	Response to NOD2; page 113 (Block 80 HWLF) pages 127-131 (CSAs A, B, C, D, and E), page 149 (F-700 Incinerator), page 167 (R-4 Boiler), pages 184-185 (F-410 and F-420 Boilers), page 202 (R-750 Boiler), pages 222-224 (Vinyl II Tanks), pages 251-257 (Solvents/EDC Hazardous Waste Storage Tanks), and pages 280-282 (Chlorinated Methanes Tanks) of the EDMS Document 36925743
Post-Closure Plan[1]	05/13/2005 12/18/2007 05/28/2008	32874288 36482307 36925743	Hazardous Waste Permit Renewal Application; Volume 5; Exhibit 10; Attachment E; pages 85-86 of the EDMS Document 32874188 Response to NOD1, page 456-457 and 459 of the EDMS Document 36482307 Response to NOD2; page 113 (Block 80 HWLF) of the EDMS Document 36925743
Post-Closure Cost Estimates[1]	05/13/2005 05/28/2008	32874188 36925743	Hazardous Waste Permit Renewal Application; Volume 5; Exhibit 10; Attachment C; page 136 (NWLF/CAMU) of the EDMS Document 32874188 Response to NOD2; pages 114-115 (Block 80 HWLF),
Groundwater Corrective Action Agreement (GW-08-93)	03/12/1991	1095105	Pages 1-10 (of 10) of the EDMS Document 1095105

[Note: Revisions addressing pages, sections, drawings, etc. shall supersede equivalent pages, sections, drawings, etc. included in previous document submittals.]

1 The Permittee shall submit whole and complete revisions of these documents and plans as a Class 1^1 permit modification request as required by Condition II.E.25 of this permit. The revisions shall incorporate all revisions required during the permit application review process and/or outstanding Administrative Authority comments relating to the documents. This table will be modified upon approval of the Class 1^1 permit modification by the Administrative Authority.

RESPONSIVENESS SUMMARY

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
PERMIT NUMBER LAD008187080-OP-1-RN-1
AGENCY INTEREST #1409

ITEM 1

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Permittee's general comments on the Draft Hazardous Waste Operating Renewal Permit

COMMENT Page 1, General Comments: General Comments 1, 2, 3, 4 and 5

As indicated in more detail in the specific comments which follow, Dow respectfully submits:

The permit conditions should conform to the applicable regulations. Where the substance of a regulation is presented in the permit, it should conform to the content of the regulation.

Restrictions and conditions which go beyond the regulations, and those which are not imposed on other like facilities, should not be imposed on the Dow facility. A consistent and level playing field should be reflected in Dow's permit.

Conditions to be imposed through a permit should be included in the permit at the time of the permit's issuance and effective date. Otherwise, notice and opportunity to comment on such conditions is not afforded.

Permit conditions should be revised to recognize and be consistent with the Hazardous Waste Combustor (HWC) Maximum Achievable Control Technology (MACT) rule, (HWCMACT).

Additionally, Dow specifically incorporates herein by reference all reports, data and information submitted on behalf of Dow to the Department in connection with and relating to the Dow Louisiana Operations Facility and which are part of the Department's records. The above General Comments are incorporated by reference in the Specific Comments presented below.

RESPONSE The Department acknowledges the Permittee's aforementioned general comments regarding the Draft Hazardous Waste Operating Renewal Permit. Rather than providing specific responses to these general comments individually, the Department has elected to respond to the general comments as they relate to the Permittee's "Specific Comments" that follow.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ACTION No action required. Revisions to the text of the final permit are in response to "Specific Comments" provided by the Permittee regarding specific content included in the draft permit.

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 2

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Glossary of Terms, page 2

COMMENT Page 1, Specific Comments: Comment 1

"Permittee" – Substitute "Highway 1" for "Highway 405"

RESPONSE The Department acknowledges and concurs with the comment. The Permittee's address has been corrected in the final permit.

ACTION The final permit has been revised. The Permittee's address has been corrected (in all locations) as follows in the final permit:

21255 LA Hwy ~~405~~ 1, Plaquemine, LA 70765

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ITEM 3

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition II.E.9.a

COMMENT Page 2, Specific Comments: Comment 2

Delete the second sentence which begins with "The method used to obtain a representative sample of the waste ...." and delete the remainder of the paragraph.

Section II. Addresses General Permit Conditions. The first sentence of II.E.9.a in the Draft Permit applies to monitoring and is consistent with LAC 33:V.309.J.1, Monitoring and Records. However, the second sentence of Section II.E.9.a applies to waste analysis. Provisions on waste analysis should be addressed in Section III.C and are not appropriately included in this section.

RESPONSE The Department acknowledges but does not concur with the comment. The text of the condition that the Permittee is requesting to be deleted in the final permit, although not included in LAC 33:V.309.J.1, is relevant to sample monitoring. The text of the condition in question specifies that sampling and laboratory methods are consistent with applicable SW-846 methods, EPA guidance and the Waste Analysis Plan.

ACTION No action required. The final permit has not been revised.

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ITEM 4

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition II.E.9.c.(1)

COMMENT Page 2, Specific Comments: Comment 3

Revise and clarify: The last sentence of this subsection provides, "Laboratory data generated ... will not be accepted by the Department." However, this provision is included within a subsection requiring a certified statement of such. This provision (that data generated by commercial labs not accredited under LELAP will not be accepted) should not be part of a statement or certification in an annual report by the Permittee. This section should be redrafted to disassociate this statement with the certification requirement. See also comment to III.C.2.

RESPONSE The Department acknowledges and concurs with the comment. The condition has been revised to remove any misinterpretation that the statement, "Laboratory data generated ... will not be accepted by the Department" would be a required element of the laboratory certification or annual report submitted by the Permittee. The statement has been moved to Condition II.E.9.c and precedes the required elements of the laboratory certification.

ACTION Conditions II.E.9.c and II.E.9.c.(1) have been revised in the final permit as follows:

II.E.9.c. Laboratory Quality Assurance/Quality Control

Laboratory data generated by commercial laboratories not accredited under LELAP will not be accepted by the Department. In order to ensure the accuracy, precision, and reliability of data generated for use, the Permittee shall submit a statement, certified as specified in LAC 33:V.513 and included in the annual report, indicating that:

II.E.9.c.(1). any commercial laboratory providing analytical results and test data to the Department required by this permit is accredited by the Louisiana Environmental Laboratory Accreditation Program (LELAP) in accordance with LAC 33:I. Subpart 3, Chapter 45. ~~Laboratory data generated by commercial laboratories not accredited under LELAP will not be accepted by the Department.~~

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ITEM 5

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Page 2, Specific Comments: Comment 4

COMMENT Condition II.E.9.c.(2)

Revise the second sentence as follows: "However, the laboratory must maintain documentation of quality assurance/quality control procedures."

Dow agrees LAC 33:I.Chapter 45, et seq. is not applicable to its laboratory. The second sentence of this subsection of the Draft Permit, however, requires clarification. The second sentence provides that an in-house laboratory "must document quality assurance/quality control procedures to the Administrative Authority." Dow agrees that it is appropriate that the facility maintain documentation of quality assurance/quality control procedures for its in-house laboratory for tests and analyses but there is no regulatory provision requiring that reports of such documentation be submitted to the Department. Such records may be inspected pursuant to LAC 33:V.309.I. The proposed revision will clarify that no submission to the Department is required.

RESPONSE The Department acknowledges and concurs with the comment. For the purpose of clarification, the condition has been revised in the final permit to specify that documentation of quality assurance/quality control procedures for the Permittee's in-house laboratory must only be maintained on site rather than submitted to the Department for review and/or approval.

ACTION Condition II.E.9.c.(2) has been revised as follows in the final permit:

II.E.9.c.(2). If the Permittee decides to use its own in-house laboratory for test and analysis, the laboratory is not required to be accredited by LELAP. However, the laboratory must ~~document~~ maintain quality assurance/quality control procedures onsite ~~to the Administrative Authority~~.

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ITEM 6

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Page 2, Specific Comments: Comment 5

COMMENT Condition II.E.9.c.(3)

Add the following sentence to the end of this section: "This section does not apply to methods specified in an approved Waste Analysis Plan."

No separate or additional approval should be required for equivalent testing, analytical methods or alternate methods that are included in the facility's approved Waste Analysis Plan.

RESPONSE The Department acknowledges and concurs with the comment. However, the condition was not revised as suggested by the Permittee. See the revised text below.

ACTION Condition II.E.9.c.(3) has been revised in the final permit as follows:

II.E.9.c.(3). For approval of equivalent testing or analytical methods not previously approved in a plan incorporated by reference in Attachment 1, the Permittee may petition for a regulatory amendment under LAC 33:V.105.I and LAC 33:I.Chapter 9.

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ITEM 7

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Page 3, Specific Comments: Comment 6

COMMENT Condition II.E.12

Revise the first sentence as follows: "For a new facility, the Permittee may not treat, store, or dispose of hazardous waste; and for a facility being modified, the Permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility except as provided in LAC 33:V.321.C. until:"

The proposed language mirrors the language of LAC 33: V 309.C.2. The language in the Draft Permit unnecessarily paraphrases the regulation and changes the meaning from that stated in the regulation. It does not provide for those exceptions afforded in LAC 33:V.321.C.

RESPONSE The Department acknowledges and concurs with the comment. The condition has been revised in the final permit as suggested by the Permittee.

ACTION Condition II.E.12 has been revised in the final permit as follows:

II.E.12. Physical Facility after Modification

~~For any new or existing unit being modified, the Permittee may not manage hazardous waste in the modified portion of the unit until the unit is complete and:~~For a new facility, the Permittee may not treat, store, or dispose of hazardous waste; and for a facility being modified, the Permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility except as provided in LAC 33:V.321.C. until:

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ITEM 8

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Page 3, Specific Comments: Comment 7

COMMENT Condition II.E.16

Revise to include the definition of "immediately": "... by telephone at (225) 925-6595 immediately (a reasonable period of time after taking prompt measures to determine the nature, quantity, and potential off-site impact of a release, considering the exigency of the circumstances) ... "

The revision is consistent with the applicable regulation, LAC 33:I.3915.

RESPONSE The Department acknowledges and concurs with the comment. In the final permit, Condition II.E.16 has been revised to include a definition of "immediately".

ACTION Condition II.E.16 has been revised in the final permit as follows:

II.E.16. Emergency Unauthorized Discharge Notification

In accordance with LAC 33:I.3915, in the event of an unauthorized discharge that results in an emergency condition (an emergency condition is any condition which could be reasonably expected to endanger the health and safety of the public, cause significant adverse impact to the land, water, or air environment, or cause severe damage to property), the Permittee shall notify the DPS (Department of Public Safety) 24-hour Louisiana Emergency Hazardous Materials Hotline by telephone at (225) 925-6595 immediately (a reasonable period of time after taking prompt measures to determine the nature, quantity, and potential off-site impact of a release, considering the exigency of the circumstances), but in no case later than one (1) hour after learning of the discharge. The DPS 24-hour Louisiana Emergency Hazardous Materials Hotline will subsequently notify the Department regarding the details of the discharge.

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ITEM 9

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Page 3, Specific Comments: Comment 8

COMMENT Condition II.E.17

Delete "and/or results in contamination of the groundwaters of the state". This phrase should be deleted so that the permit condition mirrors the cited regulations, LAC 33:I.3917. Further, groundwater is addressed in Condition II.E.18 of the Draft Permit and in LAC 33:I.3919, not 3917.

RESPONSE The Department acknowledges and concurs with the comment. The condition has been revised in the final permit to mirror LAC 33:I.3917.

ACTION Condition II.E.17 has been revised in the final permit as follows:

II.E.17. Non-Emergency Unauthorized Discharge Notification

In accordance with LAC 33:I.3917, in the event of an unauthorized discharge that exceeds a reportable quantity specified in LAC 33:I.Chapter 39.Subchapter E ~~and/or results in contamination of the groundwaters of the state~~ but does not result in an emergency condition...

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ITEM 10

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Page 3, Specific Comments: Comment 9

COMMENT General Comment to Condition II.E.25.

The Draft Permit contemplates that the Department will issue a permit with requirements that Dow respond to "agency comments," or directives set forth in Section II.E.25, according to a schedule that follows the effective date of the permit. It is not clear how the Department will manage responses to comments or submittals which are not due until after the effective date of the permit. The status of a plan, for example, and whether the permit comprises such plan, if the Department does not approve the revised plan submitted by the facility or if the Department takes issue with certain responses to comments about such plan, is not clear.

Condition II.E.25.b states that the specified plans "may" be incorporated by reference into the permit. Additionally, it is not clear how any disputes regarding the response to comments or directives in this Section will be resolved. The Draft Permit does not give notice and opportunity for comment on all provisions of the permit as there are outstanding reviews and comments yet to be made and addressed. Dow respectfully submits that any issues relative to plans should be resolved prior to the issuance of the permit. Alternatively and without waiver of the foregoing, to the extent any documents and plans are managed as permit modifications, there should be no fees assessed. This general comment applies to all subsections under II.E.25 and Dow incorporates by reference this general comment to Section II.E.25 into all subsequent comments relative to Section II.E.25.

RESPONSE The Department acknowledges the comment and provides the following clarification regarding the intent of Condition II.E.25. The Department recognizes that issuing a hazardous waste permit with a "Schedule of Compliance" (as presented in Condition II.E.25 of the permit) is not a preferred method of issuing the permit for neither the Department nor the Permittee. The Department prefers to have all information relevant to the permit application, plans incorporated by reference, etc., complete and satisfactory prior to issuance of the final permit.

However, it should be noted the Permittee is currently operating under a hazardous waste permit that has been administratively continued for almost ten (10) years. The final hazardous waste permit issued in conjunction with this Responsiveness Summary is preferable to remaining under the administratively continued permit due to the fact that it contains more accurate information regarding site conditions and site operations. Furthermore, the final permit contains essential permit conditions and operating parameter limits that are critical in ensuring that the Permittee is in compliance with applicable regulations.

Below, the Department has attempted to address specific concerns raised in the Permittee's comment point-by-point.

It is not clear how the Department will manage responses to comments or submittals which are not due until after the effective date of the permit ... if the Department does not approve the revised plan submitted by the facility or if the Department takes issue with certain responses to comments about such plan, is not clear.

The Permittee may be required to address additional comments in any notice of deficiencies (NODs) subsequently issued by the Department following a review of the aforementioned submittals. (NODs will contain interim deadlines for submittal of responses by the Permittee. Should the need arise, the Permittee may request an extension from the Department.) The Department recognizes that additional time may be required before the documents required under the Schedule of Compliance are approved by the Department and, therefore, no deadlines for final approval of the documents have been proposed to date. However, if the Permittee fails to make adequate progress in providing documents meeting the Department's approval, the Department reserves the right to propose deadlines and/or enforcement actions in the future in order to ensure compliance.

Additionally, it is not clear how any disputes regarding the response to comments or directives in this Section will be resolved. The Draft Permit does not give notice and opportunity for comment on all provisions of the permit as there are outstanding reviews and comments yet to be made and addressed.

The Permittee will retain authorship of all submittals required under Condition II.E.25, while the Department will be responsible for approval of said submittals. Also, the fact that the Condition II.E.25 submittals must be submitted in accordance with LAC 33:V.321 (regarding permit

modifications) ensures that the Permittee, the Department, and the general public will all have a voice in the final content of the Condition II.E.25 submittals.

To the extent any documents and plans are managed as permit modifications, there should be no fees assessed.

As specified in LAC 33:5901.A.1, a one-time application fee is charged to the Permittee to cover, application, evaluation, and other related program costs. While LAC 33:5901.A.2 does allow for the assessment of additional fees in association with major amendments or permit modifications, the Department does not consider any of the submittals required by Condition II.E.25 to require modifications to the permit that would be deemed "major" in classification.

ACTION No action required.

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ITEM 11

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition II.E.25.a

COMMENT Page 4, Specific Comments: Comment 10

Delete this condition.

The provision is not supported by the regulations. There is no regulatory authority in LAC 33:V.1907.B-F or elsewhere upon which the Department can require the impervious coating of lined secondary containment. If the requirement reflects the Department's interpretation of what is adequate secondary tank containment, it is an interpretation unfairly unique to Dow, in that no such permit condition is found in other hazardous waste permits and draft permits issued by the Department.

RESPONSE The Department acknowledges but does not fully concur with the comment. However, the Department will allow the Permittee an opportunity to demonstrate that the secondary containment is adequate. Accordingly, the condition has been revised to allow the Permittee sufficient time to specify and install the impermeable coatin g or to demonstrate that the bare concrete external liner meets the requirements of LAC 33:V.1907 upon approval from the Administrative Authority.

ACTION Condition II.E.25.a has been revised in the final permit to read as follows:

~~**II.E.25.a.** Within sixty (60) days of the effective date of this permit, the Permittee must submit documentation demonstrating that the secondary containment systems for all hazardous waste tanks have been lined with an impervious liner in accordance with LAC 33:V.1907.C.1 and 1907.E and Condition V.A.3.b.(4) of the permit.~~

II.E.25.a. Within one hundred and eighty (180) days of the effective date of this Permit, the Permittee shall submit for review and approval by the Administrative Authority one of the following:

> **II.E.25.a.(1).** A plan for installing impermeable coatings for each permitted tank system designated in Table 7 of this Permit

that utilizes a bare concrete external liner system to meet the secondary containment requirement. The plan must contain the following items: 1) engineering specifications for the impermeable coatings and preparation and treatment of joints that will be utilized, including compatibility with the waste being stored; and 2) a proposed schedule for completing the installation of the impermeable coatings; or

II.E.25.a.(2). Information demonstrating that the secondary containment system for each permitted tank system designated in Table 7 of this Permit that utilizes a bare concrete external liner system meets all requirements of LAC 33:V.1907. The submittal must contain documentation including, but not limited to, the following information:

II.E.25.a.(2).a. detailed information on the secondary containment system, including, but not limited to: 1) the design and installation specifications for any concrete joints; 2) the characteristics of any joint sealant used, including its compatibility with the waste stored in the tank system; and 3) the characteristics of the concrete mix design and any American Concrete Institute or other applicable codes used;

II.E.25.a.(2).b. the physical and chemical characteristics of the waste in the tank system, including its potential for migration and compatibility with the containment system;

II.E.25.a.(2).c. any other factors that influence the quality and mobility of hazardous constituents and the potential for them to migrate through the external liner system to the environment.

II.E.25.b. If the Permittee chooses to comply with Condition II.E.25.a.(1), within thirty (30) days of installing the impermeable coatings discussed in Permit Condition II.E.25.a.(1), the Permittee shall submit an installation inspection report of the impermeable coatings certified by an independent, qualified, Louisiana registered professional engineer.

II.E.25.c. Within thirty (30) days of the effective date of this Permit, the Permittee shall submit updated Financial Assurance information in accordance with LAC 33:V.Chapter 37.

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ITEM 12

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition II.E.25.b.(1)-(7)

COMMENT Page 4, Specific Comments: Comment 11

See General Comment (regarding Condition II.E.25) above.

RESPONSE The Department acknowledges the comment. See the Department's response to Item #10 regarding Condition II.E.25.b.

ACTION No action required.

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ITEM 13

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition II.E.25.b.(4)

COMMENT Page 4, Specific Comments: Comment 12

Delete the last sentence of this section.

Dow understands that the outstanding comments relating to the Groundwater Detection Monitoring Plan as referenced in this section are those items described in the Department's August 14, 2008 correspondence to Dow. In accordance with the requirements of this section and the list of outstanding comments provided to Dow by the Department in its August 14, 2008 correspondence, Dow is directed to provide a revised Groundwater Detection Monitoring Plan that includes appropriate revisions and addresses the outstanding comments made by the Department, including NOD 2, #10.

Subject to the General Comment above made a part hereof, with respect to NOD2 #10 in particular, LAC 33:V.3317.D., the regulation cited by the Department in NOD2 #10, was amended in June 2008 to delete the specific requirement for the collection of a sequence of at least four (4) samples from each well on at least a semi-annual basis. Section 3317.D now provides generally that the Department will specify frequencies for collecting samples and conducting statistical tests. Based on the reasons stated below for Condition VI.G.4 (incorporated herein by reference), it is not appropriate to require a revision of Dow's Groundwater Detection Monitoring Plan to specify that four (4) samples will be taken from each upgradient and point of compliance wells specified in Tables VI-A. Please see comments to Condition VI.G.4.

RESPONSE The Department acknowledges and concurs with the comment. Subsequent to preparation of the draft permit, LAC 33:V.3317.D was amended in June 2008 to delete the specific requirement for the collection of a sequence of at least four (4) samples from each well on at least a semi-annual basis and provides that the Department will specify frequencies for collecting samples and conducting statistical tests. The Department acknowledges that historical groundwater sampling conducted by the Permittee is sufficient enough to warrant a reduction in the number of samples required per well. The Permittee will be

expected to propose an appropriate groundwater sampling protocol (including the number of samples to be taken from each well) in the Groundwater Detection Monitoring Plan required under this condition.

ACTION Condition II.E.25.b.(4) has been revised in the final permit as follows:

II.E.25.b.(4). Revised Groundwater Detection Monitoring Plan that includes all revisions required during the permit application review process and addresses outstanding comments (provided to the Permittee under separate cover) relating to the Groundwater Detection Monitoring Plan (and revisions) referenced in Attachment 1 of this permit. ~~Additionally, the Groundwater Detection Monitoring Plan must be revised to specify that four (4) samples will be taken from each upgradient and point of compliance well specified in Tables VI-A of this permit.~~

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ITEM 14

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition II.E.25.d

COMMENT Page 5, Specific Comments: Comment 13

Clarify this subsection.

The Draft Permit provides that the "Administrative Authority's outstanding comments pertaining to background concentrations for naturally occurring groundwater monitoring parameters will be provided to the Permittee under separate cover." It is not clear if the Department is referring to its August 14, 2008, correspondence or is reserving the right to provide further comments in the future on this subject. See General Comment (regarding Condition II.E.25) above.

RESPONSE The Department acknowledges the comment and provides the following clarification. The outstanding comments pertaining to background concentrations for naturally occurring groundwater monitoring parameters were included in the Department's August 14, 2008, correspondence.

ACTION No action required.

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ITEM 15

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition II.E.25.f

COMMENT Page 5, Specific Comments: Comment 14

Delete this subsection.

Information in connection with the 1986 RFA has been submitted to the Department and should be acknowledged in Appendix 1, pp. 134-135 of the Draft Permit. Dow submits that no further resolution of the 1986 RFA is required. While the RFA identified several units for which additional information/data, additional investigation, or activities were requested, none of these units were listed as regulated under RCRA in the RFA. Additionally, the recommended actions for these units were associated primarily with waste stream characterization, regulatory status determination, housekeeping and verification of clean closure through review of existing data. Following the RFA, EPA Region VI subsequently issued the facility's HSWA permit in 1989, the content of which reflected that all of the units other than Block 49 (SWMU #39) were addressed during the permitting process. In its normal course of business and as reflected in subsequent permitting activities, the facility considered these units to have been addressed to the regulatory authority's satisfaction. Accordingly, this condition which requires additional information should be deleted. See also comments to Appendix 1 below.

RESPONSE The Department acknowledges but does not concur with the comment. Normally, a RCRA Facility Investigation (RFI) is completed subsequent to the site RFA. The RFI addresses SWMUs included in the RFA and determines whether they require no additional action or whether they will require additional investigation and/or remediation. However, an RFI was never completed for Dow's Plaquemine facility due to the fact that onsite corrective action activities were in an advanced state and were primarily managed under a Groundwater Corrective Action Agreement (GW-89-003). Because no RFI was conducted, there is no documentation that additional actions required by the RFA for specific SWMUs (i.e., waste stream characterization, regulatory status determination, housekeeping and verification of clean closure) were ever satisfactorily completed.

The Department acknowledges that many of the actions (as they relate to the SWMUs included in the RFA) were minor in nature. However, due to the fact that there was no facility RFI completed that would have brought resolution to actions required in the RFA, it is advisable for Dow to provide documentation to the Department that the actions or comments referenced in the RFA have been fully resolved. This may be completed by providing documentation, data, and certified statements. Etc. to the Department. The Department does not agree with Dow's assertion that the SWMUs (for which the additional information or actions were being requested) were not included in the 1989 EPA-issued HSWA permit due to the fact that all of the units other than Block 49 (SWMU #39) were addressed during the permitting process. The Department has noted instances for other RCRA permitted facilities where SWMUs existing prior to issuance of the facility's HSWA permit were not included in the EPA-issued HSWA permit.

ACTION No action required. The final permit has not been revised.

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ITEM 16

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition II.E.28

COMMENT Page 5, Specific Comments: Comment 15

See General Comment to Condition II.E.25 which is incorporated herein by reference.

RESPONSE The Department acknowledges the comment. See the Department's response to Item #10 regarding Condition II.E.25.

ACTION No action required.

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ITEM 17

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition II.E.28.a.(7)

COMMENT Page 5, Specific Comments: Comment 16

Revise as follows: "Operating records and Operations Plan as required by LAC 33:V.1529, 1911.D, and 3005.H."

The regulatory provision referenced in the proposed language cites 3007.K, which addresses interim status boilers and incinerator furnaces ("BIF's") and is not applicable. The citation should be changed to reference 3005.H, which is for permitted BIF's.

RESPONSE The Department acknowledges and concurs with the comment. The regulatory citation has been corrected in the final permit.

ACTION Condition II.E.28.a.(7) has been revised as follows in the final permit:

II.E.28.a.(7). Operating records and Operations Plans as required by LAC 33:V.1529, 1911.D, and 3005.H ~~3007.K~~.

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ITEM 18

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition II.E.28.a.(7)

COMMENT Page 6, Specific Comments: Comment 17

Revise as follows: "Operating records and Operations Plan as required by LAC 33:V.1529, 1911.D, and 3005.H."

The regulatory provision referenced in the proposed language cites 3007.K, which addresses interim status boilers and incinerator furnaces ("BIF's") and is not applicable. The citation should be changed to reference 3005.H, which is for permitted BIF's.

RESPONSE This comment is a repeat of Comment 16 that appears to be included in error. The comment has been addressed as specified in the Department's response to Item 17 regarding Comment 16.

ACTION No action required.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
PERMIT NUMBER LAD008187080-OP-1-RN-1
AGENCY INTEREST #1409

ITEM 19

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition II.E.28.b

COMMENT Page 6, Specific Comments: Comment 18

Revise as follows: "All proposed material amendments, revisions and modifications to any plan or cost estimates required by this permit shall be submitted to the Administrative Authority for approval. Changes that are considered Class 1 modifications under LAC 33:V.321 and 322 do not require approval by the Administrative Authority."

It is unduly cumbersome and impractical to require that all changes to a plan be submitted to the agency for approval. Only material changes to the plan should require approval. Other changes can be submitted with the facility's annual report thereby notifying the Department of any changes. See Condition II. E.28.a. Limiting this requirement to material changes in a plan is protective and practical. The proposed revision is consistent with other programs. For example, 40 CFR 112.5(a) provides for the amendment of a SPCC Plan when there is a change in the facility design, construction, operation, or maintenance that materially affects its potential for a discharge. See also LAC 33:V.1513.A. Further, the provision in the Draft Permit does not recognize that Class 1 modifications do not require approval and this mechanism for change should be available.

RESPONSE The Department acknowledges and concurs with the comment. The final permit has been revised to clarify that Class 1 modifications do not require approval by the Administrative Authority.

ACTION Condition II.E.28.b has been revised in the final permit as follows:

II.E.28.b. All proposed amendments, revisions and modifications to any plan or cost estimates required by this permit shall be submitted to the Administrative Authority for approval. Changes that are considered Class 1 modifications under LAC 33:V.321 and 322 do not require approval by the Administrative Authority.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
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ITEM 20

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition II.E.30

COMMENT Page 6, Specific Comments: Comment 19

Revise as follows: "The Permittee shall report manifest discrepancies and un-manifested waste as required by LAC 33:V.309.L.8 and 9."

The reference to LAC 33:V.1107 should be removed. This is a citation to the general manifesting system requirements and it does not reference reporting discrepancies or un-manifested waste requirements.

RESPONSE The Department acknowledges and concurs with the comment. The reference to LAC 33:V.1107 has been deleted from the condition in the final permit.

ACTION Condition II.E.30 has been revised in the final permit as follows:

II.E.30. Manifest

The Permittee shall report manifest discrepancies and un-manifested waste as required by LAC 33:V.309.L.8 and 9 ~~and LAC 33:V.1107~~.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 21

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition II.E.36

COMMENT Page 6, Specific Comments: Comment 20

Revise as follows: "Condition VIII addresses obligations for corrective action."

The condition as stated in the Draft Permit is not supported by LAC 33: V.305.A. In any event, Condition VIII of the Draft Permit addresses corrective action and can be referenced.

RESPONSE The Department acknowledges but does not concur with the comment. Condition II.E.36 is a subsection of Condition II.E DUTIES AND REQUIREMENTS. Hazardous waste permitted facilities are obliged to comply with corrective action requirements. Furthermore, the condition correctly references Condition VIII of the hazardous waste permit.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
PERMIT NUMBER LAD008187080-OP-1-RN-1
AGENCY INTEREST #1409

ITEM 22

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition III.C.2

COMMENT Page 7, Specific Comments: Comment 21

Revise as follows: "Annually, the Permittee shall submit a certified statement that indicates that any commercial laboratory that provides chemical analyses, analytical results, or other test data to the department, by contract or by agreement, is accredited in accordance with the laboratory accreditation requirements of LAC 33:I.Chapter 45. This written statement shall be certified as specified in LAC 33:V.513 and included in the annual report. This documentation shall be resubmitted when a different laboratory is contracted for services."

LAC 33:I.Chapter 45 does not require on-site laboratories to be accredited.

RESPONSE The Department acknowledges and concurs with the comment. The requirement has been revised in the final permit to reflect that only commercial (or contract) laboratories, wherever located, require accreditation in accordance with LAC 33:I.Chapter 45.

ACTION Condition III.C.2 has been revised as follows in the final permit:

III.C.2. Annually, the Permittee shall submit a certified statement that indicates that any commercial laboratory ~~(i.e., on-site laboratory or contract laboratory)~~, wherever located, that provides chemical analyses, analytical results, or other test data to the department, by contract or by agreement, is accredited in accordance with the laboratory accreditation requirements of LAC 33:I.Chapter 45. This written statement shall be certified as specified in LAC 33:V.513 and included in the annual report. This documentation shall be resubmitted when a different laboratory is contracted for services.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
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AGENCY INTEREST #1409

ITEM 23

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition III.E

COMMENT Page 7, Specific Comments: Comment 22

Revise as follows: "The Permittee must follow the approved Inspection Plan referenced in Attachment 1. The Permittee must remedy any deterioration or malfunction discovered by all inspections as required by LAC 33:V.1509.C. Records of inspections must be kept as required by LAC 33:V.1509.D. The inspection schedule must include the regulatory requirements of LAC 33:V.517.G, 1509, 1911, 2109, 2507, 3005.F, and 3119."

The proposed language cites 3007.J, which is for interim status boiler and industrial furnaces ("BIF's"). The proposed revision is to instead reference 3005.F, which is for permitted BIF's.

RESPONSE The Department acknowledges and concurs with the comment. The regulatory citation has been corrected in the final permit.

ACTION Condition III.E has been revised as follows in the final permit:

III.E. GENERAL INSPECTION REQUIREMENTS

The Permittee must follow the approved Inspection Plan referenced in Attachment 1. The Permittee must remedy any deterioration or malfunction discovered by an inspection as required by LAC 33:V.1509.C. Records of inspections must be kept as required by LAC 33:V.1509.D. The inspection schedule must include the regulatory requirements of LAC 33:V.517.G, 1509, 1911, 2109, 2507, 3005.F ~~3007.J~~, and 3119.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
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ITEM 24

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Conditions III.N.1 and III.N.3

COMMENT Page 7, Specific Comments: Comment 23 and 24

Clarify this subsection.

Dow could find no regulatory provision defining or referring to an "Operations Manual". Please clarify what constitutes an "Operations Manual" for the purposes of this provision.

RESPONSE The Department acknowledges and concurs with the comment. The Department can find no regulatory basis for a Permittee to keep an Operations Manual as described in Condition III.N.3. Therefore, the condition will be deleted from the permit.

Some facilities do create manuals or books to assist personnel with compliance; however, this is at the discretion of the Permittee. As such, the "Operations Manual" would include current and detailed standard operating procedures utilized by authorized employees in the operation of the various permitted treatment, storage and disposal facilities.

ACTION Condition III.N.3 has been deleted from the final permit as follows:

~~**III.N.3. Operations Manual**~~

~~The Permittee shall compile and keep current an Operations Manual The Operations Manual is to include detailed and current standard operating procedures utilized by authorized personnel in the operation and maintenance of the Permittee's treatment, storage and disposal facilities.~~

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
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AGENCY INTEREST #1409

ITEM 25

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition III.O

COMMENT Page 8, Specific Comments: Comment 25

Delete reference to Tank T-701 in Table III-A.

There is no tank identified as T -701. The unit apparently referred to is "D-701", not T-701 as referenced in the draft permit. D-701 is a vertical section of plastic-lined pipe that serves as a collection point for several feed locations to the incinerator and provides a surge point for these feeds prior to incineration. On April 9, 1998, Dow submitted a request to LDEQ for a status change of D-701, previously permitted as a tank, since it is actually part of the piping system associated with F-700 incinerator, as opposed to a tank.

RESPONSE The Department acknowledges but does not completely concur with the comment. The Department concurs with the Permittee's assertion that the unit referenced in Table III-A as "T-701" is actually named D-701. Table III-A has been revised accordingly in the final permit. However, the Department does not agree that the unit in question should be deleted from Table III-A at this time.

The Permittee failed to include information on D-701 in its permit renewal application. Although Dow requested the designation of D-701 as a tank be reconsidered in correspondence dated April 9, 1998, the Department never rendered a decision on the request for re-designation of D-701. After the issue regarding the omission of D-701 from the hazardous waste renewal application was raised with Dow, the Department was provided with unit details and specifications for D-701. However, the information provided by the Permittee, was not sufficient to support re-designation of D-701 from a tank to piping.

According to LAC 33:V.109, a ***tank*** is "a stationary device designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e.g. wood, concrete, steel, plastic) which provide structural support." ***A tank system*** is "a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system." However, regardless of its shape (pipe), the

Permittee has not demonstrated that this equipment does not meet the definition of a tank (stationary, contains hazardous waste, constructed of non-earthen material). Furthermore, D-701 has features commonly associated with a tank (a vent, recirculation/mixing capability, surge capacity). Therefore, until such time that the Permittee provides information warranting re-designation D-701, tank D-701 will remain subject to permitting requirements.

ACTION

All references to "T-701" have been corrected to "D-701" in the final permit. D-701 remains listed as a hazardous waste tank in the final permit.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 26

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Tables III-A, IV-A and V-A-1

COMMENT Page 8, Specific Comments: Comment 26

Change the permitted capacity of the following: Tank T-400-2 to 49,300 gallons; Tank D-750 to 1,070 gallons; and Tank T-751 (it is assumed the Permittee intended D-751) to 7,000 gallons. The volume for T-400-2 is consistent with the permit application (Drawing 3, in Volume 3, Vinyl II Storage Tanks tab), and the volumes for D-750 and D-751 are consistent with information provided in Attachment 2 of NOD 1 responses. Note: This comment applies to similar tables in Conditions IV and V.

RESPONSE The Department acknowledges and concurs with the comment. The capacities of the tanks have been revised in the final permit as suggested by the Permittee in its comment.

ACTION In Tables III-A, IV-A and V-A-1, the capacities of the following tanks have been revised in the final permit as noted below:

T-400-2 from 49,800 gallons to 49,300 gallons;
D-750 from 940 gallons to 1,070 gallons; and
D-751 from 6,018 to 7,000 gallons.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 27

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table III.B

COMMENT Page 8, Specific Comments: Comment 27

In the header of Table III-B, substitute "MA XIMUM PERMITTED CAPACITY" for "MAXIMUM PERMITTED CAPACITY (GALLONS)."

RESPONSE The Department acknowledges but does not concur with the comment. The Permittee failed to provide a rationale for the request to remove "(GALLONS)" from the "MAXIMUM PERMITTED CAPACITY" header in Table III-B.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 28

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Conditions III.Q and III.Q.3

COMMENT Page 8, Specific Comments: Comments 28 and 29

Dow recommends the deletion of "Corrective Action" from the title of this section (as well as the revisions to III.Q.3, III.Q.4 and III.R proposed in comments to follow). The Draft Permit contains a section specifically addressing corrective action which includes a provision on financial assurances, i.e., VIII.A.5. This subject is best addressed under the Corrective Action Strategy as set forth in Condition VIII of the Draft Permit. EPA does not recommend a specific approach to the timing of cost estimates and financial assurances for corrective action, but, rather acknowledges that the factors of a specific circumstance should lead to the appropriate case-by-case approach. See EPA Interim Guidance on Financial Responsibility for Facilities Subject to RCRA Corrective Action (2003).

RESPONSE The Department acknowledges but does not concur with the comment. The type of corrective action referenced in Condition III.Q is corrective action required to remediate onsite releases of hazardous constituents to environmental media from permitted hazardous waste units (i.e., Block 80 Hazardous Waste Landfill and Northwest Landfill/CAMU). The type of corrective action addressed in Condition VIII.A.5 is corrective action activities associated with non-permitted solid waste management units. Furthermore, the objectives and guidelines for corrective action of permitted disposal units differ from those of corrective action of Solid Waste Management Units and/or Areas of Concern as specified in Condition VIII of the permit. The permitted disposal units have waste left in place. Therefore, the use of RECAP is not advisable. Instead, corrective action of the permitted disposal units is conducted in accordance with LAC 33:V.3321 and Condition VI.K (Corrective Action Program) of the permit.

Currently, corrective action is not required for the Block 80 Hazardous Waste Landfill and Northwest Landfill/CAMU. Therefore, for the purpose of clarity, Condition III.Q has been revised to specify that financial assurance for corrective action (of permitted hazardous waste units) is only necessary when required in accordance with LAC

33:V.3301.B and Condition VI.K (Corrective Action Program) of this permit.

ACTION Condition III.Q has been revised as follows in the final permit:

III.Q.3. In the event of a release of hazardous constituents to environmental media from the permitted units listed in Tables III-A, III-B, III-C, and III-D of this permit, ~~T~~the Permittee must maintain cost estimates accounting for the costs associated with corrective action remedy implementation of said releases ~~and maintenance required to remediate onsite releases of hazardous constituents to environmental media~~ as required by LAC 33:V.3301.B ~~3322.B and C~~ and/or Condition VI.K of this permit.

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 29

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition III.Q.4

COMMENT Page 9, Specific Comments: Comment 30

Revise as follows: "The Permittee shall maintain and adjust all cost estimates referenced in Conditions III.Q.1-2 of this permit for inflation, as specified in LAC 33:3705.B, 3705.C, and for other circumstances that increase the cost estimates."

This revision deletes the reference to III.Q.3. See comment to III.Q above.

RESPONSE The Department acknowledges but does not concur with the comment. As noted in the Department's response to Item #28 regarding Comments 28 and 29, establishing and maintaining financial assurance to cover costs associated with corrective action connected to permitted hazardous waste units is an obligation of the Permittee. The maintenance of cost estimates associated with corrective action activities is essential component of financial assurance. Therefore, the reference to Condition III.Q.3 has not been deleted from Condition III.Q.4 in the final permit.

ACTION Condition III.R has been revised as follows in the final permit:

The Permittee shall establish and maintain financial assurance for closure, post-closure, and corrective action, as applicable in accordance with LAC 33:V.3707 for all units listed under Condition III.O.7 and III.P.1 and for all onsite and offsite releases requiring the implementation of corrective action activities (e.g., investigation, sampling and analysis, corrective action remedies, etc.). Financial assurance required for corrective action at permitted hazardous waste units shall be in accordance with Condition III.Q.3. Financial assurance required as part of the Corrective Action Strategy shall be in accordance with Condition VIII.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 30

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition III.R

COMMENT Page 9, Specific Comments: Comment 31

Revise as follows: "The Permittee shall establish and maintain financial assurance for closure, post-closure, as applicable in accordance with LAC 33:V.3707 for all units listed under Conditions III.O.7 and III.P.1 and for corrective action, in accordance with the requirements and schedules developed as part of a Corrective Action Strategy pursuant to Condition VIII."

As written, the portion of this section relative to releases and corrective action does not account for the framework of Condition VIII and the specific provisions set forth in Condition VIII Requirements, measures and timing for any financial assurance applicable to corrective action should be addressed in and implemented through the Corrective Action Strategy (CAS).

RESPONSE The Department acknowledges but does not totally concur with the comment. The Department concurs that financial assurance for corrective action implemented under the CAS should be tied to Condition VIII. However, as noted in the Department's response to Items #28 and #29 regarding Comments 28, 29 and 30 above, establishing and maintaining financial assurance to cover costs associated with corrective action connected to permitted hazardous waste units is an obligation of the Permittee and will be a part of Condition III.Q. The requirement in Condition III.R has not been revised as suggested by the Permittee, but will be clarified.

ACTION See Item #29 regarding Comment 30 for the revised text of Condition III.R included in the final permit.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 31

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table IV-A

COMMENT Page 9, Specific Comments: Comment 32

Delete reference to Tank T-701 in Table IV-A.

The reference to T-701 should be removed because there is no tank identified as T-701. The unit apparently referred to is "D-701", not "T-701" as referenced in the draft permit. D-701 is a vertical section of plastic-lined pipe that serves as a collection point for several feed locations to the incinerator and provides a surge point for these feeds prior to incineration. On April 9, 1998, Dow submitted a request to LDEQ for a status change of D-701, previously permitted as a tank, since it is actually part of the piping system associated with F-700 incinerator, as opposed to a tank. Please confirm this change in status for D-701 in accordance with the April 9, 1998, request.

RESPONSE See the Department's response to Item #25 regarding Comment 25.

ACTION All references to "T-701" have been corrected to "D-701" in the final permit. D-701 remains listed as a hazardous waste tank in the final permit.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 32

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.A.1.a.(2)

COMMENT Page 10, Specific Comments: Comment 33

Revise as follows: "The design temperature and pressure for each tank shall not change from the one listed in Table V-A-1, unless a permit modification is approved by the Department. However, a permit modification is not needed to rerate a tank in accordance with applicable API Standards."

or in the alternative

"The design temperature and pressure for each tank shall not change from the one listed in Table V-A-1, unless a permit modification is approved by the Department. Tank rerating, in accordance with applicable API Standards, qualifies as a Class 1 Modification under LAC 33:V.321.C.1."

Under the current permit, there has been some uncertainty in inspections and related enforcement regarding tank rerating and whether it does or does not require a permit modification and if it does, whether the modification would be a Class 1 or Class 2. It is Dow's position that tank rerating is not a "change" such that a permit modification is required, but rather routine maintenance to assure the ongoing suitability of the tank for service.

The Department has expressed the position in recent RCRA enforcement discussions with Dow that tank rerating should be accomplished via a Class 1 modification. Indeed, under LAC 33:V.321.C.4, in the case of modifications not explicitly listed in LAC: 33.V.322, the administrative authority may determine that the modification should be reviewed and approved as a Class 1 modification. Tank rerating, if considered a change at all, is not a modification explicitly listed in LAC 22:V.322, but rather a minor change to keep the permit current with routine changes to the facility or its operations which does not substantially alter the permit conditions or reduce the capacity of the facility to protect human health and the environment, as reflected in the criteria set out in LAC 33:V.321.C.4.b.i. If a permit modification is required, administrative

authority determination via a permit condition stating that tank rerating is a Class 1 modification will pretermit unnecessary delay in accomplishing the modification by clearly stating that tank rerating is to be reviewed and approved as a Class 1 modification.

RESPONSE The Department acknowledges but does not concur with the comment. Re-rating a tank often affects performance specification parameters and such changes require a permit modification.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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AGENCY INTEREST #1409

ITEM 33

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.A.1.b.(3)

COMMENT Page 10, Specific Comments: Comment 34

Revise as follows: "The Permittee is prohibited from storing or treating hazardous waste in any tank storage system not listed in Table V-A-1 for greater than ninety (90) days, unless an extension is granted by the Administrative Authority in accordance with LAC 33:V.1109.E.2, the activity is exempt from regulation, or an Emergency Permit is issued."

The provision should be broad enough to allow for circumstances under which either the tank content is exempt from regulation or the tank service may be authorized by Emergency Permit. The requested revision is consistent with permit conditions included in other RCRA permits issued by the Department.

RESPONSE The Department acknowledges but does fully concur with the comment. Condition V.A.1.b.(3) will be clarified to allow for storage through an exemption. (It should be noted that if a regulatory change exempts an activity that is written into a current effective permit, the Permittee must request a permit modification.) However, an emergency permit by definition would supersede applicable permit conditions for the duration of the emergency permit.

ACTION Condition V.A.1.b.(3) was revised in the final permit as follows:

The Permittee is prohibited from storing or treating hazardous waste in any tank storage system not listed in Table V-A-1 for greater than ninety (90) days, unless an extension is granted by the Administrative Authority in accordance with LAC 33:V.1109.E.2 or the activity is exempt from regulation.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 34

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.A.1.b.(4)

COMMENT Page 11, Specific Comments: Comment 35

Revise as follows: "The Permittee is prohibited from receiving any hazardous waste from off-site, with the exception of compatible wastes received from any Dow facility."

The suggested revision is consistent with the current permit and provides the necessary operational flexibility for the Permittee to provide available treatment, storage or disposal capacity to other Dow facilities for compatible wastes.

RESPONSE The Department acknowledges but does not concur with the comment. Under the previous hazardous waste operating permit, only the rotary kiln (I-200) and the container storage areas were authorized to manage offsite generated hazardous waste. Offsite-generated, containerized hazardous wastes were permitted to be stored in the container storage areas prior to treatment in the rotary kiln. However, the Permittee has since conducted closure of the rotary kiln and a closure certification report documenting closure of the rotary kiln has been submitted to the Department.

Dow did not propose in its permit application (nor in the plans submitted in support of the application) to treat offsite-generated hazardous wastes in any of the other onsite thermal treatment units (TTUs). The future utilization of the TTUs to treat offsite-generated hazardous wastes would require a permit modification and the revision of applicable sections of the plans incorporated by reference in Attachment 1 of the final permit.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
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AGENCY INTEREST #1409

ITEM 35

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.A.3.b.(4)

COMMENT Page 11, Specific Comments: Comment 36

Delete this provision.

There is no regulatory authority in LAC 33:V.1907.B-F or elsewhere upon which the Department can require the impervious coating of lined secondary containment. If the requirement reflects the Department's interpretation of what is adequate secondary tank containment, it is an interpretation unfairly unique to Dow, in that no such permit condition is found in any other hazardous waste permits and draft permits issued by the Department.

RESPONSE The Department acknowledges but does not concur with the comment. However, Condition V.A.3.b.(4) will be revised to allow the Permittee to meet the requirements of LAC 33:V.1907, specifically 1907.B-F. See the Department's response to Item #11 regarding Comment 10.

ACTION The final permit has been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 36

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.A.4.b and Tables V-A-1 and V-A-2

COMMENT Page 11, Specific Comments: Comment 37

The reference to T-701 should be removed because there is no tank identified as T-701. The unit apparently referred to is "D-701", not "T-701" as referenced in the draft permit. D-701 is a vertical section of plastic-lined pipe that serves as a collection point for several feed locations to the incinerator and provides a surge point for these feeds prior to incineration. On April 9, 1998, Dow submitted a request to LDEQ for a status change of D-701, previously permitted as a tank, since it is actually part of the piping system associated with F-700 incinerator, as opposed to a tank. Please confirm this change in status for D-701 in accordance with the April 9, 1998, request.

RESPONSE See the Department's response to Item #25 regarding Comment 25.

ACTION All references to "T-701" have been corrected to "D-701" in the final permit. D-701 remains listed as a hazardous waste tank in the final permit.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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PERMIT NUMBER LAD008187080-OP-1-RN-1
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ITEM 37

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.A.6.b.(1).(a)

COMMENT Page 12, Specific Comments: Comment 38

Revise as follows: "Above ground portions of the tank system, to detect corrosion, cracks or releases of waste."

The suggested revision tracks the precise language in LAC 33:V.1911.B.1, which does not include a list of components of a tank system. The inclusion of an exclusive list of tank system above ground components is both unnecessary and potentially confusing, in that tank system above ground components may vary tank to tank.

RESPONSE The Department acknowledges but does not concur with the comment. By specifying "Above ground portions of the tank system, including the tank, ancillary piping, valves, and vent controls..." specific detailed information is provided to both the public and Department staff regarding what is meant by "above ground portions" of a tank system. The Permittee need only inspect those components that are applicable to a particular tank system.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
PERMIT NUMBER LAD008187080-OP-1-RN-1
AGENCY INTEREST #1409

ITEM 38

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.A.6.e.(1)-(6)

COMMENT Page 12, Specific Comments: Comment 39

Revise as follows: "Thickness testing of each metallic tank listed in Tables V-A-1 and V-A-2 of this permit shall be performed in accordance with API/ASME standards listed in Table V-A-2."

Consistent with the current permit, API/ASME standards to which the metallic tanks are subject should continue to govern thickness testing.

RESPONSE The Department acknowledges but does not concur with the comment. The Department does not believe the condition, as worded, is inconsistent with API/ASME standards. Furthermore, the condition, as worded, adequately addresses Department concerns regarding tank thickness testing requirements.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 39

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.A.7.b.(5).(a)

COMMENT Page 12, Specific Comments: Comment 40

Revise as follows: "For a release caused by a spill that has not damaged the integrity of the system, the Permittee may return the system to service as soon as the released waste is removed and repairs, if necessary, are made in accordance with LAC 33:V.1913.E.2."

The proposed permit condition purports to require the Permittee to "fully restore the integrity" of the containment system after a spill that did not damage the integrity. The proposed revision tracks precisely the regulatory provision regarding containment repair or closure at LAC 33:V.E.2. Once a determination is made that a release caused by a spill has not damaged the integrity of the system, it is redundant and unnecessary to expressly purport to require the Permittee to "fully restore the integrity of the system".

RESPONSE The Department acknowledges and concurs with the comment. The Department has revised the condition as suggested by the Permittee in its comment.

ACTION Condition V.A.7.b.(5).(a) has been revised in the final permit as follows:

V.A.7.b.(5).(a). For a release caused by a spill that has not damaged the integrity of the system, the Permittee may return the system to service as soon as the released waste is removed and repairs, if necessary, are made ~~shall remove the released waste and make any necessary repairs to fully restore the integrity of the system before returning the tank system to service~~ in accordance with LAC 33:V.1913.E.2.

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ITEM 40

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.A.7.c.(2)

COMMENT Page 12, Specific Comments: Comment 41

Revise as follows: "Major repairs shall include, but not be limited to, installation of an internal liner, repair of a ruptured tank, repair of ruptured secondary containment vessel, and removal of a tank from its foundation for any reason."

The regulatory provision for certification of major repairs at LAC 33:V.1913.F does not refer specifically to "secondary containment area" but rather "secondary containment vessel" and there is no regulatory definition of "secondary containment area" such that it is a term known to or understood by the Permittee. A deviation from and expansion of the specific language in LAC 33:V.1913.F, as to major repairs, is without support.

RESPONSE The Department acknowledges and concurs with the comment. The Department has revised the condition to specify "secondary containment vessel" as referenced in LAC 33:V.1913.F rather than "secondary containment area".

ACTION Condition V.A.7.c.(2) has been revised in the final permit as follows:

V.A.7.c.(2). Major repairs shall include, but not be limited to, installation of an internal liner, repair of a ruptured tank, repair of a ruptured secondary containment vessel~~area~~, and removal of a tank from its foundation for any reason.

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ITEM 41

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.A.8

COMMENT Page 13, Specific Comments: Comment 42

Revise as follows: "In order to prevent redundant regulation, Condition V.A.8 has been reserved. The Permittee will comply with the provisions of Condition V.A.8 by complying with the provisions of its Comprehensive Fugitive Emissions Monitoring Program implemented under the facility air permit. Failure by the Permittee to comply with those provisions that are equivalent to the provisions in LAC 33:V.Chapter 17 will also result in a failure to comply with LAC 33:V.Chapter 17."

The Permittee is subject to equivalent provisions under the facility air permit and should not be subject to redundant regulation.

RESPONSE The Department acknowledges and concurs with the comment. It should be noted that in its permit renewal application, the Permittee did not refer to a Comprehensive Fugitive Emissions Monitoring Program implemented under the facility's air permit. In addition, the Permittee provided responses to LAC 33:V.Chapter 17 suggesting that it intended to comply by meeting the standards as prescribed in LAC 33:V.Chapter 17. However, in recognition of the Permittee's approved Comprehensive Fugitive Emissions Monitoring Program (which is included in each Title V air permit. See Table below) and to prevent redundant regulation, the Department has revised the condition as suggested by the Permittee in the final permit.

Permitted Thermal Treatment Units (TTUs)

TTU	LOCATION	TITLE V PERMIT No. (Date Issued)
Environmental Operations Plant TTU (I-200)	Environmental Operations Plant	NA*
Solvents/EDC TTU (F-700)	Solvents/EDC Plant	2188-V0 (1/30/2004)
Glycol I TTU (R-4)	Glycol I Plant	2007-V2 (12/13/2006)
Chlorinated Methanes TTU (R-750)	Chlorinated Methanes Plant	2037-V1 (5/29/2007)
Vinyl II TTU (F-410)	Vinyl II Plant	2285-V3 (1/25/2007)

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Vinyl II TTU (F-420)	Vinyl II Plant	2665-V7 (6/25/2007)

* The Environmental Operations Plant TTU (I-200) is undergoing closure and no longer actively managing hazardous waste (See Condition V.D.5).

ACTION

Condition V.A.8 has been revised in the final permit to read as follows:

Condition V.A.8 Air Emission Control Equipment Standards (RESERVED)

~~The Permittee shall comply with the applicable requirements for air emission control equipment for hazardous waste tanks in LAC 33:V.1747-1799 and as specified in Table V-A-2 and Condition VII.B of this permit.~~

In order to prevent redundant regulation, Condition V.A.8 has been reserved. The Permittee will comply with the provisions of Condition V.A.8 by complying with the provisions of its approved Comprehensive Fugitive Emissions Monitoring Programs implemented under the permitted unit's Title V air permits. Failure by the Permittee to comply with those provisions that are equivalent to the provisions in LAC 33:V.Chapter 17 will also result in a failure to comply with LAC 33:V.Chapter 17.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 42

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.A.9.c.(1).(a)

COMMENT Page 13, Specific Comments: Comment 43

Revise as follows: "The daily log sheets shall include all monitored parameters for the prevention of spills and overflows."

The provision in the draft permit says to log monitored parameters "including temperature, pressures, and levels." There are no units, under the current permit, for which all three parameters are monitored and logged. And there is no regulatory provision cited as requiring specifically that temperature, pressures, and levels be monitored and logged. The suggested revision provides the appropriate flexibility for the Permittee to monitor and log appropriate parameters for the prevention of spills and overflows.

RESPONSE The Department acknowledges and concurs with the comment. The condition has been revised in the final permit to provide the necessary flexibility regarding monitoring parameters for the prevention of spills and overflows.

ACTION Condition V.A.9.c.(1).(a) has been revised in the final permit as follows:

V.A.9.c.(1).(a). The daily log sheets shall include all monitored parameters for the prevention of spills and overflows ~~including temperature, pressures, and levels~~ (e.g., temperature, pressures, and levels) for tanks operated at non-ambient conditions.

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ITEM 43

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.B

COMMENT Page 13, Specific Comments: Comment 44

Delete footnote 4 in Table V.B which states for Area E: "Includes rainwater run-on per LAC 33:V.2111.B.3 and 4 assuming 10 inches of rain in a 24-hour period with use of the contained storage area and Sump 265."

The revised estimate of the area of Storage Area E is 23,472 sq. ft. (volume: 208,931 gallons). Run-on into Storage Area E is prevented due to the height (~ 14.2 inches) of its perimeter curb, and site grading diverts storm water away from it. Area E is unenclosed, yet has the capacity to collect a 10" rain event (146,308 gallons) and contain the greatest volume of either 10 percent of the volume of containers (210,000 gallons * 10% = 21,000 gallons) or the volume of the largest container (21,000 gallons). While Area E rainwater can drain to Sump 265, Dow does not operate Sump 265 for additional containment capacity for Area E. Storm water in Area E is inspected after rainfall. After the inspection, the drain valve (which is kept closed) is opened to drain storm water from Area E into Sump 265.

RESPONSE The Department acknowledges but does not fully concur with the comment. The Department concurs with the Permittee's assertion that the area of Area E should be revised to 23,472 sq. ft. and the volume to 208,931 gallons. However, Footnote 4 has not been deleted but rather revised (see the revision below). Contrary to the Permittee's comment, a site visit conducted by Department staff on November 20, 2008, to assess Area A confirmed that the curbing of Area A is not uniformly 14.2 inches (the curbing at the north side was less than 10 inches). Additionally, run-on appeared to be possible at the northern perimeter of Area E.

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ACTION Table V-B includes the following revisions in the final permit:

- The "Dimensions" of Area E has been revised to specify 23,472 ft^2 rather than 28,000 ft^2.

- The "Total Permitted Capacity" of Area E has been revised to specify 208,931 gallons rather than 210,000 gallons.

- Footnote 4 has been revised in the final permit as follows: Includes ~~rainwater~~ direct precipitation and potential run-on per LAC 33:V.2111.B.3 and 4 assuming a 10 inch~~es of~~ rainfall in a 24-hour period with use of the contained storage area ~~and Sump 265~~.

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ITEM 44

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.B.1.b.(4)

COMMENT Page 14, Specific Comments: Comment 45

Revise as follows: "With the exception of large containers (tank trucks, roll-off bins, etc.), drums or containers holding thirty (30) gallons or more, must be stored on pallets not more than two (2) containers high with no more than four (4) containers per tier on the pallet."

The provision, as written, in the Draft Permit is not included in the hazardous waste regulations. The proposed, revised language excludes large containers which cannot be practicably stored in the stated manner.

RESPONSE The Department acknowledges and concurs with the comment. The requirement has been revised in the final permit in a manner that excludes large containers such as trucks and roll-off containers which cannot be practically stored on pallets.

ACTION Condition V.B.1.b.(4) has been revised in the final permit as follows:

V.B.1.b.(4). With the exception of large containers (tank trucks, roll-off bins, etc.), ~~D~~drums or containers holding thirty (30) gallons or more, must be stored on pallets not more than two (2) containers high with no more than four (4) containers per tier on the pallet.

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ITEM 45

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.B.1.b.(7)

COMMENT Page 14, Specific Comments: Comment 46

Revise as follows: ""All pallets utilized in the storage of hazardous waste containers, irrespective of volume, shall be placed in rows with a minimum of 18 inches of aisle space between rows, or the width necessary to get emergency equipment to any area of the aisle, whichever is greater."

The provision, as written in the draft permit, is not contained in the hazardous waste regulations. A provision setting an arbitrary width for aisle space is not only impractical, it is without regulatory basis. However, if such a provision is to be included, the current 18 inch aisle space utilized at the facility is appropriate. If additional width is needed for emergency equipment, the revised language provides for this situation.

RESPONSE The Department acknowledges but does not concur with the comment. The requirement for two (2) feet of aisle space between pallets storing containers is consistent with permit requirements included in the permits of other hazardous waste treatment, storage and disposal facilities that have permitted container storage areas. Additionally, a minimum of two (2) feet of aisle space is essential to allow adequate inspection and emergency response.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 46

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.B.1.b.(8)

COMMENT Page 14, Specific Comments: Comment 47

Revise as follows: "No containers holding hazardous waste or pallets may be stored directly over drain sumps."

The revision clarifies that this provision is directed only at containers which contain hazardous waste.

RESPONSE The Department acknowledges but does not concur with the comment. Nothing should be stored over a drainage sump which may hinder drainage. Therefore, the condition has not been revised in the final permit.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 47

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.B.1.d.

COMMENT Page 14, Specific Comments: Comment 48

Revise as follows: "The Permittee is prohibited from storing hazardous waste not listed in the Part A hazardous waste permit application. The Permittee is prohibited from the receipt of offsite generated hazardous waste for storage at the CSAs, with the exception of compatible wastes received from any Dow facility."

The language in the Draft Permit would subject non-hazardous waste and other containerized materials to hazardous waste regulations on the basis of storage location rather than the actual characterization of the waste. Such a requirement is not supported by the hazardous waste regulations and should be deleted.

RESPONSE The Department acknowledges but does not concur with the comment. See the Department's response to Item #34 regarding Comment 35.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 48

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.B.1.e.(2)

COMMENT Page 15, Specific Comments: Comment 49

Revise as follows: "Except as otherwise provided by LAC 33:V. 2111.C., Permittee shall maintain a containment system with sufficient capacity to contain 10 percent of the volume of containers or the volume of the largest container, whichever is greater, in accordance with LAC 33 V.2111.B.3. Containers that do not contain free liquids (per the Paint Filter Test) need not be considered in this determination."

The revision makes the provision consistent with the applicable regulations.

RESPONSE The Department acknowledges and concurs with the comment. The requirement has been revised in the final permit to account for the provisions of LAC 33:V.2111.C.

ACTION Condition V.B.1.e.(2) has been revised in the final permit as follows in the final permit:

V.B.1.e.(2). Except as otherwise provided by LAC 33:V.2111.C, ~~The~~ the Permittee shall maintain a containment system with sufficient capacity to contain 10 percent of the volume of containers or the volume of the largest container, whichever is greater, in accordance with LAC 33 V.2111.B.3. Containers that do not contain free liquids (per the Paint Filter Test) need not be considered in this determination.

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 49

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.B.1.h.(3)

COMMENT Page 15, Specific Comments: Comment 50

Revise as follows: "The Permittee must manage any collected material as required by LAC 33:V.2111.B.6."

The draft provision is not found in the regulations. There is no requirement in the hazardous waste regulations with respect to containment pending analysis of stormwater prior to discharge pursuant to the NPDES permit or other discharge authorization.

RESPONSE The Department acknowledges but does not fully concur with the comment. The condition has been revised in the final permit. Additionally, the Department has clarified that stormwater must be managed in accordance with LAC 33:V.1505.A.1 and the Department's Water Quality regulations (LAC 33:Subpart IX), as applicable.

ACTION Condition V.B.1.h.(3) has been revised in the final permit as follows:

The Permittee must manage any collected material (including, but not limited to, stormwater that is commingled with spills and leaks) as required by LAC 33:V.2111.B.6. All other s~~S~~tormwater shall be ~~contained until analysis establishes that it meets permit limitation criteria for discharge through the NPDES treatment system, or other authorized disposal methods~~ managed in accordance with LAC 33:V.1505.A.1 and LAC 33:Subpart IX (Water Quality), as applicable.

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 50

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V-B, Footnote 1

COMMENT Page 15, Specific Comments: Comment 51

Delete SU-265 from Table V-B, Footnote 1.

SU-265 is a sump and is not designed or operated to be empty. It is not appropriately subject to the requirements applicable to the other units listed in Table V-B.

RESPONSE The Department acknowledges but does not fully concur with the comment. SU-265 is not in Area E, but it does serve Area E. Therefore, Footnote 1 has not been deleted from the final permit rather it has been revised to state that the container storage area meets LAC 33:V.2111.C.

ACTION Table V-B, Footnote 1 has been revised as follows: ~~Sump #265 (SU-265) is used for rainwater runoff that may run off the surface.~~ The container storage area meets LAC 33:V.2111.C.

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ITEM 51

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.C.1.b.(2)

COMMENT Page 15, Specific Comments: Comment 52

Revise as follows: "Polychlorinated biphenyl (PCB) waste unless approval is granted under the TSCA program."

The citation to LAC 33:V.4901 should be deleted because it does not provide a definition of PCB waste. PCB waste is defined and controlled under the Toxic Substance Control Act ("TSCA") at 40 CFR 761.73. The Solvents EDC Incinerator (F-700) is permitted to burn waste controlled under TSCA. See V.C.1.b.(10).

RESPONSE The Department acknowledges and concurs with the comment. However, the condition has been revised utilizing wording that differs from that suggested by the Permittee. The condition has been revised to specify that only the Solvents/EDC 1 Incinerator (F-700) is authorized to treat TSCA wastes. See also the Department's response to Item 54 regarding Comment 55.

ACTION Condition V.C.1.b.(2) has been revised in the final permit as follows:

V.C.1.b.(2). Polychlorinated biphenyls (PCBs) ~~waste~~ as defined in LAC 33:V.2203.A, unless approval is granted under the TSCA program for such wastes to be burned in the Solvents/EDC 1 Incinerator (F-700). All other TTUs are prohibited from burning TSCA wastes ~~as defined in LAC 33:V.4901~~.

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 52

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.C.1.b.(6)

COMMENT Page 16, Specific Comments: Comment 53

Delete this provision.

Dow objects to the prohibition of burning containerized gases in the TTU. Dow seeks the flexibility to burn containerized gases from time to time.

RESPONSE The Department acknowledges but does not concur with the comment. The only TTU that was permitted to burn containerized gasses was I-200 which has, since issuance of the draft permit, undergone closure. The future burning of containerized gases in the remaining operational TTUs would require the submittal and subsequent approval of a permit modification request. See the Department's comment to Item #34 regarding Comment 35.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 53

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.C.1.b.(9)

COMMENT Page 16, Specific Comments: Comment 54

Delete this provision.

The proposed language should be deleted because D003 is listed in Part A of Dow's permit application and the Waste Analysis Plan.

RESPONSE The Department acknowledges but does not concur with the comment. The fact that D003 wastes are managed by the Permittee and are included in the Part A Application and Waste Analysis Plan does not provide a reasonable justification for the treatment of D003 wastes in the permitted TTUs. The only TTU that was permitted to burn D003 was I-200 which has, since issuance of the draft permit, undergone closure. The future burning of D003 wastes in the remaining operational TTUs would require the submittal and subsequent approval of a permit modification request. See the Department's comment to Item #34 regarding Comment 35.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
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ITEM 54

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.C.1.b.(10)

COMMENT Page 16, Specific Comments: Comment 55

Delete this section.

Based on the proposed revision to V.C.1.b.(2) (above), the section should be deleted.

RESPONSE The Department acknowledges and concurs with the comment. The relevant information included in the condition has been incorporated into Condition V.C.1.b.(2) allowing Condition V.C.1.b.(10) to be deleted in the final permit. See also the Department's response to Item #51 regarding Comment 52.

ACTION The information included in Condition V.C.1.b.(10) was combined with Condition V.C.1.b.(2). See Item #51 regarding Comment 52. Therefore, Condition V.C.1.b.(10) has been deleted in the final permit.

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 55

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.C-1

COMMENT Page 16, Specific Comments: Comment 56

Delete this table.

Table V.C-1 does not uniformly apply to all of the TTU's on the site, so this table should be deleted. Inspection requirements are provided for in the Inspection Plan for each unit.

RESPONSE The Department acknowledges but does not fully concur with the comment. The table remains in the final permit for ease of reference to the public and Department staff. The requirements that are particular to one or more of the TTUs are specified in the table.

ACTION No action required. The table has not been deleted from the final permit.

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ITEM 56

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.C.2.a.(3)

COMMENT Page 16, Specific Comments: Comment 57

Revise as follows: "The automatic waste feed cut off system and associated alarms must be tested at least weekly when hazardous waste is burned to verify operability, unless the applicant demonstrates to the Administrative Authority that weekly inspections will unduly restrict or upset operations and that less frequent inspections are adequate. Support for this demonstration shall be included in the operational record. At a minimum, operational testing of the automatic waste feed cut off system must be conducted at least monthly (LAC 33:V.3005.F.3-F.4 and 3119)."

The change from "monthly" to "weekly" makes the permit condition consistent with LAC 33:V.3005.F.4.

RESPONSE The Department acknowledges and concurs with the comment. In order to be consistent with LAC 33:V.3005.F.4, the requirement has been revised to require weekly rather than monthly inspection of the automatic waste feed cut off system

ACTION Condition V.C.2.a.(3) has been revised in the final permit as follows:

V.C.2.a.(3). The automatic waste feed cut off system and associated alarms must be tested at least weekly ~~monthly~~ when hazardous waste is burned to verify operability, unless the applicant demonstrates to the Administrative Authority that weekly inspections will unduly restrict or upset operations and that less frequent inspections are adequate. Support for this demonstration shall be included in the operational record. At a minimum, operational testing of the automatic waste feed cut off system must be conducted at least monthly (LAC 33:V.3005.F.3-F.4 and 3119).

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ITEM 57

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.C.3.a.(3)

COMMENT Page 17, Specific Comments: Comment 58

Delete the sentence: "The method used to obtain a representative sample of the waste to be analyzed shall be the appropriate method specified in LAC 33:V.Chapter 49.Appendix D or an equivalent method approved by the Administrative Authority.

Other sampling and analytical methods shall be those specified in *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, as revised; Standard Methods for the Examination of Water and Wastewater*, current edition, or equivalent methods."

The provision in the Draft Permit refers to waste feed sampling which is covered by the WAP and not part of monitoring.

RESPONSE It appears from its comment, the Permittee suggested the deletion of all but the first sentence of Condition V.C.3.a.(3) as stated in the draft permit. The Department acknowledges and concurs with the comment. Condition II.E.9 adequately addresses sampling methods. The requirement has been revised as suggested by the Permittee in the final permit.

ACTION Condition V.C.3.a.(3) has been revised in the final permit as follows:

V.C.3.a.(3). Monitoring samples and measurements shall be representative of the monitored activity and obtained and analyzed in accordance with Condition II.E.9 of this permit. ~~The method used to obtain a representative sample of the waste to be analyzed shall be the appropriate method specified in LAC 33:V.Chapter 49.Appendix D or an equivalent method approved by the Administrative Authority.~~

~~Other sampling and analytical methods shall be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, as revised; Standard Methods for the Examination of Water and Wastewater, current edition, or equivalent methods.~~

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
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AGENCY INTEREST #1409

ITEM 58

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.C.3.a.(4)

COMMENT Page 17, Specific Comments: Comment 59

Revise as follows: "The Permittee must calibrate monitoring equipment as specified by the Continuous Monitoring System Performance Evaluation Plan ("CMSPEP") as required by the HWCMACT."

Tables V.D.1-3, V.D.2-3, V.D.3-3, and V.D.4-3 should be deleted as they are duplicative of the CMSPEP.

RESPONSE The Department acknowledges but does not concur with the comment. Tables V.D.1-3, V.D.2-3, V.D.3-3, and V.D.4-3, which include the monitoring equipment associated with each TTU, serve as a reference to both the public and Department staff and, therefore, have not been deleted from the final permit. Furthermore, due to the fact that Dow has not yet demonstrated compliance with HWCMACT for any of its permitted TTUs, the condition will not be revised as suggested by the Permittee. Equipment included in the aforementioned tables shall be calibrated according to RCRA (BIF) standards.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 59

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.C.3.a.(5)

COMMENT Page 17, Specific Comments: Comment 60

Revise as follows: "Hazardous waste may continue to be introduced into the TTUs during daily continuous emission monitoring system (CEMS) calibration check periods. The CEMS shall be maintained according to the following schedule: (1) at least daily, a calibration check of the instrument; (2) at least daily, a system audit; (3) at least quarterly, a calibration error test; and (4) at least annually, a performance specification test. The procedures for CEMS maintenance are outlined in 40 CFR 63 EEE, HWCMACT."

The language in the permit should reference the maintenance requirements of 40 CFR 63 EEE (hazardous waste combustors) rather than 40 CFR 266 Appendix IX so that the provision will conform to HWCMACT requirements.

RESPONSE The Department acknowledges but does not concur with the comment. 40 CFR 266 Appendix IX standards are applicable until Dow demonstrates HWCMACT compliance. After becoming compliant with HWCMACT, the TTU(s) will be incorporated into Dow's Title V air permit and removed from the RCRA permit through a Class1[1] permit modification. Therefore, the condition has not been revised to reference 40 CFR 63 EEE, HWCMACT in the final permit.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
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ITEM 60

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.C.3.b

COMMENT Page 17, Specific Comments: Comment 61

Revise as follows: "In the operating record, the Permittee shall record and maintain in accordance with LAC 33:V.1529 all monitoring data compiled to satisfy the permit requirements using the minimum monitoring requirements summarized in 40 CFR 63 EEE, HWCMACT."

Revision of the language in the Draft Permit to reference monitoring requirements of 40 CFR 63 EEE (hazardous waste combustors) will make the condition conform to HWCMACT requirements.

RESPONSE The Department acknowledges but does not concur with the comment. After becoming compliant with HWCMACT, the TTU(s) will be incorporated into Dow's Title V air permit and removed from the RCRA permit through a Class1[1] permit modification. Therefore, the requirement has not been revised in the final permit.

ACTION No action required. The final permit has not been revised.

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ITEM 61

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.C.5.b.(1)

COMMENT Page 18, Specific Comments: Comment 62

Revise as follows: "The Permittee shall record in the facility operating record the date and time of all automatic waste feed cut off events initiated by permit or OPL exceedances in accordance with 40 CFR 63 EEE. The records shall also include the known or suspected cause of the automatic waste feed cut off, the triggering parameters, root cause, the corrective actions taken, the duration of the event, and the date and time of restarting waste feed following the automatic waste feed cut off. Electronic records may be maintained, in lieu of paper copies."

The revised language references the record keeping requirements of 40 CFR 63 EEE (hazardous waste combustors). This change will bring the provision into agreement with HWCMACT requirements, and will avoid unnecessary, separate recordkeeping.

RESPONSE The Department acknowledges but does not concur with the comment. AWFCOs may occur for reasons other than permit or OPL exceedances and these may have the potential to affect human health and environment. It is essential that these events be investigated and noted in the operating record as well.

ACTION No action required. The final permit has not been revised.

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ITEM 62

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.C.6

COMMENT Page 18, Specific Comments: Comment 63

Revise as follows: "The Permittee shall report activation of the automatic waste feed cut off systems in the HWCMACT semi-annual report. The report shall include summaries of the date, cause, and remedial action for each waste feed cut off activation. The Permittee shall report in writing to the Administrative Authority if there are more than ten (10) permit required waste feed cut offs in 60 days for a particular TTU. This report shall include date, cause and remedial actions taken and must be submitted within five (5) calendar days of the tenth (10th) exceedance as required in 40 CFR 63 EEE."

The revision references the waste feed cut off reporting requirements of 40 CFR 63 EEE (hazardous waste combustors), and conforms to the HWCMACT reporting requirements. The reporting requirements in the Draft Permit are not required by regulation. The proposed reporting requirements aloe equivalent to, if not more stringent than, those in the Draft Permit. Reporting per HWCMACT is appropriately based on excess emissions, not all emissions.

RESPONSE The Department acknowledges and concurs with the comment. The revisions suggested by the Permittee in its comment regarding AWFCO reporting are consistent with HWCMACT reporting requirements that are more stringent than RCRA (BIF) standards. However, the condition has not been revised to reference 40 CFR 63 EEE as suggested by the Permittee due to the fact that the TTUs are not yet compliant with HWC MACT standards (as noted in previous Department responses to Items #58 and #60).

ACTION Condition V.C.6. has been revised in the final permit as follows:

V.C.6. Reports

The Permittee shall report activation of the automatic waste feed cut off systems in the annual report described in Condition III.N.2 of this permit. The report shall include summaries of the date, cause, and

remedial action for each waste feed cut off activation. The Permittee shall report in writing to the Administrative Authority if there are more than ~~fifty (50)~~ ten (10) permit required waste feed cut offs per month for a particular TTU. This report shall include date, cause and remedial actions taken and must be submitted within ~~thirty (30)~~ five (5) calendar days of the ~~end of the month in which the fifty (50) or more permit required waste feed cut offs occurred~~ tenth (10th) exceedance.

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ITEM 63

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.C.1

COMMENT Page 18, Specific Comments: Comment 64

For waste feed system, this table should reflect that not all units monitor waste feed pressure. Waste tank systems should be deleted. Tanks are not part of a combustion unit but are discrete RCRA units. For combustion units, the table should reflect that not all units routinely conduct a refractory turnaround annually. The meaning of "out-of tolerance" in "out-of-tolerance operational data" is ambiguous and requires clarification. The rotary kiln does not have an ESP. Delete this requirement because the kiln is closing. Several of the items specified for the "Absorber" and "Scrubber Systems" are not applicable. For example, most units do not use spray nozzles. Instead, distributor trays are used. The Table should provide that inspections be conducted as applicable. Alternatively, this table should be eliminated and these equipment inspections can be addressed in the Inspection Plan.

RESPONSE The Department acknowledges but does not fully concur with the comment. The table has not been deleted from the final permit due to the fact that it serves as a good reference to the public and Department staff. The requirements that pertain to one or more of the TTUs are specified in the table. Additionally, the waste tank systems have not been deleted from the table because the table follows a standard DEQ permit format, they are connected to the TTUs and a comprehensive table serves the public and DEQ interests. However, the table has been revised to address the Permittee's concerns regarding: 1) the applicability of the various inspection requirements respective to the TTUs; 2) refractory inspections; 3) the meaning of out-of tolerance; 4) the deletion of the ESP inspection requirements due to the closure of the rotary kiln; and 5) the applicability of requirements specified for the Absorber and Scrubber Systems.

ACTION Table V.C.1 has been revised in the final permit as noted below to address the Permittee's aforementioned comments.

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TABLE V.C-1
COMBUSTION UNIT INSPECTIONS

Equipment/Instrument	Inspection Elements as Applicable to the Specific TTUs	Inspection Frequency
Burner system	Leaks in manifold	Daily
Waste feed system	Atomizing fluid pressure transducer	Daily
	Waste feed pressure transducer	Daily
	Waste feed flowmeter	Daily
Waste tank system	Tank integrity	Daily
	Level controls	Monthly
	Overflow alarms and controls	Monthly
	Secondary containment	Daily
Combustion Units (i.e.: BIFs, Incinerator and rotary kiln)	Fugitive emissions	Daily
	Refractory	~~Annually~~ Upon every entry into the combustion chamber
Continuous process monitors	Out-of-tolerance operational data[1]	Daily
Automatic waste feed cut off system	Operability	Monthly
~~Electrostatic Precipitator for rotary kiln~~	~~Condition of collection plates~~	~~Annually~~
	~~Condition of Electrical Components~~	~~Annually~~
	~~Operation of rappers~~	~~Annually~~
Absorber and Scrubber Systems for BIFs and Incinerator	Condition of packing or trays	Annually
	Operation of spray nozzles/distributor trays and recirculation system	Annually
	Condition of mist eliminators	Annually

[1] Out-of-tolerance operational data for continuous process monitors means any unacceptable instrument performance discovered during routine operation and testing (e.g. out of calibration, instrument failure, frequent drift, inaccuracy, imprecision, etc.).

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ITEM 64

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.D.1.a.(1)

COMMENT Page 19, Specific Comments: Comment 65

Revise as follows: "The R-750 Boiler shall achieve a Destruction and Removal Efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC). The DRE shall be determined by using the method specified in LAC 33:V.3009.A. The POHCs are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial bum."

In accordance with LAC 33:V.3009.A.2, the POHCs are demonstrated in a trial burn. The proposed language should be revised to be consistent with the hazardous waste regulations.

RESPONSE The Department acknowledges and concurs with the comment. To maintain consistency between the final permit and the hazardous waste regulations, the requirement has been revised in the final by removal of individual POHCs associated with the TTU and the insertion of a statement noting that the POHCs are the compounds for which the TTU demonstrated compliance with DRE requirements during a trial burn.

Note: The Permittee's comment regarding Condition V.D.1.a.(1) is similar to other Permittee comments regarding Conditions V.D.2.a.(1), V.D.3.a.(1) and V.D.4.a.(1) to follow. The Department's response to comments regarding the aforementioned conditions is the same as the Department's response to the Permittee's comment regarding Condition V.D.1.a.(1).

ACTION Condition V.D.1.a.(1) has been revised in the final permit as follows:

V.D.1.a.(1). The R-750 Boiler shall achieve a Destruction and Removal Efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC). The DRE shall be determined by using the method specified in LAC 33:V.3009.A.

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The POHCs are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial burn.

- ~~Carbon tetrachloride~~
- ~~Chlorobenzene~~

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ITEM 65

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Conditions V.D.1.b.(1).(a)-(d)

COMMENT Pages 19 and 20, Specific Comments: Comments 66, 67, 68 and 69

Clarify provision(s).

Permittee is unclear why operation of the R-750 Boiler is to be in accordance with Group A Parameter Limits, as opposed to Group B or C. Permittee seeks clarification of the reason for the designation.

RESPONSE The Department acknowledges the comments and provides the following clarification regarding TTU operating limits. The Group A Parameter Limits require AWFCOs whereas the Groups B and C Parameter Limits must be recorded and not exceeded. The HWCMACT rule is more stringent, requiring all Groups A, B and C Parameter Limits to have AWFCOs. However, due to the fact that the TTUs have not yet demonstrated compliance with HWCMACT, the TTUs will continue to be governed under the RCRA Hazardous Waste Operating Permit until such time that the operating parameter limits are transferred to the Title V air permit via a permit modification.

Note: The Permittee's comments regarding Conditions V.D.1.b.(1).(a)-(d) are similar to other Permittee comments regarding Conditions V.D.2.b.(1).(a)-(d), V.D.3.b.(1).(a)-(d), and V.D.4.b.(1).(a)-(d) to follow. The Department's response to comments regarding the aforementioned conditions is the same as the Department's response to the Permittee's comments regarding V.D.1.b.(1).(a)-(d).

ACTION No action required.

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 66

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.D.1.b.(1).(e)

COMMENT Page 20, Specific Comments: Comment 70

Delete this provision.

This provision is redundant and should be deleted. See, V.D.1.b.(1).(d) - "The Permittee must operate all Continuous Monitoring System (CMS) components consistent with the manufacturer's specifications."

RESPONSE The Department acknowledges and concurs with the comment. Condition V.D.1.b.(1).(e) is redundant with Condition V.D.1.b.(1).(d) and, therefore, has been deleted in the final permit.

Note: The Permittee's comment regarding Condition V.D.1.b.(1).(e) is similar to other Permittee comments regarding Conditions V.D.2.b.(1).(e), V.D.3.b.(1).(e), and V.D.4.b.(1).(e) to follow. The Department's response to comments regarding the aforementioned conditions is the same as the Department's response to the Permittee's comment regarding Condition V.D.1.b.(1).(e).

ACTION Condition V.D.1.b.(1).(e) has been deleted in the final permit.

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 67

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.D.1-1

COMMENT Page 20, Specific Comments: Comment 71

Revise Table V.D.1-1 to delete the numerical limits and revise the "Final Operating Limits Automatic Waste Feed Cut Off Point" column for the table is qualified with the statement "as demonstrated in the latest COC/ Comprehensive Performance Test".

"Minimum chlorine (C-751) scrubber blowdown rate" and "Minimum HCl absorber (C-750) blowdown rate" should be deleted from the table. This is a HWCMACT requirement with a pending AMA and will be noted in the Notification of Compliance.

RESPONSE The Department acknowledges but does not concur with the comment. To date, no acceptable Comprehensive Performance Test has been performed for any of the Permittee's TTUs. Therefore, the RCRA permit must contain operating limits for each TTU until such time that the Department issues a Finding of Compliance on the results of the CPT for a particular TTU.

Note: The Permittee's comment regarding Table V.D.1-1 is similar to other Permittee comments regarding Tables V.D.2-1, V.D.3-1, and V.D.4-1 to follow. The Department's response to comments regarding the aforementioned conditions is the same as the Department's response to the Permittee's comment regarding Table V.D.1-1.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 68

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.D.1-2

COMMENT Page 20, Specific Comments: Comment 72

Delete "minimum atomizing fluid pressure" from table.

This is a HWCMACT requirement and will be included in the Notification of Compliance.

Revise the final operating limits for "maximum ash feed rate" to state, "as demonstrated in the latest performance test."

The final operating limits for "total chlorine and HCl feed rate (Tier III)" and "maximum feed rate of total Chromium (Tier III)" should be revised, deleting the numerical limits, and replacing these numeric limits with language stating, "as demonstrated in the latest Certification of Compliance/Comprehensive Performance Test."

RESPONSE The Department acknowledges but does not concur with the comment. "Minimum atomizing pressure" is a required parameter per LAC 33:V.3005.E.2.b.iii. It is necessary for the permit to specify numerical values for operating parameter limits. Therefore, numerical limits (rather than stating "as demonstrated in the latest Certification of Compliance/Comprehensive Performance Test") for all parameters referenced in the Permittee's comment remain in the final permit. However, it was noted in the Department's review of the table in preparing its response to the Permittee's comment that the "maximum feed rate of total Chromium (Tier III)" was incorrectly set at 7.76 g/hr. The proper operating parameter limit for "maximum feed rate of total Chromium (Tier III)" has been revised to 7.69 g/hr in the final permit.

Note: The Permittee's comment regarding Table V.D.1-2 is similar to other Permittee comments regarding Tables V.D.2-2, V.D.3-2, and V.D.4-2 to follow. The Department's response to comments regarding the aforementioned conditions is the same as the Department's response to the Permittee's comment regarding Table V.D.1-2.

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ACTION The maximum feed rate of total Chromium (Tier III) specified in Table V.D.1-2 has been revised in the final permit as follows:

~~7.76~~ 7.69 g/hr, hourly-rolling average

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ITEM 69

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.D.1-3

COMMENT Page 21, Specific Comments: Comment 73

Delete this table from the permit.

The Continuous Monitoring Evaluation Plan per the HWCMACT includes the instrumentation maintenance and calibration requirements. This plan is maintained at the facility and must be reviewed and updated, if needed, at least annually.

RESPONSE The Department acknowledges but does not concur with the comment. The requirement for annual calibration in the permit is distinct from and more stringent than the HWCMACT requirements. Therefore, the table has not been deleted in the final permit. However, the table has been revised by the deletion of the 2nd column "Instrument Description" and 3rd column "DCS Tag #".

Note: The Permittee's comment regarding Table V.D.1-3 is similar to other Permittee comments regarding Tables V.D.2-3, V.D.3-3, and V.D.4-3 to follow. The Department's response to comments regarding the aforementioned conditions is the same as the Department's response to the Permittee's comment regarding Table V.D.1-3.

ACTION Table V.D.1-3 has been revised in the final permit by the deletion of the 2nd column "Instrument Description" and 3rd column "DCS Tag #".

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ITEM 70

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.D.2.a.(1)

COMMENT Page 21, Specific Comments: Comment 74

Revise as follows: "The F-410/420 Boiler shall achieve a Destruction and Removal Efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC). The DRE shall be determined by using the method specified in LAC 33:V.3009.A. The POHCs are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial burn"

In accordance with LAC 33:V.3009.A.2 the POHCs are demonstrated in a trial burn.

RESPONSE See the Department's response to Item #64 regarding Comment 65

ACTION Condition V.D.2.a.(1) has been revised in the final permit as follows:

V.D.2.a.(1). The F-410 and F-420 Boilers shall achieve a Destruction and Removal Efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC). The DRE shall be determined by using the method specified in LAC 33:V.3009.A. The POHCs are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial burn~~:~~

- ~~1,1, 2-trichloroethane~~
- ~~Chlorobenzene~~

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ITEM 71

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Conditions V.D.2.b.(1).(a)-(d)

COMMENT Pages 21 and 22, Specific Comments: Comments 75, 76, 77, and 78

Clarify provisions.

Permittee is unclear why operation of the F-410/420 Boiler is to be in accordance with Group A Parameter Limits, as opposed to Group B or C. Permittee seeks clarification of the reason for the designation.

RESPONSE See the Department's response to Item 65 regarding Comments 66, 67, 68, and 69.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
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ITEM 72

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.D.2.b.(1).(e)

COMMENT Page 22, Specific Comments: Comment 79

Delete this provision.

This provision is redundant and should be deleted. See, V.D.2.b.(1).(d) - "The Permittee must operate all Continuous Monitoring System (CMS) components consistent with the manufacturer's specifications."

RESPONSE See the Department's response to Item #66 regarding Comment 70.

ACTION Condition V.D.2.b.(1).(e) has been deleted in the final permit.

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ITEM 73

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.D.2-1

COMMENT Page 22, Specific Comments: Comment 80

The "Final Operating Limits Automatic Waste Feed Cut Off Point" column for the entire table should be revised, deleting the numerical limits, and revising the language in this column to state, "as demonstrated in the latest RCOC and/or HWCMACT CPT."

However, the "Final Operating Limits Automatic Waste Feed Cut Off Point" for "maximum stack gas carbon monoxide" will remain the same with numerical limits.

RESPONSE See the Department's response to Item #67 regarding Comment 71.

However, the Department did note in its review of the table in preparing its response to the Permittee's comment, that it was advisable to include the unit names for the HCl Absorber and the Chlorine Scrubber for the purpose of clarity.

ACTION Table V.D.2-1 has been revised by including the unit names for the HCl Absorber and the Chlorine Scrubbers noted below:

- C-412/422 HCl Absorber
- C-413/423 Chlorine Scrubber

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ITEM 74

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.D.2-2

COMMENT Page 22, Specific Comments: Comment 81

"Minimum atomizing fluid pressure" should be deleted from the table. This is a HWCMACT requirement and will be included in the Notification of Compliance. Providing this information in two different sets of reports is redundant.

The "final operating limits" for "maximum ash feed rate" and "total chlorine and HCl feed rate (Tier III)" should be revised, deleting the numeric limits, and revising the language to state, "as demonstrated in the latest RCOC and/or HWCMACT CPT."

The "final operating limits" for "maximum feed rate of total Chromium (Tier III)" should be revised, deleting the numeric limits, and revising the language to state, "as demonstrated in the latest COC/ Comprehensive Performance Test."

RESPONSE See the Department's response to Item #68 regarding Comment 72.

ACTION No action required. The final permit has not been revised.

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HAZARDOUS WASTE OPERATING PERMIT
PERMIT NUMBER LAD008187080-OP-1-RN-1
AGENCY INTEREST #1409

ITEM 75

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.D.2-3

COMMENT Page 23, Specific Comments: Comment 82

Delete Table V.D.2-3.

Pursuant to the HWCMACT requirements, Dow's Continuous Monitoring Evaluation Plan already includes stringent instrumentation maintenance and calibration requirements. This Plan is maintained at the facility and must be reviewed and updated if needed at least annually.

RESPONSE See the Department's response to Item #69 regarding Comment 73.

ACTION Table V.D.2-3 has been revised in the final permit by the deletion of the 2nd column "Instrument Description" and 3rd column "DCS Tag #".

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
PERMIT NUMBER LAD008187080-OP-1-RN-1
AGENCY INTEREST #1409

ITEM 76

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.D.3.a.(1)

COMMENT Page 23, Specific Comments: Comment 83

Revise as follows: "The F-410/420 Boiler (*it is assumed the Permittee intended to reference the R-4 Boiler)* shall achieve a Destruction and Removal Efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC). The DRE shall be determined by using the method specified in LAC 33:V.3009.A. The POHCs are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial burn."

In accordance with LAC 33:V.3009.A.2 the POHCs are demonstrated in a trial burn.

RESPONSE See the Department's response to Item #64 regarding Comment 65

ACTION Condition V.D.3.a.(1) has been revised in the final permit as follows:

V.D.3.a.(1). The R-4 Boiler shall achieve a Destruction and Removal Efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC). The DRE shall be determined by using the method specified in LAC 33:V.3009.A. The POHCs are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial burn.~~:~~

~~• 1, 2-dichloropropane~~
~~• Chlorobenzene~~

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 77

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Conditions V.D.3.b.(1).(a)-(d)

COMMENT Pages 23 and 24, Specific Comments: Comments 84, 85, 86, and 87

Clarify provisions.

Permittee is unclear why operation of the R-4 is to be in accordance with Group A Parameter Limits, as opposed to Group B or C. Permittee seeks clarification of the reason for the designation.

RESPONSE See the Department's response to Item #65 regarding Comments 66, 67, 68, and 69.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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AGENCY INTEREST #1409

ITEM 78

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.D.3.b.(1).(e)

COMMENT Page 24, Specific Comments: Comment 88

Delete this provision.

This provision is redundant and should be deleted. See, V.D.3.b.(1).(d) - "The Permittee must operate all Continuous Monitoring System (CMS) components consistent with the manufacturer's specifications."

RESPONSE See the Department's response to Item #66 regarding Comment 70.

ACTION Condition V.D.3.b.(1).(e) has been deleted in the final permit.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
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ITEM 79

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.D.3-1

COMMENT Page 24, Specific Comments: Comment 89

The "Final Operating Limits Automatic Waste Feed Cut Off Point" column for the entire table should be revised, deleting the numerical limits, and revising the language of this column to state, "as demonstrated in the latest RCOC and/or HWCMACT CPT."

However, the "Final Operating Limits Automatic Waste Feed Cut Off Point" for "maximum stack gas carbon monoxide" will remain the same as proposed with numerical limits.

RESPONSE See the Department's response to Item #67 regarding Comment 71.

However, the Department did note in its review of the table in preparing its response to the Permittee's comment, that it was advisable to include the unit names for the HCl Absorber and the Chlorine Scrubber for the purpose of clarity.

ACTION Table V.D.3-1 has been revised by including the unit names for the HCl Absorber and the Chlorine Scrubbers noted below:

- T-200 HCl Absorber
- T-201 Chlorine Scrubber

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 80

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.D.3-2

COMMENT Page 24, Specific Comments: Comment 90

"Minimum atomizing fluid pressure" should be deleted from the permit. This is a HWCMACT requirement and will be included in the Notification of Compliance.

The "Final Operating Limits" for "maximum feed rate of Lead (Adjusted Tier I)" and "total chlorine and HCl feed rate (Tier III)" should be revised, deleting the numerical limits, and revising the language in this column to state, "as demonstrated in the latest RCOC and/or HWCMACT CPT."

RESPONSE See the Department's response to Item #68 regarding Comment 72.

However, the Department did note in its review of the table in preparing its response to the Permittee's comment, that it was advisable to include a separate header in Table V.D.3-2 of the final permit titled "Maximum Metals Feed Rate Total Feed Streams" in order to maintain consistency with the other Group B and C Operating Parameter Limits (OPLs) included in the final permit.

ACTION Table V.D.3-2 has been revised in the final permit by including a separate header titled "Maximum Metals Feed Rate Total Feed Streams" for the maximum metal feed OPLs.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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AGENCY INTEREST #1409

ITEM 81

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.D.3-3

COMMENT Page 25, Specific Comments: Comment 91

Delete Table V.D.3-3.

Pursuant to the HWCMACT requirements, Dow's Continuous Monitoring Evaluation Plan already includes stringent instrumentation maintenance and calibration requirements. This plan is maintained at the facility and must be reviewed and updated if needed at least annually.

RESPONSE See the Department's response to Item #69 regarding Comment 73.

ACTION Table V.D.3-3 has been revised in the final permit by the deletion of the 2nd column "Instrument Description" and 3rd column "DCS Tag #".

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 82

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.D.4.a.(1)

COMMENT Page 25, Specific Comments: Comment 92

Revise as follows: "The Solvents/EDC Incinerator F-700 shall achieve a Destruction and Removal Efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC). The DRE shall be determined by using the method specified in LAC 33:V.3111.A.1. The POHCs are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial burn."

In accordance with LAC 33:V.3009.A.2, the POHCs are demonstrated in a trial burn.

RESPONSE See the Department's response to Item #64 regarding Comment 65.

ACTION Condition V.D.4.a.(1) has been revised in the final permit as follows:

V.D.4.a.(1). The Solvents/EDC Incinerator F-700 shall achieve a Destruction and Removal Efficiency (DRE) of 99.99 percent for each principal organic hazardous constituent (POHC). The DRE shall be determined by using the method specified in LAC 33:V.3111.A.1. The POHCs are those compounds for which compliance with the DRE requirements shall be demonstrated in a trial burn. ~~:~~

~~• 1, 2-dichloropropane~~
~~• Chlorobenzene~~

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
PERMIT NUMBER LAD008187080-OP-1-RN-1
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ITEM 83

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Conditions V.D.4.b.(1).(a)-(d)

COMMENT Pages 25 and 26, Specific Comments: Comments 93, 94, 95, and 96

Clarify provisions.

Permittee is unclear why operation of the F-700 is to be in accordance with Group A Parameter Limits, as opposed to Group B or C. Permittee seeks clarification of the reason for the designation.

RESPONSE See the Department's response to Item #65 regarding Comments 66, 67, 68, and 69.

ACTION No action required.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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AGENCY INTEREST #1409

ITEM 84

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.D.4.b.(1).(e)

COMMENT Page 26, Specific Comments: Comment 97

Delete this provision.

This provision is redundant and should be deleted. See, V.D.4.b.(1).(d) - "The Permittee must operate all Continuous Monitoring System (CMS) components consistent with the manufacturer's specifications."

RESPONSE See the Department's response to Item #66 regarding Comment 70.

ACTION Condition V.D.4.b.(1).(e) has been deleted in the final permit.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 85

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.D.4.b.(2)

COMMENT Page 26, Specific Comments: Comment 98

Clarify this provision.

Permittee is unclear why permit says AWFCOS "do not have set points" for Group B parameters.

RESPONSE The Department acknowledges the comment and provides the following clarification. The Department has previously approved interim operating parameter limits (Groups A, B, and C) for the Solvents/EDC 1 Incinerator (F-700) pursuant to an inconclusive Comprehensive Performance Test (CPT). Until Dow demonstrates conclusive HWCMACT compliance, only Group A parameters must have AWFCO set points per RCRA (BIF) requirements. Groups B & C are RCRA permit limits that the facility must not exceed. After HWCMACT compliance is demonstrated, Groups B & C parameters will also require AWFCO set points (as well as Group A). The text of the condition has been revised in the final permit to specify that the Permittee shall operate the incinerator without exceeding the Group B and Group C parameters.

ACTION Condition V.D.4.b.(2) has been revised in the final permit as follows:

V.D.4.b.(2). Group B and C Parameter Limits

Although the automatic waste feed cut off systems do not have set points for the Group B and Group C parameter limits, the Permittee shall operate the ~~boiler~~ incinerator without exceeding the Group B and Group C parameter limits in Table V.D.4-2. In addition, O_2 shall be monitored continuously in accordance with CEMS regulations. O_2 level is provided as a correction factor, and as such, no limit for O_2 is provided under this condition.

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 86

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.D.4-1

COMMENT Page 26, Specific Comments: Comment 99

"Minimum pressure drop across chlorine scrubber" should be removed from this table. This is a HWCMACT requirement with a pending AMA and will be noted in the Notification of Compliance.

"Maximum combustion zone temperature" should be deleted from this table. It is not required in this table because it is not a BIF, and, therefore, never demonstrated.

The "Final Operating Limits Automatic Waste Feed Cut Off Point" column for the entire table should be revised, deleting numerical limits, and revising the language of this column to state, "as demonstrated in the latest RCOC and/or HWCMACT CPT." However, the "Final Operating Limits Automatic Waste Feed Cut Off Point" for "maximum stack gas carbon monoxide" should remain the same with numerical limits.

RESPONSE The Department acknowledges and concurs with the Permittee's comment regarding the deletion of "Maximum combustion zone temperature" and the parameter has been deleted from Table V.D.4-1 in the final permit. For the other specific Permittee comments included in Comment 99, see the Department's response to Item #67 regarding Comment 71.

Additionally, the Department noted in its review of the table in preparing its response to the Permittee's comment, that it was advisable to include the unit names for the HCl Absorber and the Chlorine Scrubber for the purpose of clarity.

ACTION Table V.D.4-1 has been revised by deletion of the parameter "Maximum combustion zone temperature" and by including the unit names for the HCl Absorber and the Chlorine Scrubbers noted below:

- C-720 HCl Absorber
- C-730 Chlorine Scrubber

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 87

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.D.4-2

COMMENT Page 27, Specific Comments: Comment 100

"Minimum atomizing fluid pressure," "maximum SVM (Cd & Pb)" and "maximum LVM (As, Be & Cr)" should be removed from the table. These are HWCMACT requirements and will be included in the Notification of Compliance.

RESPONSE The Department acknowledges but does not concur with the comment. The Table V.D.4-2 control parameters and OPLs are based upon a previously executed inconclusive F-700 CPT, Condition 1 (see Item #85 regarding Comment 98). The interim OPLs have been previously approved by the Department in correspondence dated August 16, 2008 and August 28, 2008. However, the table has been revised by the deletion of the footnote addressing carcinogenic metals and insertion of a new footnote referencing the aforementioned CPT and correspondence in order to clearly state the rationale for the OPLs included in the final permit.

ACTION Table V.D.4-2 has been revised in the final permit as noted below:

Table V.D.4-2
Group B and C Operating Parameter Limits[1]
Solvent/EDC Incinerator (F-700)

Control Parameter	Final Operating Limits Automatic Waste Feed Cut Off Point
Minimum Atomizing Fluid Pressure	40 psig, 1-minute average
Maximum Ash Feed Rate	1.52 lbs/hr, hourly-rolling average
Maximum Total Chlorine/Chloride Feed Rate (Tier III)	4,540 lbs/hr, hourly-rolling average
Maximum SVM (Cd & Pb)	0.004 lbs/hr, hourly-rolling average
Maximum LVM (As, Be & Cr)	0.014 lbs/hr, hourly-rolling average

~~* Carcinogenic Metal – Feed rate is further limited to a level such that the sum, of the actual feed rate divided by the allowable feed rate, for all carcinogenic metals shall be less than or equal to 1.00.~~

[1] DEQ approved interim operating limits based upon comprehensive performance test (condition 1) and letters to Dow dated August 16, 2008 (EDMS Document # 36204218) and August 28, 2008 (EDMS Document # 36227930).

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 88

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table V.D.4-3

COMMENT Page 27, Specific Comments: Comment 101

Delete Table V.D.4-3.

Pursuant to the HWCMACT requirements, Dow's Continuous Monitoring Evaluation Plan already includes stringent instrumentation maintenance and calibration requirements. This Plan is maintained at the facility and must be reviewed and updated if needed at least annually.

RESPONSE See the Department's response to Item #69 regarding Comment 73.

ACTION Table V.D.4-3 has been revised in the final permit by the deletion of the 2nd column "Instrument Description" and 3rd column "DCS Tag #".

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ITEM 89

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Conditions V.F.3.a.(2), V.F.3.a.(2).(a)-(e), and V.F.3.a.(3)

COMMENT Page 27, Specific Comments: Comments 102 and 103

Revise as follows: "The Permittee may dispose of debris that is a listed hazardous waste by association generated from onsite turnaround and/or closure activities (e.g., refractory, fiberglass, and column packing) associated with the Permittee's thermal treatment units. All LDR standards will be adhered to prior to placing any waste in the landfill."

Waste from the thermal treatment units (e.g., refractory, fiberglass, column packing, and residue) is hazardous by definition because it is a residue from a hazardous waste treatment process. These materials are hazardous waste and not non-hazardous debris. Permitting disposal of this debris is appropriate; the waste must meet the LDR standards prior to placing any waste in the landfill.

RESPONSE The Department acknowledges but does not fully concur with the comment. The Department agrees with the Permittee's assertion that "Waste from the thermal treatment units (TTUs) (e.g., refractory, fiberglass, column packing, and residue) is hazardous by definition because it is a residue from a hazardous waste treatment process. These materials are hazardous waste and not non-hazardous debris." Therefore, the final permit has been revised to classify TTU debris wastes as hazardous waste due to the nature of their generation.

However, the Department does not agree with the Permittee's assertion that these wastes may be disposed of in the Block 80 Hazardous Waste Landfill without need of the additional permit conditions as stated in Conditions V.F.3.a.(2), V.F.3.a.(2).(a)-(e), and V.F.3.a.(3). The Block 80 Hazardous Waste Landfill has historically been utilized for the disposal of ash resulting from treatment of hazardous waste in the Permittee's onsite TTUs. Furthermore, the Permittee's permit application failed to adequately address the disposal of these intermittently generated wastes in the landfill.

While recognizing that these intermittently generated TTU debris wastes can be disposed of safely and effectively in the landfill, the Department also recognizes that there are legitimate concerns regarding landfill stability and the potential need for additional landfill monitoring parameters that could arise due to the disposal of these TTU debris wastes in the landfill.

The aforementioned conditions were prepared in a manner that both affords the Permittee the necessary flexibility to effectively manage the TTU debris wastes and the Department the necessary oversight to ensure that wastes are managed properly and that they will not be detrimental to the long term operation of the landfill. Furthermore, due to the fact that TTU debris wastes will be generated only intermittently, the Department does not believe compliance with the conditions will be unduly burdensome to the Permittee.

ACTION

Condition V.F.3.a.(2) has been revised in the final permit as follows:

V.F.3.a.(2). The Permittee may request approval from the Administrative Authority to dispose of non-hazardous <u>and hazardous</u> debris generated from onsite turnaround and/or closure activities (e.g., refractory, fiberglass, and column packing) associated with the Permittee's thermal treatment units. Approval to dispose of non-hazardous <u>and hazardous</u> debris in the landfill will be granted by the Administrative Authority on a case-by-basis. Requests by the Permittee for Administrative Authority approval must be accompanied by the following information and data (e.g., analytical data, narratives, etc.):

<u>Note</u>: Conditions V.F.3.a.(2).(a)-(e) and V.F.3.a.(3) were not deleted from the permit. However, the conditions were revised by adding "and hazardous" along with "non-hazardous" regarding the classification of the TTU debris.

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ITEM 90

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.G.3.a

COMMENT Page 28, Specific Comments: Comment 104

Substitute "leachate recovery trench system" for "leachate collection and recovery trench system."

The reference to the "leachate collection and recovery trench system" is incorrect. The subject groundwater recovery system was installed as a corrective measure pursuant to a Department-approved remediation plan (Attachment 1) and does not serve as a leachate collection system for the landfill.

RESPONSE The Department acknowledges and concurs with the comment. The final permit has been corrected to refer to the system as the "Leachate Recovery Trench System."

ACTION Condition V.G.3.a has been revised as follows in the final permit:

V.G.3.a. The Permittee must continue to operate and maintain the NWLF/CAMU ~~l~~Leachate ~~collection and~~ ~~r~~Recovery ~~t~~Trench ~~s~~System as described in the latest approved version of the "Remediation Plan – Northwest Landfill" referenced in Attachment 1. [Note: the "Remediation Plan – Northwest Landfill" was implemented prior to the unit's designation as the NWLF/CAMU].

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ITEM 91

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition V.G.3.b

COMMENT Page 28, Specific Comments: Comment 105

Revise to substitute "wells" for "system" for clarification: "The Permittee must continue to monitor and maintain the NWLF/CAMU leak detection wells that are described in the latest approved version of the "Remediation Plan-Northwest Landfill" referenced in Attachment I."

The NWLF/CAMU leak detection system consists of seven (7) "leak detection" wells.

RESPONSE The Department acknowledges and concurs with the comment. The final permit has been revised as suggested by the Permittee's comment.

ACTION Condition V.G.3.b has been revised as follows in the final permit:

V.G.3.b. The Permittee must continue to operate and maintain the NWLF/CAMU leak detection ~~system~~ wells as described in the latest approved version of the "Remediation Plan – Northwest Landfill" referenced in Attachment 1.

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 92

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.A and VI.B

COMMENT Page 28, Specific Comments: Comment 106

Revise to substitute "Tables VI-B and VI-C" for "Tables IV-D and IV-E."

This is apparently a clerical error.

RESPONSE The Department acknowledges but does not concur with the comment. Tables IV-D and IV-E are the tables included in "Condition IV PERMITTED FACILITIES" and reference the Block 80 and NWLF/CAMU hazardous waste landfills, while tables VI-B and VI-C reference the groundwater monitoring parameters specific to each landfill.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 93

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.A and VI.B

COMMENT Page 28, Specific Comments: Comment 107

Clarify throughout the permit when provisions apply only to compliance monitoring and do not apply to detection monitoring.

RESPONSE The Department acknowledges and concurs with the comment. The Department recognizes that language in various parts of "Condition VI Groundwater Protection" refers to different groundwater monitoring programs (i.e., Detection Monitoring Program, Compliance Monitoring Program, and Corrective Action Program). The various programs are referenced in the text of Condition VI in order to present the framework of the overall hazardous waste Groundwater Protection (LAC 33:V.Chapter 33) program as well as to describe the transition from one monitoring program to another based on site groundwater conditions.

Although, it is acknowledged clearly in Condition VI.B that the Permittee is currently in Detection Monitoring Programs for both the Block 80 and NWLF/CAMU hazardous waste landfills. The Department has attempted in the final permit to alleviate confusion regarding the applicability of various permit conditions by including qualifying words and phrases such as "if", "whenever", "in the event" etc.

ACTION The following conditions have been revised in the final permit in order to clarify the applicability of the various groundwater monitoring programs and requirements:

- Condition VI.A as noted in Item #94
- Condition VI.B as noted in Item #95;
- Condition VI.C as noted in Item #97;
- Condition VI.D as noted in Item #99;
- Condition VI.E as noted in Items #101 and #102;
- Table VI-A as noted in Item #103;
- Table VI-B as noted in Item #104; and
- Table VI-C as noted in Item #105.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 94

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.A

COMMENT Page 28, Specific Comments: Comment 108

Add to end of second paragraph, second sentence: "from regulated unit".

RESPONSE The Department acknowledges and concurs with the comment. The final permit has been revised as suggested by the Permittee. However, language differing from that suggested by the Permittee was utilized.

ACTION The second paragraph, second sentence of Condition VI.A has been revised in the final permit as follows:

"The units referenced in Tables IV-D and IV-E of this permit are subject to groundwater monitoring under Detection Monitoring Programs. The Permittee must establish, expand or continue ~~assessment and corrective action programs~~ Compliance Monitoring and/or Corrective Action Programs for all regulated units whenever hazardous constituents from a regulated unit are "detected" in groundwater as defined in LAC 33:V.3303.A.1 and/or the groundwater protection standard is "exceeded" as defined in LAC 33:V.3303.A.2 ~~for all regulated units where groundwater has been affected by hazardous waste, hazardous constituents, or parameters exceeding the assigned concentration limits. Assessment and corrective action programs~~. The Compliance Monitoring and Corrective Action Monitoring Programs shall be in accordance with the requirements of LAC 33:V.Chapter 33 and as subsequently directed by the Administrative Authority."

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 95

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.B

COMMENT Page 29, Specific Comments: Comment 109

Revise to substitute "Condition VI.J." for "Condition VI.I"

This appears to be a clerical error.

RESPONSE The Department acknowledges and concurs with the comment. The permit reference has been corrected in the final permit as noted in the Permittee's comment.

ACTION The first sentence of the second paragraph of Condition VI.B has been revised in the final permit (to address the comments noted in Items #93 and #95) as follows:

"In the event ~~statistically significant evidence that the concentration limits defined~~ any groundwater point of compliance monitoring wells in Condition VI.D and Tables VI-B and VI-C of this permit exhibit statistically significant evidence of contamination as a result of a release from the regulated unit and as described in LAC 33:V.3317.F ~~have been exceeded in any groundwater point of compliance monitoring wells in Table VI-A of this permit~~, the Permittee shall modify the permit in accordance with LAC 33:V.321 and Condition VI.J ~~VI.I~~ of this permit in order to establish a Compliance Monitoring Program (unless a demonstration under LAC 33:V.3317.G.6 has been satisfactory documented by the Permittee) ~~for the unit that was the source of the contamination~~."

RESPONSIVENESS SUMMARY
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AGENCY INTEREST #1409

ITEM 96

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.B

COMMENT Page 29, Specific Comments: Comment 110

Clarify last sentence of second paragraph. This provision is ambiguous and states requirements for corrective action not provided for by the regulations, and thus goes beyond the regulations. LAC 33:V.3321.B provides that "the owner or operator must implement a corrective action program that prevents hazardous constituents from exceeding their respective concentration limits at the compliance point by removing the hazardous waste constituents or treating them in place."

RESPONSE The Department acknowledges the comment and provides the following clarification regarding the intent of the last sentence of the second paragraph in Condition VI.B. The intent of the sentence is to require that the Permittee to conduct corrective action to address contamination of groundwater detected at monitoring wells that are not designated as point of compliance wells and associated with a regulated unit. For example, the Permittee may be required to conduct corrective action of groundwater before the point of compliance in the event there is a failure of the landfill liner.

Monitoring beyond the point of compliance may be required to monitor the nature and extent of the release. LAC 33:V.3321.E. (see also LAC 33:V.3303.A.3) states "in addition to the other requirements of this Section (i.e., corrective action at the point of compliance), the owner or operator must conduct a corrective action program to remove or treat in place any hazardous constituents under LAC 33:V.3307 that exceed concentration limits under LAC 33:V.3309 in groundwater: 1) between the compliance point under LAC 33:V.3311 and the downgradient facility property boundary; and 2) beyond the facility boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the administrative authority that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will

be determined on a case-by-case basis". Therefore, any hazardous constituents or indicator parameters detected in additional downgradient wells above the groundwater protection standard would require corrective action.

ACTION No action required. The final permit has not been revised.

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THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
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ITEM 97

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.C

COMMENT Page 29, Specific Comments: Comment 111

Dow understands that if hazardous constituents from a regulated unit are detected (as defined by LAC 33:V3303.A.1) in the groundwater, then the Administrative Authority will establish the groundwater protection standard. Dow is currently in a Detection Monitoring Program.

RESPONSE The Permittee's understanding of Condition VI.C is correct. Due to the fact that the Permittee is currently conducting Detection Monitoring for both landfills, the groundwater protection standard does not yet apply to the Permittee. However, if hazardous constituents from a regulated unit are detected (as defined by LAC 33:V.3303.A.1) in the groundwater, then the Administrative Authority will establish the groundwater protection standard for the regulated unit responsible for the release. The text of the condition has been revised in the final permit to clarify the applicability of the condition.

ACTION Condition VI.C has been revised in the final permit as follows:

VI.C. GROUNDWATER PROTECTION STANDARD

The regulated units referenced in Tables VI-B and VI-C of this permit are currently monitored under Detection Monitoring Programs and, therefore, no groundwater protection standards are currently applicable. However, the Administrative Authority shall establish the groundwater protection standard when hazardous constituents from a regulated unit have been detected. The groundwater protection standard shall be required during the Compliance Monitoring Program and/or Correction Action Program and ~~is~~ will be the concentration limit that shall indicate when corrective action must begin and when it may be terminated. ~~The Administrative Authority shall establish the groundwater protection standard when hazardous constituents from a regulated unit have been detected (as defined by LAC 33:V.3303.A.1) in the groundwater.~~

~~Accordingly~~ If, at a later date, the Permittee is required to implement a Compliance Monitoring Program under the terms and conditions of this permit, the Permittee must comply with the conditions specified in this permit that are designed to ensure that hazardous constituents (Condition VI.D) detected (as defined by LAC 33:V.3303.A.1) do not exceed the concentration limits (Condition VI.D) in the uppermost permeable zones underlying the regulated units, beyond or below the point of compliance (Condition VI.E) during the compliance period (Condition VI.F).

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ISSUE Condition VI.D

COMMENT Page 29, Specific Comments: Comment 112

Clarify that the groundwater protection standard applies only to the point of compliance wells listed in Table VI-A. The clarification should include that Compliance Monitoring applies only if there is statistically significant evidence that the concentration limits have been exceeded in a point of compliance well. Concepts relative to the establishment of the applicable Groundwater Protection Standard are set forth in a manner throughout the permit conditions which makes it appear that compliance monitoring requirements apply in the case of a detection monitoring program which is contrary to the regulations. Dow is currently in a Detection Monitoring Program. Accordingly, this and other permit conditions should be revised and clarified.

RESPONSE The Department acknowledges the comment and provides the following clarification.

Condition VI.D is the section of the permit delineating the hazardous constituents, parameters, sampling frequency and concentration limits. These are required for all groundwater monitoring programs, including detection monitoring. Due to the fact that the Permittee is currently conducting detection monitoring for both landfills, the groundwater protection standard does not yet apply to the Permittee. However, if hazardous constituents are "detected" (as defined in LAC 33:V.3303.A.1) at the point of compliance as a result of a release from the regulated unit, then the Administrative Authority will establish the groundwater protection standard for the regulated unit responsible for the release. The text of the condition has been revised in the final permit to clarify the applicability of the condition. In the event a Compliance Monitoring Program and/or a Corrective Action Program would be required, the permit would be modified and the groundwater protection standard would be established (see Item #97 regarding Comment 111).

The Department has attempted in the final permit to alleviate confusion regarding the applicability of various requirement within the final

permit by including qualifying words and phrases such as "if" or "in the event". Additionally, Condition VI.D has been clarified to reflect detection monitoring.

ACTION Condition VI.D has been revised in the final permit as follows:

VI.D. HAZARDOUS CONSTITUENTS, PARAMETERS, ANALYTICAL FREQUENCY AND CONCENTRATION LIMITS

The Permittee is required to monitor the point of compliance wells specified in Table VI-A for the hazardous constituents (or parameters) specified in Tables VI-B and VI-C. Groundwater at the point of compliance shall be monitored to detect potential changes in groundwater quality as compared against groundwater background concentrations (concentration of constituents in groundwater that represent the quality of groundwater not contaminated by hazardous waste activity at the site). The concentrations of hazardous constituents from point of compliance wells shall be compared against data on groundwater background concentrations in order to determine whether there is statistical significant evidence of in an increase in the concentration of hazardous constituents over background. If hazardous waste constituents are "detected" (as defined in LAC 33:V.3303.A.1) at the point of compliance as a result of a release from the regulated unit, the Permittee shall submit a permit modification (in accordance with LAC 33:V.321) to implement a Compliance Monitoring Program (unless a demonstration under LAC 33:V.3317.G.6 has been satisfactorily documented by the Permittee). At that time, the Administrative Authority shall establish concentration limits (or MCLs) for the hazardous waste constituents specified in Tables VI-B and VI-C. The concentration limits would also serve as the groundwater protection standard defined in LAC 33:V.3305.

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ISSUE Condition VI.D

COMMENT Page 29, Specific Comments: Comment 113

Clarify how the concentration limits for each hazardous waste constituent specified in Tables VI-B and VI-C relate to the reference of the Maximum Concentration Limits (MCLs). For example, there is a text reference to "MCL" in Tables VI-B & C, but there is no column header about MCL in those tables. MCLs for certain constituents are provided for in Table 1 of LAC 33:V.3309 but it is uncertain if this table is being referenced. Additionally, the provision contradicts the concentration limits in tables VI-B and VI-C (i.e., MCLs vs. background/MDLs).

RESPONSE The Department acknowledges the comment and provides the following clarification regarding "concentration limits" and "Maximum Concentration Limits (MCLs)". The Department recognizes that MCLs are not appropriate and, therefore, not applicable to the Permittee's Detection Monitoring Programs. Therefore, the condition has been revised in the final permit by deleting text referencing MCLs. Furthermore, due to the fact that to date there has been no documented release of hazardous constituents from the regulated units at the respective points of compliance, "concentration limits" set at a defined concentration are also not applicable to the Permittee's Detection Monitoring Programs.

The goal of a Detection Monitoring Program is to detect and characterize any release of hazardous constituents from a regulated unit at the point of compliance. Under the Detection Monitoring Programs, the Permittee is required to monitor the specific points of compliance associated with each of the Permittee's regulated units for the parameters specified in Tables VI-B and VI-C. The groundwater at the point of compliance is monitored to detect potential changes in groundwater quality as compared against groundwater background concentrations (concentration of constituents in groundwater upgradient of the regulated unit). The concentrations of hazardous constituents from point of compliance wells are compared against data on groundwater background concentrations in order to determine whether

there is statistical significant evidence of in an increase in the concentration of hazardous constituents at the point of compliance. If hazardous waste constituents are "detected" (as defined in LAC 33:V.3303.A.1) as a result of a release from the regulated unit at the point of compliance, the Permittee will be required to implement a Compliance Monitoring Program via a permit modification. At that time, the Administrative Authority would establish concentration limits (or MCLs) for the hazardous waste constituents specified in Tables VI-B and VI-C (i.e., the groundwater protection standard as defined in LAC 33:V.3305).

Based upon the preceding clarification, the condition has been revised in the final permit by the deletion of non-applicable text and providing additional text that more accurately describes the Permittee's current groundwater monitoring programs and how the terms of the condition apply (or may apply if groundwater quality is impacted by the regulated units) to the Permittee's groundwater monitoring programs.

ACTION

See Item #98 regarding Comment 112 for the revised text of Condition VI.D included in the final permit.

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ISSUE Condition VI.D

COMMENT Page 29, Specific Comments: Comment 114

Correct spelling of limits in the last sentence.

RESPONSE The Department acknowledges and concurs with the comment. However, Condition VI.D has been revised in the final permit (in response to Items #98 and #99) in a manner that rendered the comment no longer relevant.

ACTION No action required.

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REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.E

COMMENT Page 30, Specific Comments: Comment 115

Clarify that the POC wells listed in Table VI-A are monitored as a part of the Detection Monitoring Program: "If hazardous constituents are detected (as defined in LAC 33:V.3303.A.1), then the groundwater protection standard of LAC 33:V.3305.A shall apply to these POC wells."

RESPONSE The Department acknowledges and concurs with the comment. The condition has been revised in the final permit to clearly specify the applicability of the various groundwater monitoring programs based upon the groundwater conditions associated with a particular regulated unit.

ACTION For the purpose of clarification, the second paragraph of Condition VI.E has been revised in the final permit as follows:

The point of compliance wells listed in Table VI-A are monitored as a part of ongoing Detection Monitoring Programs associated with the regulated units. If hazardous constituents are detected at the point of compliance (as defined in LAC 33:V.3303.A.1) as a result of a release from a regulated unit, then the groundwater protection standard of LAC 33:V.3305.A shall apply to wells at the point of compliance and beyond. If ~~contamination is~~ hazardous constituents are detecte d in the upper permeable zone underlying the waste management area, the next vertical aquifer or permeable zone must also be monitored.

~~In the event that~~ If the concentration of any hazardous constituents ~~are detected at the point of compliance above~~ exceed the groundwater protection standard (as described in LAC 33:V.3303.A.2) as a result of a release from the regulated unit, the Permittee shall institute a Corrective Action Program in accordance with LAC 33:V.3322...

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ISSUE Condition VI.E

COMMENT Page 30, Specific Comments: Comment 116

Revise the beginning of the first sentence of second paragraph as follows: "If constituents are detected in the upper permeable zone underlying the waste management area as a result of a release from the regulated unit ... "

Dow is currently in a Detection Monitoring Program. If hazardous constituents from a regulated unit are detected (as defined by LAC 33:V.3303.A.1) in the groundwater, then the Administrative Authority will establish the groundwater protection standard to which this point of compliance is applicable.

RESPONSE The Department acknowledges and concurs with the comment. See the Department's response to Item #101 regarding Comment 115 for the revised text of Condition VI.E.

ACTION See the Department's response to Item #101 regarding Comment 115 for the revised text of Condition VI.E.

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ITEM 103

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table VI.A

COMMENT Page 30, Specific Comments: Comments 117, 118, 119, and 120

(Comment #117) Revise table to substitute "First" Pervious Zone for "Shallow" Pervious Zone under "Zone Screened" column; and to substitute "Second" Pervious Zone for "Deep" Pervious Zone under "Zone Screened" column.

This revision will maintain consistency of nomenclature among Dow documents, including Dow's RCRA Permit Renewal Application Volume 7, Exhibits 12 and 13, and LDEQ documents. *(Comment #117)*

(Comment #118) Revise table to substitute "approximately 13 feet below ground surface in the surface soils" for "Shallow Pervious" under the "Zone Screened" for the Leak Detection Wells (Wells LD2 through LD8).

(Comment #119) Revise table to reference Footnote 1 in "Zone Screened" column for the NWLF/CAMU POC wells.

(Comment #120) Revise Footnote 1, as follows: "The first pervious zone is not continuous and is not present in some areas in the vicinity of the NWLF/CAMU. The second pervious zone is the first continuous permeable zone underlying the NWLF/CAMU. Therefore, the point of compliance for the NWLF/CAMU has been established at the second pervious zone."

RESPONSE Below, the Department provides a point-by-point response to the Permittee's preceding comments.

(Comment #117) The Department acknowledges and concurs with the comment. However, the revisions to the table included in the final permit were not made as suggested by the Permittee in its comment. The Department recognizes that suggested revisions to the nomenclature of groundwater aquifers (or pervious zones) specified in Table VI-A are consistent with the Permittee's RCRA Permit Renewal Application Volume 7, Exhibits 12 and 13. However, some documents submitted

previously by the Permittee to the Department regarding these groundwater aquifers have referenced these aquifers as the "Shallow Pervious Zone" and "Deep Pervious Zone". Therefore, to avoid any confusion, the nomenclature of the aquifers (as referenced in Table VI-A) has been revised in the final permit as requested by the Permittee. However, the aforementioned revisions also include references to new Footnotes 1 & 2, which state: "The First Pervious Zone is also known as the Shallow Pervious Zone." and "The Second Pervious Zone is also known as the Deep Pervious Zone." respectively.

(Comment #118) The Department acknowledges and concurs with the comment. Based upon a review of the supporting application materials, the Department recognizes that the Leak Detection Wells actually monitor surface soils approximately thirteen (13) feet below ground surface and not the First Pervious (or Shallow Pervious Zone) as noted in the Table VI-A included in the draft permit. Therefore, the Table VI-A included in the final permit has been revised to state the "Zone Screened" for the Leak Detection Wells monitor is "Surface Soils". "Surface Soils" also reference a new Footnote 4 that acknowledges the rationale for the revision detailed above.

(Comment #119) The Department acknowledges and concurs with the comment. Table VI-A of the final permit has been revised so that the NWLF/CAMU POC wells in the "Zone Screened" column reference a renumbered Footnote 3.

(Comment #120) The Department acknowledges and concurs with the comment. The text of Footnote 1 (as included in the draft permit) has been revised as suggested by the Permittee and renumbered as Footnote 3 due to the inclusion of new Footnotes 1 & 2, which were not in included in the draft permit.

ACTION

Table VI-A of the final permit includes the following revisions:

- The "Zone Screened" column includes the following revisions: 1) "Shallow Pervious" has been replaced by "First Pervious" which references a new Footnote 1 stating that, "The First Pervious Zone is also known as the Shallow Pervious Zone"; 2) "Deep Pervious" has been replaced by "Second Pervious" which references a new Footnote 2 stating that, "The Second Pervious Zone is also known as the Deep Pervious Zone"; 3) the zone monitored by Leak Detection Wells LD2-LD8 has been revised to specify "Surface Soils", which also references a new Footnote 4; and 4) the NWLF/CAMU POC wells have been revised to

reference a renumbered Footnote 3.

- Footnote 1 (as included in the draft permit) has been renumbered as Footnote 3 and revised to read, "The First Pervious Zone is not continuous and is not present in some areas in the vicinity of the NWLF/CAMU. The Second Pervious Zone is the first continuous permeable zone underlying the NWLF/CAMU. Therefore, the point of compliance for the NWLF/CAMU has been established at the Second Pervious Zone."

Table VI-A
Monitoring Well Network

Well	Regulated Unit	Well Type	Zone Screened	Sampling Frequency
Well UH1	Block 80 HWLF	Upgradient	~~Shallow~~ First Pervious[1]	Semi-Annually
Well DH2	Block 80 HWLF	POC	~~Shallow~~ First Pervious[1]	Semi-Annually
Well DH3	Block 80 HWLF	POC	~~Shallow~~ First Pervious[1]	Semi-Annually
Well DH4	Block 80 HWLF	POC	~~Shallow~~ First Pervious[1]	Semi-Annually
Well DH5	Block 80 HWLF	POC	~~Shallow~~ First Pervious[1]	Semi-Annually
Well UN1	NWLF/CAMU	Upgradient	~~Deep~~ Second Pervious[2]	Semi-Annually
Well UN2	NWLF/CAMU	Upgradient	~~Deep~~ Second Pervious[2]	Semi-Annually
Well DN3	NWLF/CAMU[2]	POC[2]	~~Deep~~ Second Pervious[2]	Semi-Annually
Well DN4	NWLF/CAMU[2]	POC[2]	~~Deep~~ Second Pervious[2]	Semi-Annually
Well DN6	NWLF/CAMU[2]	POC[2]	~~Deep~~ Second Pervious[2]	Semi-Annually
Well DN7	NWLF/CAMU[2]	POC[2]	~~Deep~~ Second Pervious[2]	Semi-Annually
Well DN8	NWLF/CAMU[2]	POC[2]	~~Deep~~ Second Pervious[2]	Semi-Annually
Well NN5	NWLF/CAMU	Monitoring Well	Plaquemine Aquifer	Semi-Annually
Well LD2	NWLF/CAMU	Leak Detection	Surface Soils[14] ~~Shallow Pervious~~	Semi-Annually
Well LD3	NWLF/CAMU	Leak Detection	Surface Soils[14] ~~Shallow Pervious~~	Semi-Annually
Well LD4	NWLF/CAMU	Leak Detection	Surface Soils[14] ~~Shallow Pervious~~	Semi-Annually
Well LD5	NWLF/CAMU	Leak Detection	Surface Soils[14] ~~Shallow Pervious~~	Semi-Annually
Well LD6	NWLF/CAMU	Leak Detection	Surface Soils[14] ~~Shallow Pervious~~	Semi-Annually
Well LD7	NWLF/CAMU	Leak Detection	Surface Soils[14] ~~Shallow Pervious~~	Semi-Annually
Well LD8	NWLF/CAMU	Leak Detection	Surface Soils[14] ~~Shallow Pervious~~	Semi-Annually

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[1]The First Pervious Zone is also known as the Shallow Pervious Zone.

[2]The Second Pervious Zone is also known as the Deep Pervious Zone.

[~~1~~2] The ~~Shallow~~ First Pervious Zone groundwater is not continuous in the area of the NWLF/CAMU and is not present in some areas in the vicinity of the NWLF/CAMU ~~and is first encountered at approximately 5 feet bgs~~. The ~~Deep~~ Second Pervious Zone is the first continuous pervious zone encountered below the NWLF/CAMU. Therefore, the point of compliance for the NWLF/CAMU has been established at the ~~Deep~~ Second Pervious Zone.

[4] The Surface Soils Zone is a layer of surface soils approximately thirteen (13) feet below ground surface monitored by the Leak Detection Wells.

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ITEM 104

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table VI-B

COMMENT Pages 31 & 32, Specific Comments: Comments 121, 122, 123, & 124

(Comment #121) Revise the Preservation Method for metal parameters [list] as follows: "HNO_3 to pH <2."

(Comment #122) Revise Footnote 2 as follows: "[2] SW-S46, 3rd Edition or subsequent updates will be utilized." or "[2] The laboratory's current version of the required SW-S46 Method will be utilized."

This revision recognizes that laboratories may not immediately implement the latest version of the method as listed on-line because changes to laboratory equipment or procedures may be required. This situation is recognized by the EPA.

(Comment #123) Revise table to omit Footnote 3.

The proposed revision prevents a potential misinterpretation of the footnote that background concentrations are considered to be statistically significant concentrations suggestive of a release having occurred from the regulated unit. It is not clear what is meant by a "statistically significant concentration"; this phrase is not used in the regulations. Further, even detection, as defined by the regulations, does not necessarily indicate that a release has occurred from the regulated unit although further actions are required in accordance with the regulations. We understand these concentration limits will be used in detection monitoring to determine whether statistically significant evidence of contamination exists in accordance with LAC 33:V.3317. F.1.

(Comment #124) Add a new footnote for each metal parameter to provide as follows: "All metals are monitored on a dissolved (i.e., filtered) basis."

RESPONSE Below, the Department provides a point-by-point response to the Permittee's preceding comments.

(Comment #121) The Department acknowledges and concurs with the comment. The preservation method for Table VI-B metal parameters has been revised as suggested by the Permittee.

(Comment #122) The Department acknowledges and concurs with the comment. Table VI-B, Footnote 2 has been revised in the final permit as suggested by the Permittee.

(Comment #123) The Department acknowledges but does not fully concur with the comment. Rather than deleting the footnote, Footnote 3 has been revised to be consistent with the new text of Condition VI.D as included in the final permit (see the Department's response to Item #99 regarding Comment 113). As delineated in Footnote 3, the Permittee shall be required to report any concentration at or above the laboratory's Reporting Limit (RL) in the Semi-Annual and Annual Groundwater Monitoring Reports. The RL has been defined in Footnote 3 as "a laboratory-specific value which is the lowest concentration at which an analyte can be detected in a sample and its concentration reported by the laboratory with a reasonable degree of accuracy and precision. Additionally, the Department has revised the fifth column header by replacing "Concentration Limits" with "Reporting Concentration", which also references the revised Footnote 3. The fifth column (now titled "Reporting Concentration") has been revised by the deletion of "Background[4]" and all rows of the column (other than the groundwater quality parameters) have been revised to reference the revised Footnote 3.

(Comment #124) The Department acknowledges and concurs with the comment. Table VI-B of the final permit includes a new footnote (Footnote 4) specifying that all metals are monitored on a dissolved (i.e., filtered) basis.

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ACTION Table VI-B has been revised in the final permit as noted below:

Table VI-B
Block 80 HWLF Groundwater Monitoring Parameters

Parameters	Container Type	Preservation Method	Analytical Method[2]	Reporting Concentration[3] ~~Limit[3] (ug/L)~~
pH[1], Specific Conductivity[1], and Turbidity[1]	Glass/Plastic	Field Measure	N/A	N/A
Antimony[4]	Glass/Plastic	HNO_3 to pH <2 ~~and Cool to 4°C~~	6010	~~Background[4]~~ See Footnote 3
Barium[4]	Glass/Plastic	HNO_3 to pH <2 ~~and Cool to 4°C~~	6010	~~Background[4]~~ See Footnote 3
Cadmium[4]	Glass/Plastic	HNO_3 to pH <2 ~~and Cool to 4°C~~	6010	~~Background[4]~~ See Footnote 3
Chromium[4]	Glass/Plastic	HNO_3 to pH <2 ~~and Cool to 4°C~~	6010	~~Background[4]~~ See Footnote 3
Copper[4]	Glass/Plastic	HNO_3 to pH <2 ~~and Cool to 4°C~~	6010	~~Background[4]~~ See Footnote 3
Iron[4]	Glass/Plastic	HNO_3 to pH <2 ~~and Cool to 4°C~~	6010	~~Background[4]~~ See Footnote 3
Lead[4]	Glass/Plastic	HNO_3 to pH <2 ~~and Cool to 4°C~~	6010	~~Background[4]~~ See Footnote 3
Selenium[4]	Glass/Plastic	HNO_3 to pH <2 ~~and Cool to 4°C~~	6010	~~Background[4]~~ See Footnote 3
Zinc[4]	Glass/Plastic	HNO_3 to pH <2 ~~and Cool to 4°C~~	6010	~~Background[4]~~ See Footnote 3

[1] These are groundwater quality parameters; statistical analysis is not required for these parameters.
[2] ~~The most current version of the required~~ SW-846, 3rd Edition or subsequent updates will be utilized.

[3] The Permittee shall report any concentration at or above the laboratory's Reporting Limit (RL) in the Semi-Annual and Annual Groundwater Monitoring Reports. The RL is a laboratory-specific value which is the lowest concentration at which an analyte can be detected in a sample and its concentration reported by the laboratory with a reasonable degree of accuracy and precision ~~Method Detection Limit (MDL) in the Semi-Annual and Annual Groundwater Monitoring Reports~~. The concentrations of hazardous constituents from point of compliance wells shall be compared against data on groundwater background concentrations in order to determine whether there is statistically significant evidence of in an increase in the concentration of hazardous constituents over background. In the event hazardous waste constituents are "detected" (as defined in LAC 33:V.3303.A.1) at the point of compliance as a result of a release from a regulated unit, the Permittee shall submit a permit modification (in accordance with LAC 33:V.321) to implement a Compliance Monitoring Program. At that time, this table will be revised by including a "Concentration Limit" as specified in Condition VI.D of this permit. ~~Statistically significant concentrations that suggest a release has occurred from the regulated unit~~.
[4] All metals are monitored on a dissolved (i.e., filtered) basis ~~Any concentrations of naturally occurring parameters (e.g., metals, etc.) which exceed background concentrations will be considered an exceedance of the Concentration Limits~~.

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REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table VI-C

COMMENT Pages 31-35, Specific Comments: Comments 125-134

(Comment #125) Revise the "Analytical Method" column to reference Footnote 2 in place of Footnote 1.

(Comment #126) Revise the Preservation Method for metal parameters [list] as follows: "HNO_3 to pH <2."

(Comment #127) Revise the Preservation Method for Volatile Organic Compounds (VOCs) as follows: "Cool to 4°C (not preserved should be analyzed within 7 days) HCl, pH<2, Cool to 4°C (preserved should be analyzed within 14 days)."

(Comment #128) Revise the Concentration Limit for Base Neutrals and Volatile Organic Compounds (VOCs) to substitute the "Practical Quantitation Limit (PQL)" for the "Method Detection Limit (MDL)".

The PQL is the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility. See comment to Table VI-C, Footnote 6. Also, several Base Neutrals and VOCs have been monitored at the NWLF/CAMU for many years and are typically not detected. Large percentages of non-detect data will likely require that a non-parametric statistical method be applied as described in EPA guidance and addressed in the modified Groundwater Detection Monitoring Plan that will be submitted subsequent to issuance of this permit.

(Comment #129) Revise Footnote 2 as follows: "[2] SW-846, 3rd Edition or subsequent updates will be utilized." or "[2] The laboratory's current version of the required SW-846 Method will be utilized."

See comments to Table VI-B, Footnote 2, above.

(Comment #130) Revise Table to omit Footnote 3.
This revision serves to prevent a potential misinterpretation of the

footnote that background concentrations or concentrations at the MDL are considered to be statistically significant concentrations are suggestive of a release having occurred from the regulated unit. It is not clear what is meant by a "statistically significant concentration"; this phrase is not used in the regulations. Further, even detection, as defined by the regulations, does not necessarily indicate that a release has occurred from the regulated unit although further action may be required in accordance with the regulations. We understand these concentration limits will be used in the detection monitoring to determine whether statistically significant evidence of contamination exists in accordance with LAC 33.V.3317.F.1.

(Comment #131) Supplement Footnote 5 to include the list of Base Neutral parameters to be monitored.

(Comment #132) Add a new footnote for each metal parameter: "All metals are monitored on a dissolved (i.e., filtered) basis."

(Comment #133) Add a new footnote for the volatile organic compounds (VOCs).

(Comment #134) Revise Footnote 6 to reflect that the practical quantitation limit (PQL), and not the MDL, is the concentration limit. The PQL is the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

Footnote 6 is ambiguous. It is not clear whether the Department is referring to "quantitation limits," or the development of MDLs, which are referenced in Appendix B to Part 136, Definition and Procedure for the Determination of the Method Detection Limit-Revision 1.11, 40 CFR 136, 1986.

RESPONSE

Below, the Department provides a point-by-point response to the Permittee's preceding comments.

(Comment #125) The Department acknowledges and concurs with the comment. Reference to Footnote 1 in the draft permit was a typographical error. The "Analytical Method" column of Table VI-C has been revised in the final permit to reference Footnote 2 rather than Footnote 1.

(Comment #126) The Department acknowledges and concurs with the comment. The preservation method for Table VI-C metal parameters has been revised to state, "HNO_3 to pH<2."

(Comment #127) The Department acknowledges but does not fully concur with the comment. Rather than revising the footnote as specified in the Permittee's comment, the revisions were made based upon the latest preservation methods provided in Federal Register, March 12, 2007, regarding 40 CFR 136.3 Table 2—Required Containers, Preservation Techniques and Holding Times. A new footnote (Footnote 7) has been added to Table VI-C in the final permit that states: "Cool to $\leq$ 6°C (not preserved should be analyzed within 7 days) HCl to pH<2, Cool to $\leq$ 6°C (preserved should be analyzed within 14 days)." Although not requested by the Permittee in its comments, the preservation methods for Base Neutral Parameters has also been revised in the final permit (based upon 40 CFR 136.3 Table 2—Required Containers, Preservation Techniques and Holding Times) to state: "Cool to $\leq$ 6°C".

(Comment #128) The Department acknowledges but does not fully concur with the comment. The "Concentration Limit" for Base Neutrals and Volatile Organic Compounds (VOCs) has not been revised in the final permit to specify "Practical Quantitation Limit (PQL)". Instead, "Concentration Limit" column has been replaced by a "Reporting Limit" column. The "Reporting Limit" column references a new footnote specifying that the Permittee shall report any concentrations of hazardous constituents above the laboratory's Reporting Limit (RL). The RL has been defined in Footnote 3 as "a laboratory-specific value which is the lowest concentration at which an analyte can be detected in a sample and its concentration reported by the laboratory with a reasonable degree of accuracy and precision. See the Department's response to Item #99 regarding Comment 113 for additional details.

(Comment #129) The Department acknowledges and concurs with the comment. Table VI-C, Footnote 2 has been revised in the final permit as suggested by the Permittee.

(Comment #130) The Department acknowledges but does not fully concur with the comment. Rather than deleting the footnote, Footnote 3 has been revised to be consistent with the new text of Condition VI.D as included in the final permit (see the Department's response to Item #99 regarding Comment 113). As delineated in Footnote 3, the Permittee shall be required to report any concentration at or above the laboratory's RL in the Semi-Annual and Annual Groundwater Monitoring Reports.

Additionally, the Department has revised the fifth column header by replacing "Concentration Limits" with "Reporting Concentration", which also references the revised Footnote 3. The fifth column (now titled "Reporting Concentration") has been revised by the deletion of "Background[4]" and all rows of the column (other than the groundwater quality parameters) have been revised to reference the revised Footnote 3.

(Comment #131) The Department acknowledges and concurs with the comment. However, rather than supplementing Footnote 5 with the list of Base Neutral Parameters, Footnote 5 has been revised to reference "List VI-1". List VI-1 is a new list that follows the groundwater monitoring tables in the final permit and specifies the list of Base Neutral Parameters as described in the Permittee's comment.

(Comment #132) The Department acknowledges and concurs with the comment. Table VI-C includes a revised Footnote 4 that specifies all metals are monitored on a dissolved (i.e., filtered) basis.

(Comment #133) The Department acknowledges and concurs with the comment. Footnote 6 (as included in the draft permit) has been deleted in response to Comment 128. Therefore, a new Footnote 6 has been included in the final permit that addresses the list of Volatile Organic Compounds. However, rather than including the list of Volatile Organic Compounds, the new Footnote 6 instead references "List VI-2". List VI-2 is a new list that follows the groundwater monitoring tables in the final permit and specifies the list of Volatile Organic Compounds as described in the Permittee's comment.

(Comment #134) The Department acknowledges but does not concur with the comment. Footnote 6 (as included in the draft permit) has not been revised in the final permit to specify that the PQL will be the concentration limit as requested by the Permittee. See the Department's response to Comments 128 and 130 above.

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ACTION Table VI-C has been revised in the final permit as noted below:

Table VI-C
NWLF/CAMU Groundwater Monitoring Parameters

Parameter	Container Type	Preservation Method	Analytical Method[1,2]	Reporting Concentration[3] ~~Limit[3] (ug/L)~~
pH[1], Specific Conductivity[1], and Turbidity[1]	Glass/Plastic	Field Measure	N/A	N/A
Chromium[4]	Glass/Plastic	HNO_3, to pH <2 ~~and Cool to 4°C~~	6010	~~Background[4]~~ See Footnote 3
Mercury[4]	Glass/Plastic	HNO_3, to pH <2 ~~and Cool to 4°C~~	7470	~~Background[4]~~ See Footnote 3
Base Neutrals [5]	Amber Glass, Teflon-lined cap	Cool to 6~~4~~°C	8270	~~MDL[6]~~ See Footnote 3
Volatile Organic Compounds[6] (VOCs)	VOC Vials	See Footnote 7	8260	~~MDL[6]~~ See Footnote 3

[1] These are groundwater quality parameters; statistical analysis is not required for these parameters.

[2] ~~The most current version of the required~~ SW-846, 3rd Edition or subsequent updates will be utilized.

[3] The Permittee shall report any concentrations at or above the Method Detection Limit (MDL) in the Semi-Annual and Annual Groundwater Monitoring Reports. The concentrations of hazardous constituents from point of compliance wells shall be compared against data on groundwater background concentrations in order to determine whether there is statistical significant evidence of in an increase in the concentration of hazardous constituents over background. In the event hazardous waste constituents are "detected" (as defined in LAC 33:V.3303.A.1) at the point of compliance as a result of a release from the regulated unit, the Permittee shall submit a permit modification (in accordance with LAC 33:V.321) to implement a Compliance Monitoring Program. At that time, this table will be revised by including a "Concentration Limit" as specified in Condition VI.D of this permit. ~~Statistically significant concentrations that suggest a release has occurred from the regulated unit~~.

[4] All metals are monitored on a dissolved (i.e., filtered) basis ~~Any concentrations of naturally occurring parameters (e.g., metals, etc.) which exceed background concentrations will be considered an exceedance of the Concentration Limits~~.

[5] Base Neutrals specified in this table shall be the subset of semi-volatile compounds included in List VI-1 ~~a subset of the semi-volatile organic compounds (SVOC) analysis~~.

[6] The VOCs specified in this table shall be the subset of VOCs included in List VI-2. ~~The Method Detection Limit (MDL), established in "Test Methods for Evaluating Solid Waste Physical/Chemical Methods, 3rd Ed." (EPA Publication Number SW-846, 1986, as amended), or Administrative Authority-approved equivalent, shall serve as the concentration limit, unless changed through permit modification(s) by the Administrative Authority. MDL denotes maximum permissible U.S. EPA quoted Method Detection Limit~~.

[7] Cool to < 6°C (if not preserved, sample to be analyzed within 7 days) HCL to pH<2, Cool to < 6°C (if preserved, to be analyzed within 14 days).

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[Note: Lists VI-1 and VI-2 actually follow Table VI-D (the last groundwater monitoring table) in the final permit.]

List VI-1
Base Neutral Fraction Groundwater Monitoring Parameters

The Base Neutral Fraction of the semi-volatile organic compound (SVOC) analysis specified in Tables VI-C and VI-D shall include the following parameters:

1,2,4-Trichlorobenzene	bis(2-Chloroethyl)ether
1,2-Diphenylhydrazine	bis(2-Chloroisopropyl)ether
2,4-Dinitrotoluene	bis(2-Ethylhexyl)phthalate
2,6-Dinitrotoluene	Butyl benzyl phthalate
2-Chloronaphthalene	Carbazole
2-Methylnapthalene	Chrysene
2-Nitroaniline	Dibenzo[a,h]anthracene
3,3'-Dichlorobenzidine	Dibenzofuran
3-Nitroaniline	Diethyl phthalate
4-Bromophenyl phenyl ether	Dimethyl phthalate
4-Chloroaniline	Dimethyl phthalate
4-Chlorophenyl phenyl ether	Di-n-butyl phthalate
4-Nitroaniline	Di-n-octyl phthalate
Acenaphthene	Fluoranthene
Acenaphthylene	Fluorene
Aniline	Hexachlorobenzene
Anthracene	Hexachlorobutadiene
Benzidine	Hexachlorocyclopentadiene
Benzo[a]anthracene	Hexachloroethane
Benzo[a]pyrene	Indeno[1,2,3-cd]pyrene
Benzo[b]fluoranthene	Isophorone
Benzo[g,h,i]perylene	Naphthalene
Benzo[k]fluoranthene	Nitrobenzene
Benzyl Alcohol	n-Nitrosodimethylamine
bis(2-Chloroethoxy)methane	n-Nitroso-di-n-propylamine
	n-Nitrosodiphenylamine
	Phenanthrene
	Pyrene
	Pyridine

List VI-2
Volatile Organic Compounds (VOCs) Groundwater Monitoring Parameters

The VOC analysis specified in Tables VI-C and VI-D shall include the following parameters:

1,1,1-Trichloroethane	Chlorobenzene
1,1,2,2-Tetrachloroethane	Chloroethane
1,1,2-Trichloroethane	Chloroform
1,1-Dichloroethane	Chloromethane
1,1-Dichloroethene	cis-1,2-Dichloroethylene
1,2-Dibromo-3-chloropropane	cis-1,3-Dichloropropene
1,2-Dibromoethane	Dibromochloromethane
1,2-Dichlorobenzene	Dibromomethane
1,2-Dichloropropane	Dichlorodifluoromethane
1,3-Dichlorobenzene	Diethyl ether
1,4-Dichlorobenzene	Ethylbenzene
1,2-Dichloroethane	Methylene chloride
2-Butanone	Methyl-t-Butyl Ether

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2-Chloroethyl vinyl ether	m-Xylene
2-Hexanone	o-Xylene
4-Methyl-2-pentanone	p-Xylene
Acetone	Styrene
Acrylonitrile	Tetrachloroethene
Allyl chloride	Toluene
Benzene	trans-1,2-Dichloroethene
Bromodichloromethane	trans-1,3-Dichloropropene
Bromoform	Trichloroethene
Bromomethane	Trichlorofluoromethane
Carbon tetrachloride	Vinyl chloride

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ITEM 106

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Table VI.D

COMMENT Page 34-36, Specific Comments: Comment 135-140

(Comment #135) Revise Footnote 1 to substitute "First" Pervious Zone for "Shallow" Pervious Zone; and to substitute "Second" Pervious Zone for "Deep" Pervious Zone.

See comment to Table VI-A above.

(Comment #136) Revise the last sentence of Footnote 1 as follows: "The Permittee shall continue to report the analytical results for groundwater in NWLF/CAMU Leak Detection Wells and Leachate Recovery Trench in the Semi-Annual and Annual Groundwater Monitoring Reports."

This change is necessary to reflect that the Leachate Recovery Trench recovers groundwater that was previously impacted by landfill leachate, rather than serving to collect landfill leachate.

(Comment #137) Revise Footnote 2 as follows: "[2] SW-846, 3rd Edition or subsequent updates will be utilized." or "[2] The laboratory's current version of the required SW-846 Method will be utilized."

See comment to Table VI-B, Footnote 2, above.

(Comment #138) Revise Footnote 3 as follows: "The sampling and analysis of these groundwater quality parameters applies only to the leak detection wells. The sampling and analysis of these groundwater quality parameters does not apply to groundwater recovered by the leachate recovery trench."

(Comment #139) Supplement Footnote 4 to include the list of Base Neutral parameters to be monitored:

(Comment #140) Add a new footnote for the volatile organic compounds (VOCs) to be monitored.

RESPONSE Below, the Department provides a point-by-point response to the Permittee's preceding comments.

(Comment #135) The Department acknowledges and concurs with the comment. Footnote 1 has been revised in the final permit by substituting "First" Pervious Zone for "Shallow" Pervious Zone and substituting "Second" Pervious Zone for "Deep" Pervious Zone.

(Comment #136) The Department acknowledges and concurs with the comment. The last sentence of Footnote 1 has been revised in the final permit to state: "The Permittee shall continue to report the analytical results for groundwater in NWLF/CAMU Leak Detection Wells and Leachate Recovery Trench in the Semi-Annual and Annual Groundwater Monitoring Reports."

(Comment #137 The Department acknowledges and concurs with the comment. Footnote 2 has been revised in the final permit as suggested by the Permittee.

(Comment #138) The Department acknowledges and concurs with the comment. The last sentence of Footnote 3 has been revised in the final permit to state: "The sampling and analysis of these groundwater quality parameters applies only to the leak detection wells. The sampling and analysis of these groundwater quality parameters does not apply to groundwater recovered by the Leachate Recovery Trench."

(Comment #139) The Department acknowledges and concurs with the comment. However, rather than supplementing Footnote 5 with the list of Base Neutral Parameters, Footnote 4 has been revised to reference "List VI-1". List VI-1 (see Item #105) is a new list that follows the groundwater monitoring tables in the final permit and specifies the list of Base Neutral Parameters as described in the Permittee's comment. In addition, although not requested by the Permittee in its comment, the preservation method for Base Neutral Compounds specified in Table VI-D has been revised in the final permit to be consistent with the preservation method specified in Table VI-C. The preservation method specified now states: "Cool to $\leq$6°C".

(Comment #140) The Department acknowledges and concurs with the comment. Therefore, a new Footnote 5 has been included in the final permit that addresses the list of Volatile Organic Compounds. However, rather than including the list of Volatile Organic Compounds, the new Footnote 5 instead references "List VI-2". List VI-2 (see Item #105) is a new list that follows the groundwater monitoring tables in the

final permit and specifies the list of Volatile Organic Compounds as described in the Permittee's comment. In addition, although not requested by the Permittee in its comment, the preservation method for VOCs specified in Table VI-D has been revised in the final permit to be consistent with the preservation method specified in Table VI-C. A new footnote (Footnote 6) has been added to Table VI-D in the final permit that states: "Cool to ≤6°C (not preserved should be analyzed within 7 days) HCL to pH<2, Cool to ≤6°C (preserved should be analyzed within 14 days)."

ACTION Table VI-D has been revised in the final permit as noted below:

Table VI-D
NWLF/CAMU Leak Detection Wells and Leachate Recovery Trench Groundwater Monitoring Parameters[1]

Parameter	Container Type	Preservation Method	Analytical Method[2]
pH[3], Specific Conductivity[3], and Turbidity[3]	Glass/Plastic	Field Measure	N/A
Base Neutrals[4]	Amber Glass, Teflon-lined cap	Cool to 4≤ 6 °C	8270
Volatile Organic Compounds[5] (VOCs)	VOC Vials	~~Cool to 4°C~~ See Footnote 6	8260

[1] The ~~NWLF/CAMU Leak Detection Wells and Leachate Recovery Trench are located in the Shallow Pervious Zone (the POC is located in the Deep Pervious Zone) and, therefore, detection monitoring concentration limits do not apply. However, the~~ Permittee shall continue to operate and maintain the NWLF/CAMU Leak Detection Wells and Leachate Recovery Trench until the termination of corrective action activities associated with the aforementioned systems is approved by the Administrative Authority. The Permittee shall continue to report the analytical results for groundwater ~~and leachate~~ sampled from the NWLF/CAMU Leak Detection Wells and Leachate Recovery Trench in the Semi-Annual and Annual Groundwater Monitoring Reports.

[2] ~~The most current version of the required~~ SW-846, 3rd Edition or subsequent updates will be utilized.

[3] The sampling and analysis of these groundwater quality parameters applies only to the leak detection wells. The sampling and analysis of these groundwater quality para meters does not apply to ~~leachate~~ groundwater recovered from the ~~l~~Leachate ~~r~~Recovery ~~t~~Trench.

[4] Base Neutrals specified in this table shall be the subset of semi-volatile compounds included in List VI-1 ~~a subset of the semi-volatile organic compounds (SVOC) analysis~~.

[5] The VOCs specified in this table shall be the subset of VOCs included in List VI-2.

[6] Cool to <6°C (not preserved should be analyzed within 7 days) HCL to pH<2, Cool to <6°C (preserved should be analyzed within 14 days).

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REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.G.4

COMMENT Page 36, Specific Comments: Comment 141

Dow understands that the outstanding comments relating to the Groundwater Detection Monitoring Plan as referenced in Condition II.E.25.b.(4) are those items described in the Department's August 14, 2008, correspondence to Dow. In accordance with the requirements of the above referenced section and the list of outstanding comments provided to Dow by the Department in its August 14, 2008 correspondence, Dow is directed to provide a revised Groundwater Detection Monitoring Plan that includes appropriate revisions and addresses the outstanding comments made by the Department, including NOD2, #10. Subject to the General Comment above made a part hereof, with respect to NOD2, #10 in particular, LAC 33:V.3317.D, the regulation cited by the Department in NOD2, #10, was amended in June 2008 to delete the specific requirement for the collection of a sequence of at least four (4) samples from each well on at least a semi-annual basis. Section 3317.D. now provides generally that the Department will specify frequencies for collecting samples and conducting statistical tests. Further, LAC 33:V.3317.D references the general groundwater monitoring requirements of LAC 33.V.3315.G. Therefore, Dow evaluated the current groundwater detection monitoring program sampling procedures and the current requirements of LAC 33:V.3317.D, in accordance with LAC 33:V.3315.G.

The requirements of LAC 33:V.3315.G that describe the establishment of sufficient background data (i.e., number and kinds of samples to establish background data to support appropriate statistical testing and sample size) may be more pertinent to a newly established unit, but nonetheless are certainly fulfilled by Dow's current groundwater detection monitoring program utilized at the two landfills. The current groundwater detection monitoring program was established many years ago in the facility's RCRA permit, and the groundwater monitoring data consists of data collected during the initial background monitoring period and data collected since that time (over 20 years of data), providing a comprehensive and more than adequate data set to furnish information on background conditions at the site and support the

appropriate statistical evaluation methods utilized for the detection of potential contaminants.

Further, the requirement of LAC 33:V.3317.D to establish frequencies for collection of samples and conducting statistical tests to determine whether there is statistically significant evidence of contamination for any parameter or hazardous constituent is fulfilled by the current groundwater detection monitoring program sampling frequency that requires semi-annual sampling and analysis. As described in the EPA guidance and is reflected in Dow's application and submittals to the Department, the existing groundwater monitoring data, the statistical approaches, and the site-specific subsurface characteristics (i.e., hydraulic conductivity, hydraulic gradient, effective porosity) of the monitored zones (i.e., shallow pervious zones). show that groundwater velocities in the monitored zones are sufficiently low such that no advantage is gained by sampling more frequently than semi-annually (i.e., sufficient time must pass between sampling events to ensure, to the greatest extent technically feasible, that an independent groundwater sample is taken from each well). The semi-annual data is sufficient to support statistical testing, which may involve the development of tolerance limits (as recommended by USEPA for comparison to fixed numerical limit such as a maximum concentration limit (MCL) (USEPA 1992)) and/or prediction limits (as recommended in the USEPA guidance to determine if a statistically significant increase has occurred for a constituent at the identified downgradient well compared to baseline), as appropriate. Verification sampling may be employed to confirm any statistically significant increase conclusion. The statistical methods to be utilized are consistent with the USEPA Guidance (USEPA 1992) and the framework recommended by Dr. Robert D. Gibbons (Gibbons 1994).

Although a single sample will be collected from each well semi-annually, in accordance with LAC 33:V.3315.G (which stipulates at least four samples), Dow will utilize at least four samples (and may increase the number of samples used to eight) to support the statistical testing by incorporating the results of the most recent sampling events or the applicable background data set. The sample size used to support the statistical testing may be increased to eight samples to ensure that there are sufficient data to determine the appropriate statistical distribution and compute a more reliable statistic.

RESPONSE The Department acknowledges and concurs with the comment. See the Department's response to Item #13 regarding Comment 12. There is no necessary revision to the text of the condition which simply states, "The

Permittee must conform to the latest approved Groundwater Detection Monitoring Plan referenced in Attachment 1."

ACTION No action required. The final permit has not been revised.

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REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.G.5

COMMENT Page 37, Specific Comments: Comment 142

Revise to provide that total depth measurements shall be made on an annual basis.

The proposed revision reflects the current practice followed by Dow in accordance with the requirements of its current permit and is supported by the following: annual measurements to-date have not indicated any significant silting of well screens; therefore, an annual frequency is sufficient to detect any potential future silting of the well screens. Dow utilizes dedicated submersible pumps in each of the wells; therefore, the pumps must be removed from the well each time a total depth measurement is to be made.

RESPONSE The Department acknowledges and concurs with the comment. The condition has been revised to specify that total depth measurements shall be made according to the frequencies specified in the Groundwater Detection Monitoring Plan. The revised Groundwater Detection Monitoring Plan required by Condition II.E.25.b.(4) must include details regarding the fact that total depth measurements shall be made on an annual basis (see the revised text of Condition VI.G.5 below).

ACTION Condition VI.G.5 has been revised in the final permit as follows:

VI.G.5. Each well must be measured for total depth and depth to water according to the frequencies specified in the Groundwater Detection Monitoring Plan referenced in Attachment 1 of this permit. Measurements must be to the nearest 0.1 foot, and the values must be recorded in the field notebook and reproduced and submitted in the Semi-Annual and Annual Groundwater Monitoring Reports. If 10% of the screened interval is blocked by sediments, the well must be redeveloped prior to the next required sampling event.

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REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.G.6

COMMENT Page 38, Specific Comments: Comment 143

Revise to provide an option to use micro-purging as an alternate purging technique, as described in Dow's RCRA Permit Renewal Application Volume 7, Exhibit 13.

RESPONSE The Department acknowledges and concurs with the comment. The Department recognizes micro-purging is an appropriate method as described in Dow's RCRA Permit Renewal Application Volume 7, Exhibit 13.

ACTION Condition VI.G.6 has been revised in the final permit as follows:

VI.G.6. Each well must be purged by evacuation to dryness or by removing a minimum of three casing volumes. The wells must be sampled immediately upon purging and/or when sufficient water for sampling has recharged the well. ~~Other techniques (e.g., micro-purging) must be~~ The Permittee shall sample the wells utilizing techniques specified in the Groundwater Detection Monitoring Plan referenced in Attachment 1 of this permit and approved by the Administrative Authority ~~prior to use in monitoring or corrective action programs. Purging methods must be consistent throughout the life of the permitted unit.~~

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ITEM 110

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.G.7

COMMENT Page 38, Specific Comments: Comment 144

Revise to recognize permissible use of submersible pumps (as opposed to bailers only without approval) to collect samples.

Dow utilizes dedicated submersible pumps to collect samples from monitoring wells as described in Dow's RCRA Permit Renewal Application, Volume 7, Exhibit 13. The proposed revision reflects the current practice followed by Dow in accordance with the requirements of its current permit.

RESPONSE The Department acknowledges and concurs with the comment. The condition has been revised in the final permit to state that the use of submersible pumps for the collection of groundwater samples has been previously approved by the Department.

ACTION Condition VI.G.7 has been revised in the final permit as follows:

VI.G.7. Samples must be withdrawn using dedicated or adequately cleaned equipment for each well. No equipment or method may be used that will chemically alter or influence the sample. The Permittee shall sample the wells utilizing sampling devices specified in the Groundwater Detection Monitoring Plan referenced in Attachment 1 of this permit and approved by the Administrative Authority. Care must be taken to avoid placing clean sampling equipment on the ground or on any contaminated surface. ~~Sampling methods and equipment must be compatible throughout the life of the permitted closed unit.~~

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ISSUE Condition VI.G.8

COMMENT Page 38, Specific Comments: Comment 145

Delete this condition.

Historically, groundwater samples collected from wells located at the NWLF/CAMU and the HWLF have yielded turbidity values that are greater than 5 NTU, even immediately following re-development of the wells. At that time, Dow reviewed the analytical testing being conducted under its permit and communicated to the Department that turbidity was not known to cause a problem with the analytical testing. It is anticipated that the turbidity values may continue to exceed 5 NTU during future monitoring events; however, based on the past experience, this is not anticipated to impact the testing results of the analytical methods listed in Tables VI-B and Table VI-C. The Department indicates in Condition VI.G.8 specifically that the analysis of metals may be sensitive to turbidity; however, the groundwater monitoring program for the NWLF/CAMU and Block 80 HWLF includes the analysis of filtered (i.e., dissolved) metals, therefore, turbidity is not anticipated to impact the metals analysis.

The requirement for certification by a qualified geologist as "the best obtainable" is not required by the regulation. Further, the requirements of the last sentence of Condition VI.G.8 are unclear as to the appropriate content of an evaluation of turbidity for all potentially affected analytical values.

RESPONSE The Department acknowledges but does not concur fully with the comment. The condition has not been deleted in the final permit as requested by the Permittee in its comment. However, the condition has been revised to state that the Permittee must analyze samples for turbidity and record the results in the field log. Furthermore, the Permittee must report the results of the turbidity analysis in the groundwater monitoring reports required by Condition VI.M of the final permit. However, the condition has also been revised by deleting the text specifying that only samples less than five (5) NTU (nephelometric turbidity unit) are acceptable.

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ACTION Condition VI.G.8 has been revised in the final permit as follows:

> **VI.G.8.** Groundwater samples shall be monitored and analyzed for turbidity and the results recorded in the field log. The results of turbidity analyses shall be reported in the Annual and Semi-Annual Groundwater Monitoring Reports required under Condition VI.M of this permit. ~~Samples containing less than five (5) NTU (nephelometric turbidity unit) are acceptable for analysis when the analytical method is sensitive to turbidity (such as the analysis of metals). Samples containing greater than five (5) NTU are only acceptable when well development is certified by a qualified geologist as "the best obtainable". An evaluation of turbidity must accompany all potentially affected analytical values~~.

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ITEM 112

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.G.13

COMMENT Page 39, Specific Comments: Comment 146

Delete second sentence.

The specific recordkeeping requirements in the Draft Permit are not supported by the regulations. The regulations require maintenance of records for data collected pursuant to LAC 33:V.3315.G. The Permittee is thus required to maintain those records of data collection per section LAC 33:V.3315.G. Further, any specifications for recordkeeping are more appropriately addressed in the Groundwater Detection Monitoring Plan.

RESPONSE The Department acknowledges but does not concur with the comment. The types of sampling and analysis records required to be maintained onsite by the Permittee are relative and essential to the groundwater protection programs associated with the regulated units. Although many of the required records are included in the Groundwater Detection Monitoring Plan and/or the Groundwater Monitoring Reports, specifying the recordkeeping requirements in the final permit serves as a reference for the public, the Permittee, and Department staff. These records shall be maintained onsite and be readily available for review by the Department. However, due to the fact that the Permittee utilizes tables to determine standing water volume, the condition has been revised by replacing "calculations of the standing water volume in the well" with "the standing water volume in the well".

ACTION Condition VI.G.13 has been revised in the final permit as follows:

VI.G.13. Records of all sampling and analytical work must be maintained at the site during the life of the facilities, including post-closure care periods. An up-to-date field log book (or compilation of field sheets) must be kept at the site which documents (for each sample) the well identification number, total well depth, elevation of top of casing, water level, water color (visual), well evacuation procedures and equipment, sample withdrawal procedures and equipment, date, time sample identification numbers, field measurements (pH, specific

conductance, etc.) and methods, name of collector, field observations, ~~calculations of~~ the standing water volume in the well, and the total volume evacuated.

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ITEM 113

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ISSUE Condition VI.H

COMMENT Page 39, Specific Comments: Comment 147

Delete the following wording in the second sentence: "or expand".

LAC 33:V.3317 sets forth the requirements of a detection monitoring program. The reference to an "expansion" of the program is not clear.

RESPONSE The Department acknowledges but does not fully concur with the comment. Under certain circumstances, it may be necessary for the Permittee to expand the Detection Monitoring Program. For example, it may become necessary at a later date to install additional monitoring wells to ensure that the unit is monitored properly.

ACTION Condition VI.H in the final permit has been revised as follows:

VI.H. DETECTION MONITORING PROGRAM

A Detection Monitoring Program is required whenever hazardous constituents have NOT been detected at the point of compliance for a regulated unit. The Permittee must continue or expand the Detection Monitoring Program as subsequently directed by the Administrative Authority and in accordance with the requirements of LAC 33:V.3317 ~~and as subsequently directed by the Administrative Authority~~ until one of the following occurs: 1) a Compliance Monitoring Program and/or Corrective Action Program is required and the permit is modified accordingly; or 2) the post-closure monitoring period has ended for the regulated unit.

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ITEM	114
REFERENCE	Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit
ISSUE	Condition VI.H.2
COMMENT	Page 39, Specific Comments: Comment 148 See comment to Condition VI.G.4
RESPONSE	See the Department's response to Item #107 regarding Comment #141
ACTION	No action required. The final permit has not been revised.

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ITEM 115

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.H.4

COMMENT Page 39, Specific Comments: Comment 149

Revise this section to allow 90 days after the sampling event for the Permittee to have complete analytical results and have determined whether there is statistically significant evidence of contamination for any indicator parameter or hazardous constituent.

The proposed revision will accommodate the employment of the statistical methodology selected by the Permittee, tolerance intervals (for comparison to a MCL) or prediction interval (for intrawell comparison) procedures, including provisions for the use of verification re-sampling in the determination of statistical significance. Thus time must be allowed for the collection and analysis of any required verification sample. LAC 33:V.3317.D allows for an "alternate site-specific" schedule.

RESPONSE The Department acknowledges but does not fully concur with the comment. The condition has not been revised as suggested by the Permittee in its comment. However, due to the time required for the Permittee to employ the statistical methodology and due to the additional time required to conduct any re-sampling, the Department has revised Condition VI.H.4 to allow sixty (60) days to determine whether or not there is statistically significant evidence of contamination for any indicator parameter or hazardous constituent.

ACTION Condition VI.H.4 has been revised in the final permit as follows:

VI.H.4. Within ~~forty-five (45)~~ sixty (60) days after the sampling event, the Permittee shall have complete analytical results and shall have determined whether there is statistically significant evidence of contamination for any indicator parameter or hazardous constituent.

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ITEM 116

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.H.5.b

COMMENT Page 39, Specific Comments: Comments 150 and 151

(Comment #150) Revise first sentence to substitute "a site-specific subset of constituents listed in LAC 33:V.3325, Table 4" for "constituents listed in LAC 33:V.3325, Table 4".

(Comment #151) Revise the 3rd and 4th sentences of this section as follows: Within forty-five (45) days after the sampling event, the Permittee shall submit a report to the Administrative Authority detailing whether constituents are present, and if so, in what concentrations, and should indicate whether the Permittee intends on re-sampling for any of the constituents pursuant to Condition VI.H.5.c. The report shall contain the test results, the statistical comparative data (for those constituents having established background concentrations only), and groundwater potentiometric maps.

The proposed revisions reflect LAC 33:V.3317.G.2. This regulation was amended in June 2008 to allow sampling for a site-specific subset of constituents from LAC 33:V.3325, Table 4. The proposed revision also reflects that this regulatory citation does not require the use of statistical methods to determine whether there is statistically significant evidence of contamination for any constituent. If statistical methods are, however, employed in the evaluation of the data, the methods may only be applicable to those constituents having established background concentrations.

RESPONSE *(Comment #150)* The Department acknowledges and concurs with the comments. The requirement has been revised to allow for a site-specific subset of constituents listed in LAC 33:V.3325, Table 4. However, a site-specific subset of LAC 33:V.3325, Table 4 constituents must be proposed by the Permittee in the Groundwater Detection Monitoring Plan and approved by the Administrative Authority prior to implementation.

(Comment #151) The Department acknowledges but does not concur fully with the comment. In its comment, the Permittee suggests several revisions to the text of the condition. The revisions regarding: 1) replacement of text specifying "statistically significant evidence of contamination" with "constituents are present"; 2) insertion of text specifying "and if so, in what concentrations"; and 3) addition of text clarifying that statistical comparative data is only applicable for those constituents having established background concentrations have been incorporated into the condition in the final permit as suggested by the Permittee in its comment.

However, the Permittee's suggested deletion of text requiring the submittal of "graphs, and copies of the field log book notes and chain of custody where appropriate" in the report required by the conditions has not been incorporated into the condition in the final permit. The information contained in these records is relevant to the reporting of contaminant concentrations.

ACTION

Condition VI.H.5.b has been revised in the final permit as follows:

VI.H.5.b. Immediately sample the groundwater in all point of compliance wells and determine whether constituents listed in LAC 33:V.3325, Table 4 (or site-specific subset of LAC 33:V.3325, Table 4 constituents previously approved by the Administrative Authority) are present, and if so, in what concentrations. This sampling shall be conducted within seven (7) days of the determination that there is statistically significant evidence of contamination, unless written approval of a different timeframe is given by the Administrative Authority. Within forty-five (45) days after the sampling event, the Permittee shall submit a report to the Administrative Authority detailing whether constituents are present, and if so, in what concentrations ~~there is statistically significant evidence of contamination for any constituent~~, and should indicate whether the Permittee intends on resampling for any of the constituents pursuant to Condition VI.H.5.c. The report shall contain the test results, the statistical comparative data (for those constituents having established background concentrations only), groundwater potentiometric maps, graphs, ~~and~~ copies of the field log book notes and chain of custody where appropriate.

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ITEM 117

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.H.5.c

COMMENT Page 40, Specific Comments: Comment 152

Revise the first sentence as follows: "For any site-specific subset of constituents listed in LAC 33:V.3325, Table 4 found in the analysis pursuant to Condition VI.H.5.b above, the Permittee may resample within one month of the report submittal or at an alternate site-specific schedule approved by the Administrative Authority and repeat the analysis for those constituents detected. Within forty-five (45) days after the sampling event, the Permittee shall submit a report to the Administrative Authority detailing whether constituents are present, and if so, in what concentrations. The report shall contain the test results, the statistical comparative data (for those constituents having established background concentrations only), and groundwater potentiometric maps."

The proposed revisions reflect LAC 33:V.3317.G.2 & G.3. These regulations were amended in June 2008. LAC 33:V.3317.G.2 was amended to allow sampling for a site-specific subset of constituents from LAC 33:V.3325, Table 4. LAC 33:V.3317.G.3 was amended to allow an alternate site-specific schedule for repeating the analysis for those compounds detected. The proposed revision also reflects that this regulatory citation does not require the use of statistical methods to determine whether there is statistically significant evidence of contamination for any constituent. If statistical methods are, however, employed in the evaluation of the data, the methods may only be applicable to those constituents having established background concentrations.

RESPONSE The Department acknowledges but does not concur fully with the comment. In its comment, the Permittee suggests several revisions to the text of the condition. The revisions regarding: 1) site-specific subset of LAC 33:V.3325, Table 4 constituents; 2) alternate resampling schedule; 3) removal of text specifying "statistically significant evidence of contamination"; and

4) addition of text clarifying that statistical comparative data is only applicable for those constituents having established background concentrations have been incorporated into the condition in the final permit as suggested by the Permittee in its comment.

However, the Permittee's suggested deletion of text requiring the submittal of "graphs, and copies of the field log book notes and chain of custody where appropriate" in the report required by the conditions has not been incorporated into the condition in the final permit. The information contained in these records is relevant to the reporting of contaminant concentrations.

ACTION

Condition VI.H.5.c has been revised in the final permit as follows:

VI.H.5.c. For any LAC 33:V.3325, Table 4 constituents (or site-specific subset of LAC 33:V.3325, Table 4 constituents previously approved by the Administrative Authority) found in the analysis pursuant to Condition VI.H.5.b above, the Permittee may resample within one month (or at an alternate site-specific schedule approved by the Administrative Authority) of the report submittal to the Administrative Authority and repeat the analysis for those constituents detected. Within forty-five (45) days after the sampling event, the Permittee shall submit a report to the Administrative Authority detailing whether constituents are present, and if so, in what concentrations ~~whether there is statistically significant evidence of contamination for any constituent~~. The report shall contain the test results, the statistical comparative data (for those constituents having established background concentrations only), groundwater potentiometric maps, graphs, and copies of the field log book notes and chain of custody where appropriate.

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ITEM 118

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ISSUE Condition VI.H.5.d.(1)

COMMENT Page 40, Specific Comments: Comment 153

Revise first sentence to substitute "site-specific subset of constituents listed in LAC 33:V.3325, Table 4" for "LAC 33:V.3325, Table 4".

RESPONSE The Department acknowledges and concurs with the comment. The requirement has been revised to allow for a site-specific subset of constituents listed in LAC 33:V.3325, Table 4. However, a site-specific subset of LAC 33:V.3325, Table 4 constituents must be proposed by the Permittee in the Groundwater Detection Monitoring Plan and approved by the Administrative Authority prior to implementation.

ACTION Condition VI.H.5.d.(1) has been revised in the final permit as follows:

VI.H.5.d.(1). An identification of the concentration of any LAC 33:V. 3325, Table 4 constituent (or site-specific subset of LAC 33:V.3325, Table 4 constituents previously approved by the Administrative Authority) detected in the groundwater at each point of compliance well;

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ITEM 119

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ISSUE Condition VI.I.2

COMMENT Page 40, Specific Comments: Comment 154

Delete the phrase "and leachate."

The leak detection wells contain only groundwater.

RESPONSE The Department acknowledges and concurs with the comment. The phrase "and leachate" has been removed from the condition in the final permit.

ACTION Condition VI.I.2 has been revised in the final permit as follows:

VI.I.2. The Permittee must sample and analyze groundwater ~~and leachate~~ from the leak detection wells referenced in Table VI-A for the monitoring parameters specified in Table VI-D in accordance with the approved Groundwater Detection Monitoring Plan referenced in Attachment 1.

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ITEM 120

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VI.I.3

COMMENT Page 41, Specific Comments: Comments 155 and 156

(Comment #155) Revise to reference the NWLF/CAMU Leachate Recovery Trench: "The Permittee must maintain and operate the NWLF /CAMU Leachate Recovery Trench System in accordance with the approved NWLF Corrective Action Plan (note: the NWLF Corrective Action Plan was approved prior to the unit's designation as a CAMU).

(Comment #156) Substitute "unit's" for "units."

RESPONSE The Department acknowledges and concurs with the comments. The requirement has been revised in the final permit as suggested in the Permittee's comments.

ACTION Condition VI.I.3 has been revised in the final permit as follows:

VI.I.3. The Permittee must maintain and operate the NWLF/CAMU ~~Groundwater~~ Leachate Recovery ~~and Contaminant Extraction~~ Trench System in accordance with the approved NWLF Corrective Action Plan (note: the NWLF Corrective Action Plan was approved prior to the ~~units~~ unit's designation as a CAMU).

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ITEM 121

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ISSUE Condition VI.M.1.d

COMMENT Page 41, Specific Comments: Comment 157

Revise as follows: "a summary of all analytical data, including QA/QC."

The revision specifies that a summary of data with QA/QC be submitted in the semi-annual report. Raw data will be maintained at the facility. It is more appropriate and manageable to require that all data be required in the operating record (see LAC 33:V.1529 B.) as opposed to submission of all data to the Administrative Authority. Such data is voluminous.

RESPONSE The Department acknowledges but does not fully concur with the comment. The requirement to submit all analytical data has been deleted in the final. Additionally, the final permit will not indicate that a summary of the QA/QC is required.

ACTION The specific language commented above in Condition VI.M.1.d has been deleted in the final permit. Subsequent conditions in Condition VI.M.1 were renumbered accordingly.

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ITEM 122

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Conditions VI.M.1.g.(1) and (2)

COMMENT Page 41, Specific Comments: Comment 158

Delete VI.M.1.g (including (1) and (2)) and substitute the following: "graphical representation to present the evaluation of data pursuant to the statistical method employed."

As written, the permit condition is ambiguous. Further, the use of MCLs is improper. See comments to Tables VI.B, VI.C and VI.D which are incorporated herein by reference. Graphic representations of parameters with MCLs do not comport with regulatory requirements and would not be a meaningful or appropriate exercise. The reference to "contaminant concentration" is not clear. It is not clear if this is a reference to constituents which have been "detected" as that term is defined in LAC 33:V.Chapter 33. Finally, any graphing of data should be required only where meaningful to present the evaluation of data pursuant to the statistical method employed.

RESPONSE The Department acknowledges but does not fully concur with the comment. Rather than revising the condition as suggested by the Permittee in its comment, the condition has been revised in the final permit by substituting "MCL" with "graphical representation to present the evaluation of data pursuant to the statistical method employed" Secondly, the requirement for isopleths maps and concentration versus time graphs remains in the final permit. However, Condition VI.M.1.g has been revised to specify that these graphic elements are only required for those parameters that have been "detected" as defined in LAC 33:V.3303.A.1. [Note: condition was renumbered as VI.M.1.f in the final permit as required by Item #121 regarding Comment 157.]

ACTION Condition VI.M.1.f (Condition VI.M.1.g in the draft permit; condition was renumbered as required by Item #121 regarding Comment 157) has been revised in the final permit as follows:

VI.M.1.ef. For those hazardous constituents specified in Table VI-B and VI-C that have been detected as defined in LAC 33:V.3303.A.1 at the point of compliance as a result of a release from the regulated unit, the Permittee shall

provide graphical representation of data pursuant to the statistical method employed for those ~~parameters~~ constituents ~~with MCLs specified in Table VI-B and VI-C for each sampling event.~~ The graphical representation must include:

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ITEM 123

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ISSUE Condition VI.M.2

COMMENT Page 41, Specific Comments: Comment 159

After the first sentence, delete the remainder of the paragraph.

The specified requirements set forth in the condition are not supported by the regulations. See 1529.D. The use of "contaminant" in "contaminant migration rates" is not clear; presumably, this refers to constituents "detected". Corrective Action should be addressed in accordance with Condition VIII, and not under the Annual Groundwater Report.

RESPONSE The Department acknowledges but does not concur with the comment. The condition references the content requirements of the Annual Groundwater Monitoring Report. As noted in previous Department responses (see the Department's responses to Items #28, 29 and 30), corrective action associated with regulated units differs from that of corrective action associated with solid waste management units. It is essential to include information relating to corrective action associated with the Permittee's land disposal units in the Annual Groundwater Monitoring Report.

The condition has been revised in the final permit in order to clarify the meaning of "contaminant migration rates".

ACTION Condition VI.M.2 has been revised in the final permit as follows:

VI.M.2. Annual Groundwater Report

...Applicable calculations must also include groundwater flow contaminant migration rates (for those hazardous constituents that have been detected at the point of compliance or exceeded the groundwater protection standard as a result of a release from the regulated unit); statistical comparisons...

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ITEM 124

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VII.A.8

COMMENT Page 421, Specific Comments: Comment 160

Revise as follows: "... All submittals required under the corrective action strategy must conform to those requirements outlined in the RECAP in accordance with Condition VIII of this permit. Variance from the content and/or formatting guidelines provided under the RECAP shall be requested by the Permittee prior to submittal to the Administrative Authority, as deemed necessary or appropriate as part of the Corrective Action Strategy set forth in Condition VIII."

Information submitted for the Corrective Action Strategy should be made pursuant to objectives and processes set forth in Condition VIII.

RESPONSE The Department acknowledges and concurs with the comment. The requirement has been revised to acknowledge and reference Condition VIII of the permit which includes requirements pertaining to the submittal of corrective action documents.

ACTION Condition VII.A.8 has been revised as follows in the final permit:

VII.A.8. Information Submittal for the Corrective Action Strategy

...Variance from content and/or formatting guidelines provided under the RECAP shall be requested by the Permittee prior to submittal to the Administrative Authority, as deemed necessary or as appropriate as part of the Corrective Action Strategy set forth in Condition VIII of this permit.

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ITEM 125

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VII.A.10

COMMENT Page 42, Specific Comments: Comment 161

Revise the second to last sentence as follows: "Except for remedial measures for solid wastes already approved by the Administrative Authority, the Permittee is required to comply with all applicable requirements of RECAP."

Already approved remedial measures being managed or which have been managed under a prescribed corrective action program are not subject to this requirement.

RESPONSE The Department acknowledges but does not fully concur with the comment. The Department recognizes the Permittee's concern regarding the possibility of the Department requiring additional investigation and/or corrective action activities for areas being managed or which have been managed under a prescribed and previously approved corrective action program. However, the Department also acknowledges that additional activities investigation and/or corrective action may be required.

Therefore, the condition has been revised to specify that the condition will only apply to previously-approved remedial measures and/or corrective action activities when warranted by new information and/or data (not available to the Administrative Authority at the time it rendered decisions regarding the specific measures and/or activities) relevant to the previously-approved remedial measures and/or corrective action activities.

ACTION Condition VII.A.10 has been revised in the final permit by including a note at the end of the text of the conditions which reads:

[Note: Condition VII.A.10 is applicable to previously-approved remedial measures and/or corrective action activities only when warranted by new information and/or data (not available to the Administrative Authority at the time it rendered decisions regarding the specific measures and/or activities) relevant to the previously-approved remedial measures and/or corrective action activities.

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ITEM 126

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VIII.A.1

COMMENT Page 1, Specific Comments: Comment 162

Substitute "will" for "need" in the following sentence: "However, the CAS need not be applied to work that is already been completed to satisfaction of the administrative authority."

Work that is already completed to the satisfaction of the Administrative Authority should be recognized as final.

RESPONSE The Department acknowledges but does not concur with the comment. The potential exists for work completed under previously-approved remedial measures and/or corrective action to be reevaluated if new information or data becomes available that was not available at the time the work was completed or the decisions were rendered. Therefore, this condition has been left flexible by the use of the tem "need not" as opposed to "will not". See the Department's response on Item #125 regarding Comment 161.

ACTION No action required. The final permit has not been revised.

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ITEM 127

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VIII.A.4

COMMENT Page 42, Specific Comments: Comment 163

Revise the first part of the provision as follows: "Section 3004(v) of RCRA as amended by HSWA, and State regulations promulgated as LAC 33:V.3322.C. require corrective actions beyond facility property boundary, as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which the waste was placed in the unit, unless the Permittee demonstrates that, despite the Permittee's best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions."

The condition should be consistent with LAC 33:V.3322 and the RCRA statute.

RESPONSE The Department acknowledges but does not concur with the comment. The title of the condition is "Corrective Action for Releases Beyond Facility Boundary" and the text of the condition closely mirrors the wording of LAC 33:V.3322.C. The additional text, "for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which the waste was placed in the unit" suggested by the Permittee precedes LAC 33:V.3322, which pertains to obligation of the Permittee to implement corrective actions beyond the facility boundary. Therefore, the Department finds no just cause to revise the conditions as suggested by the Permittee in its comment.

ACTION No action required. The final permit has not bee revised.

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REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VIII.D

COMMENT Page 43, Specific Comments: Comment 164

Revise the third paragraph as follows: "The Administrative Authority reserves the right to require revisions to the CSM based upon data resulting from ongoing investigations and activities that is significantly different from data previously considered by the Administrative Authority. Revisions to the CSM may also be required for newly identified SWMUs or AOCs according to Condition VIII.L of this permit (See Appendix 1, Ongoing Corrective Action) and based on new information and information not previously considered by the Administrative Authority."

Data resulting from ongoing investigations and activities that is not significantly different from data already considered by the Administrative Authority should not be a basis upon which to require revisions to the CSM.

RESPONSE The Department acknowledges but does not concur with the comment. While the Department will only revisit previous corrective action approvals and/or decisions when warranted by new information or data, the CSM is intended to evolve through time based on the latest site-specific conditions. Therefore, the CSM must remain a flexible document and must be revised, as necessary, based upon available data.

ACTION No action required. The final permit has not been revised.

RESPONSIVENESS SUMMARY
THE DOW CHEMICAL COMPANY (DOW) - PLAQUEMINE FACILITY
HAZARDOUS WASTE OPERATING PERMIT
PERMIT NUMBER LAD008187080-OP-1-RN-1
AGENCY INTEREST #1409

ITEM 129

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VIII.I.5

COMMENT Page 43, Specific Comments: Comment 165

Renumber Section VIII.I.5 to include VIII.I.5.c.

RESPONSE The Department acknowledges and concurs with the comment. The outline sequence of Condition VIII.I.5 has been renumbered to include VIII.I.5.c.

ACTION The numbering of Condition VIII.I.5 has been corrected in the final permit.

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ITEM 130

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Condition VIII.K.4 (*note: the comment erroneously referenced Condition VIII.L but the correct reference was Condition VIII.K.4)*

COMMENT Page 43, Specific Comments: Comment 166

Revise as follows: "A determination of NFA-ATT shall not preclude ...at a later date, if new information or subsequent analysis which could not have been made at the time of the NFA-ATT determination, indicates that a release or likelihood of a release ..."

A NFA-ATT should result in no further action required unless there is information and analysis that was not available at the time of the determination.

RESPONSE The Department acknowledges and concurs with the comment. The requirement has been revised but with wording that differs from that suggested by the Permittee.

ACTION Condition VIII.K.4 has been revised in the final permit as follows:

VIII.K.4. Additional Investigations

A determination of NFA-ATT shall not preclude the Administrative Authority from requiring further investigations, studies, or remediation at a later date, if new information, data or subsequent analysis (not available to the Administrative Authority at the time the NFA-ATT determination was rendered) indicates a release or likelihood of a release from a SWMU/AOC at the facility that is likely to pose a threat to human health and/or the environment. In such a case, the Administrative Authority shall initiate a modification to the Permit according to LAC 33:V.321.

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ITEM 131

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Appendix 1: Summary of Corrective Action Activities, Historical Background

COMMENT Pages 43 & 44, Specific Comments: Comment 167 & 168

Add the following language: "None of these units were listed as regulated under RCRA in the RFA. EPA Region VI subsequently issued the facility's HSWA permit in 1989, the content of which reflected that all of the units other than Block 49 (SWMU #39) were addressed during the permitting process."

Delete the following language: "In order to reconcile historical and ongoing onsite corrective action activities with the 1986 RFA, Dow must provide response information demonstrating that comments included in the RFA have been adequately addressed for the following SWMUs: #1, #2, #21, #23, #32, #33, and #34."

Information in connection with the 1986 RFA has been submitted to the Department and should be acknowledged in Appendix 1, pp. 134-135 of Draft Permit. Dow submits that no further resolution of the 1986 RFA is required. While the RFA identified several units for which either additional information/data, additional investigation, or activities were requested, none of these units were listed as regulated under RCRA in the RFA. Additionally, the recommended actions for these units were associated primarily with waste stream characterization, regulatory status determination, housekeeping and verification of clean closure through review of existing data. Following the RFA, EPA Region VI subsequently issued the facility's HSWA permit in 1989, the content of which reflected that all of the units other than Block 49 (SWMU #39) were addressed during the permitting process. In its normal course of business and as reflected in subsequent permitting activities, the facility considered these units to have been addressed to the regulatory authority's satisfaction. Dow attaches hereto and resubmits the information previously provided to the permit writer on July 22, 2008.

RESPONSE The Department acknowledges but does not concur with the comment. See the Department's response to Item #15 regarding Comment 14.

ACTION No action required. The final permit has not been revised.

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ITEM 132

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Appendix 1: Summary of Corrective Action Activities; Corrective Action Sites; Lighthouse Road

COMMENT Page 44, Specific Comments: Comment 169

Revise the first sentence of the last paragraph under "Lighthouse Road" as follows: "At the request of the Administrative Authority and pursuant to a Supplemental Groundwater Plan, Dow performed sampling of the multiple depths of the Plaquemine Aquifer at locations in the vicinity of the Lighthouse Road site, including a location upgradient of the site."

The revision more accurately describes the activities conducted. See Supplemental Groundwater Sampling in the Vicinity of the Lighthouse Road Site (February 2007), and Plan, January 2004; Lighthouse Road Corrective Action Plan Implementation Report (February 2007), Plan (January 2004), and Plan approval (May 2004).

Dow submits that the referenced contamination detected in the Plaquemine Aquifer in the vicinity of the Lighthouse Road Site does not result from Dow's activities or operations.

RESPONSE The Department acknowledges and concurs with the comment. The description of "Lighthouse Road" included in Appendix 1 has been revised as suggested by the Permittee in its comment

ACTION Appendix 1: Summary of Corrective Action Activities; Corrective Action Sites; the third paragraph of the "Lighthouse Road" summary has been revised in the final permit as follows:

At the request of the Administrative Authority and pursuant to a Supplemental Groundwater Plan, Dow performed sampling of the multiple depths of the Plaquemine Aquifer at locations in the vicinity of the Lighthouse Road site, including a location upgradient of the site. Dow performed sampling of multiple depths of the Plaquemine Aquifer around the excavation. Data from this sampling was submitted in a document titled "Supplemental Groundwater Sampling in the Vicinity of the Lighthouse Road Site" dated March 1, 2007. Volatile organic compounds were detected above the maximum contaminant levels (MCLs).

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ITEM 133

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Appendix 1, Table 1: Summary of Corrective Action Activities; Additional CAS-Related Corrective Action Submittals and Requirements

COMMENT Page 44, Specific Comments: Comment 170

Add the following language at the end the section: "Those areas for which implementation of the corrective action remedy corresponds to the implementation of the Risk Management Plan in the CAS process will not be subject to steps in the CAS process which are preliminary to the Risk Management Plan implementation, and those areas for which a NFA-ATT determination has been issued will not be subject to steps in the CAS process which are preliminary to a NFA -ATT determination."

RESPONSE The Department acknowledges but does not fully concur with the comments. New text has been added to the end section as suggested by the Permittee. However, the new text contains wording that differs from that suggested by the Permittee. As noted in the Department response to Item #130 regarding Comment 166, the Department may require additional investigations, studies, or remediation at a later date, if new information, data or subsequent analysis (not available to the Administrative Authority at the time the NFA-ATT determination was rendered) indicates a release or likelihood of a release from a SWMU/AOC at the facility.

ACTION Appendix 1: "Summary of Corrective Action Activities" has been revised in the final permit to include new text that appears as the last paragraph and which reads:

"Those areas for which implementation of the corrective action remedy corresponds to the implementation of the Risk Management Plan in the CAS process will not be subject to steps in the CAS process which are preliminary to the Risk Management Plan implementation. Those areas for which a NFA-ATT determination has been issued will not be subject to steps in the CAS process which are preliminary to a NFA-ATT determination unless warranted by new information, data, and/or analytical results that was not available to the Administrative Authority at the time of the determination."

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ITEM 134

REFERENCE Comments on the Behalf of The Dow Chemical Company on the Draft Hazardous Waste Operating Renewal Permit

ISSUE Appendix 1, Table 1: Summary of Corrective Action Activities;

COMMENT Page 45, Specific Comments: Comments 171 and 172

(Comment 171) Revise the first sentence of the third paragraph under the second column (AOCs/SWMU/Release Area Description) for Lighthouse Road (Corrective Action Site) at page 146: "At the request of the Administrative Authority and pursuant to a Supplemental Groundwater Plan, Dow performed sampling of multiple depths of the Plaquemine Aquifer at locations in the vicinity of the Lighthouse Road site, including a location up gradient of the site."

(Comment 172) Revise the first paragraph and delete the second paragraph under the third column (Status of CA Activity) for Lighthouse Road (Corrective Action Site) at page 146: "Corrective action activities were conducted pursuant to the Lighthouse Road RECAP Assessment and Corrective Action Plan. A NFA-ATT for soils has been issued."

The revisions more accurately describe the activities conducted. See Comments to Appendix 1 above.

Dow submits that the referenced contamination detected in the Plaquemine Aquifer in the vicinity of the Lighthouse Road Site does not result from Dow's activities or operations.

RESPONSE The Department acknowledges but does not fully concur with the comments. The Department revised the first sentence of the third paragraph under the second column (AOCs/SWMU/Release Area Description) to include the new text as suggested by the Permittee in Comment 171.

In regards to Comment 172, the Department agreed to the revised text for the first paragraph under the third column (Status of CA Activity) as suggested by the Permittee. However, the Department did not find just cause to delete the second paragraph under the third column (Status of CA Activity) as suggested by the Permittee. The paragraph remains in the final permit.

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ACTION

Appendix 1, Table 1: Summary of Corrective Action Activities includes the following revisions in the final permit:

- Lighthouse Road: the first sentence of the third paragraph under the second column (AOCs/SWMU/Release Area Description) has been revised to read:

  "At the request of the Administrative Authority, and pursuant to a Supplemental Groundwater Plan, Dow performed sampling of multiple depths of the Plaquemine Aquifer at locations in the vicinity of the Lighthouse Road site, including a location up gradient of the site."

- Lighthouse Road: the first paragraph under the third column (Status of CA Activity) has been revised to read:

  "Corrective action activities were conducted pursuant to the Lighthouse Road RECAP Assessment and Corrective Action Plan. A NFA-ATT for soils has been issued."