



**Kentucky Energy and Environment Cabinet
Department for Environmental Protection
Division of Waste Management**

PERMIT

**Facility: U.S. Department of Energy - Paducah Gaseous Diffusion Plant
5501 Hobbs Rd
Kevil, KY 42053**

**Permittee (Owner): U.S. Department of Energy
5501 Hobbs Rd
Kevil, KY 42053**

**Permittee (Operator): Four Rivers Nuclear Partnership, LLC
5511 Hobbs Rd
Kevil, KY 42053**

**Agency Interest: Dept. of Energy-Paducah Gaseous Diffusion Plant
5501 Hobbs Rd
Kevil, KY 42053**

The Division has issued the permit under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. This permitted activity or activities are subject to all conditions and operating limitations contained herein. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses or approvals required by this Division or other state and local agencies.

No deviation from the plans and specifications submitted with your application or any condition specified herein is allowed, unless authorized in writing from the Division. Violation of the terms and conditions specified herein may render this permit null and void. All rights of inspection by representatives of the Division are reserved. Conformance with all applicable Waste Management Regulations is the responsibility of the permittee.

Agency Interest ID #: 3059

Solid Waste Permit #: SW07300015, SW07300045, SW07300014

County: McCracken

Permitted Activities:

Subject Item	Activity	Type	Status
ACTV004	Residential Landfill/07300014	Closure Activities Only	Post-closure
ACTV005	Inert Landfill/07300015	Closure Activities Only	Post-closure
ACTV006	Contained Landfill/07300045	Construction/Operation	Active

PERMIT

Acreage Summary:

Waste Disposal Area (in Acres):

Activity	Disposal Area
Contained Landfill	22.10
Inert Landfill	10.50
Residential Landfill	3.90
Total Disposal Area	36.50
Total Permitted Area	100.00

Cost Estimate Summary:

Coverage Type	Cost Estimate	Effective	Comments
N/A			

Financial Assurance Summary:

The owner or operator shall maintain the following financial assurance approved by the Division in compliance with KRS Chapter 224.40-650, KRS Chapter 224.50-862, 401 KAR 45:080, and 401 KAR 48:310:

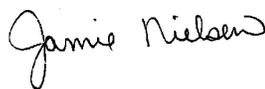
Instrument Type	Instrument Number	Amount	Date Received	Comments
N/A				

First Operational Permit Effective Date: 11/04/1996 -- Contained Landfill

Permit Effective Date: 11/05/2016

Permit Expiration Date: 11/04/2026

Permit issued: 05/08/2019

 for

Danny Anderson, P.E.
Manager, Solid Waste Branch

PERMIT

Permit Conditions:**Subject Items****ACTV0004 - Residential Landfill****Variations, Alternate Specifications and Special Conditions:**

1. C-746-S Landfill: This permit is for the post-closure care, groundwater monitoring, groundwater assessment, and- if necessary- groundwater corrective action of the C-746-S Residential Landfill. [401 KAR 47:120 Section 2, 401 KAR 48:300 Section 8]
2. C-746-S Landfill: The permittee shall complete closure and post-closure activities at this landfill in accordance with the approved plans and applications. The landfill cap and surface water control structures shall be maintained as necessary to: 1) maintain positive drainage; 2) prevent the growth of weeds, trees, and woody plants on the landfill cap; 3) protect the integrity of the low permeability layer; and 4) ensure compliance with the environmental performance standards of 401 KAR 47:030 and the requirements of KRS 224 and the administrative regulations issued pursuant thereto. [401 KAR 47:120 Section 2]
3. The permittee shall test the C-746-S Landfill leachate annually for the parameters listed in 401 KAR 48:300 Section 11(3), minus 2-Chlorovinyl Ethyl Ether, Dichlorodifluoromethane, Ethyl Alcohol, and Ethyl Methacrylate, plus the following: Aluminum, Boron, Bromide, Calcium, Cyanide, Eh, Fluoride, Gross Alpha, Gross Beta, Iodide, Magnesium, Manganese, Molybdenum, Dissolved Oxygen, PCBs, Potassium, Radium-226, Rhodium, Strontium-90, Sulfate, Tantalum, Technetium-99, Thorium-230, Tritium, and Uranium (total). Samples shall not be filtered. The leachate shall be thoroughly agitated in the tank(s) prior to sampling in order to ensure representative samples. [401 KAR 47:120 Section 2]

Approved Applications - The owner or operator shall comply with applicable statutes and regulations and the following approved applications:

1. 04/09/81 - Application
2. 07/03/89 - Application
3. 11/05/90 - Application
4. 04/12/93 - APE19930003 - Closure Plan
5. 02/21/95 - APE19900002 - Closure Plan
6. 08/09/95 - APE19890001 - Closure Plan
7. 03/04/96 - APE19990001 - Closure Plan
8. 03/04/96 - APE19930004 - Closure Plan
9. 03/04/96 - APE19910003 - LR1 PR1 - Permit Renewal
10. 03/04/96 - APE19910001 - Closure Plan
11. 03/06/96 - APE19900003 - Closure Plan
12. 04/25/01 - APE19980002 - LR1 PR2 - Permit Renewal
13. 02/01/01 - APE20000002 - Plan for Abandonment and Replacement of Monitoring Wells
14. 03/14/02 - APE20010002 - LI1MOGW1 - Groundwater Monitoring Plan
15. 02/16/06 - APE20030005 - Permit Renewal
16. 03/16/06 - APE20060003 - Minor Modification - TEMPO permit revision
17. 03/20/06 - APE20060003 - Minor Modification - Updated TEMPO permit revision
18. 04/24/06 - APE20060005 - Minor Modification - Add Paducah Remediation Services, LLC (operator)

PERMIT

19. 05/24/07 - APE20060007 - Permit Renewal
20. 06/12/07 - APE20060007 - Revised Permit Issued to replace 5/24/07 permit issued
21. 07/11/07 - APE20060007 - Revised Permit Issued to replace 06/12/07 permit issued
22. 11/20/08 - APE20080002 - Groundwater and Surface Water Monitoring Plan Modification
23. 07/28/10 - APE20100005 - Permit Modification to Remove PRS from Permit and Add LATA to Permit
24. 08/02/10 - APE20100005 - Revised Permit Issued to replace 07/28/10 permit issued
25. 01/25/12 - APE20110004 - Groundwater Monitoring Modification - Remove Iodine-131 parameter
26. 09/05/14 - APE20130007 - Groundwater Monitoring Plan
27. 07/21/15 - APE20150001 - Permit Modification to Remove LATA from Permit and Add FFS to Permit (effective 7-26-15)
28. 09/09/16 - APE20160002 - Permit Renewal
29. 09/28/17 - APE20170004 - Permit Modification to Remove Fluor Federal Services Inc. from Permit and Add Four Rivers Nuclear Partnership LLC to Permit as Operator (effective 10-20-17)
30. 06/12/18 - APE20180001 - Minor Modification - Upgrade to Leachate Collection and Treatment System
31. 07/11/18 - APE20180001 - Revised Permit Issued to replace 6/12/18 permit issued

ACTV0005 - Inert Landfill**Variations, Alternate Specifications and Special Conditions:**

1. C-746-T Landfill: This permit is for the post-closure care, groundwater monitoring, groundwater assessment, and- if necessary- groundwater corrective action of the C-746-T Inert Landfill. [401 KAR 47:120 Section 2, 401 KAR 48:300 Section 8]
2. C-746-T Landfill: The permittee shall complete closure and post-closure activities at this landfill in accordance with the approved plans and applications. The landfill cap and surface water control structures shall be maintained as necessary to: 1) maintain positive drainage; 2) prevent the growth of weeds, trees, and woody plants on the landfill cap; 3) protect the integrity of the low permeability layer; and 4) ensure compliance with the environmental performance standards of 401 KAR 47:030 and the requirements of KRS 224 and the administrative regulations issued pursuant thereto. [401 KAR 47:120 Section 2]

Approved Applications - The owner or operator shall comply with applicable statutes and regulations and the following approved applications:

1. 01/25/85 - Application
2. 02/05/85 - Application
3. 04/25/01 - APE19980001 - LI1PR2 - Permit Renewal
4. 02/01/01 - APE20000003 - Plan for Abandonment and Replacement of Monitoring Wells
5. 03/14/02 - APE20010003 - LI1MOGW1 - Groundwater Monitoring Plan
6. 02/16/06 - APE20020005 - Permit Renewal
7. 03/16/06 - APE20060003 - Minor Modification - TEMPO permit revision
8. 03/20/06 - APE20060003 - Minor Modification - Updated TEMPO permit revision
9. 04/24/06 - APE20060005 - Minor Modification - Add Paducah Remediation Services, LLC (operator)
10. 05/24/07 - APE20060007 - Permit Renewal
11. 06/12/07 - APE20060007 - Revised Permit Issued to replace 5/24/07 permit issued
12. 07/11/07 - APE20060007 - Revised Permit Issued to replace 06/12/07 permit issued
13. 11/20/08 - APE20080002 - Groundwater and Surface Water Monitoring Plan Modification
14. 07/28/10 - APE20100005 - Permit Modification to Remove PRS from Permit and Add LATA to Permit

PERMIT

15. 08/02/10 - APE20100005 - Revised Permit Issued to replace 07/28/10 permit issued
16. 01/25/12 - APE20110004 - Groundwater Monitoring Modification - Remove Iodine-131 parameter
17. 09/05/14 - APE20130007 - Groundwater Monitoring Plan
18. 07/21/15 - APE20150001 - Permit Modification to Remove LATA from Permit and Add FFS to Permit (effective 7-26-15)
19. 09/09/16 - APE20160002 - Permit Renewal
20. 09/28/17 - APE20170004 - Permit Modification to Remove Fluor Federal Services Inc. from Permit and Add Four Rivers Nuclear Partnership LLC to Permit as Operator (effective 10-20-17)

ACTV0006 - Contained Landfill**Standard Requirements:**

1. General: The owner or operator of a solid waste site or facility shall comply with KRS Chapter 224 and 401 KAR Chapters 30, 40, 47 and 48 and the approved applications. [KRS 224.40-305, KRS 224.40-310]
2. Permit Renewal: The owner or operator of a solid waste facility shall submit a permit application for renewal at least 180 days prior to permit expiration unless permission for a later date has been granted in writing by the Cabinet. [401 KAR 47:160 Section 5(2), KRS 224.40-310(14)]
3. General: The owner or operator may only accept waste as authorized by the Cabinet pursuant to KRS Chapter 224 from the approved sources. [401 KAR 47:080 Section 2(1), 401 KAR 47:170 Section 2(11)]
4. Recordkeeping: The owner or operator shall conduct an annual survey to determine the remaining landfill volume which may be used for waste disposal. The quantity of waste disposed per day shall be determined by dividing the total waste received in one (1) year by 365 calendar days. This survey shall bear the seal and signature of the registered professional land surveyor or licensed professional engineer who performed the survey. The owner or operator shall submit the annual survey to the Cabinet by July 1 of each year. The annual survey shall contain the following information: Cross-sections on 100 foot intervals or other approved method showing current waste placement and proposed final contours and remaining capacity in cubic yards. [401 KAR 47:190 Section 8(2)]
5. Recordkeeping: The owner or operator shall submit a report detailing the source, disposal location and quantity of any spill residues and limited quantity generator hazardous wastes, and records as to the source and quantity of all other wastes disposed of at the contained landfill. The report may be submitted each quarter with the operating report or annually with the fourth quarter operating report. [401 KAR 47:120 Section 2, 401 KAR 47:190 Section 8(5)]
6. Working Face: The owner or operator shall not place an initial lift containing any object that may damage the bottom liner. [401 KAR 48:090 Section 10(3)]
7. Cover: The owner or operator may use soil for daily cover. Soil or any approved alternate cover must be applied in accordance with 401 KAR 48:090, Section 4 at the end of each operating day. [401 KAR 47:120 Section 2, 401 KAR 48:090 Section 4(1)]

Variations, Alternate Specifications and Special Conditions:

1. Monitoring: The permittee shall test the C-746-U Landfill leachate annually for the parameters listed in 401

PERMIT

KAR 48:300 Section 11(3), minus 2-Chlorovinyl Ethyl Ether, Dichlorodifluoromethane, Ethyl Alcohol, and Ethyl Methacrylate, plus the following: Aluminum, Boron, Bromide, Calcium, Cyanide, Eh, Fluoride, Gross Alpha, Gross Beta, Iodide, Magnesium, Manganese, Molybdenum, Dissolved Oxygen, PCBs, Potassium, Radium-226, Rhodium, Strontium-90, Sulfate, Tantalum, Technetium-99, Thorium-230, Tritium, and Uranium (total). Samples shall not be filtered. The leachate shall be thoroughly agitated in the tank(s) prior to sampling in order to ensure representative samples. [401 KAR 47:120 Section 2]

2. Operation: The leachate collection system shall include tanks capable of storing at least fifteen (15) days volume of leachate. A quarterly log of the volume, method, and place of disposal of the leachate shall be maintained, and shall be made available for review by Cabinet representatives upon request. [401 KAR 48:080 Section 6(4)(f)]

3. Recordkeeping: Groundwater, surface water, and methane samples shall be taken quarterly and the results submitted to the Cabinet according to the following schedule [401 KAR 48:300 Section 11(3)]:

First Quarter samples: Results due May 30

Second Quarter samples: Results due August 30

Third Quarter samples: Results due November 30

Fourth Quarter samples: Results due February 28.

4. Monitoring: The permittee shall comply with all requirements of 401 KAR 48:300 and the Surface Water Monitoring Plan. Except as otherwise provided by statute, the requirements of 401 KAR 48:300 Section 8, Subsections 8, 9, 11, 12, 13, and 14 shall not apply to statistical exceedences of radionuclides, Uranium, and Technetium-99. However, in the event that a statistically significant increase of these contaminants occurs, the permittee shall perform a complete Groundwater Contamination Assessment as required by 401 KAR 48:300 Section 8. [401 KAR 48:300 Section 8, 401 KAR 47:120 Section 2]

5. Operation: The leachate recirculation shall occur only at the working face. A leachate transfer tank shall be used to discharge leachate into a hole excavated into the waste. No more than 1,600 gallons per day shall be recirculated. The discharge shall be restricted to sunny days. Recirculation shall not occur during periods of high winds, freezing temperatures, following rainfall events, or at night. No leachate shall be applied to waste that is less than ten (10) feet thick. Leachate recirculation shall be performed in accordance with the approved application, APE20110003. [401 KAR 47:120 Section 2]

6. Operation: In accordance with approved plan APE20040005, the landfill leachate treatment facility shall only accept leachate from the C-746-U and C-746-S landfills at the Paducah Gaseous Diffusion Plant. [401 KAR 47:120 Section 2]

7. Leachate from the C-746-U Contained Landfill may be treated in the C-746-U-15 onsite treatment facility or in the C-615, C-752-A, or C-753-A treatment facilities which are located outside the landfill permit boundary. The permittees shall provide the Division of Waste Management (Solid Waste Branch) at least two hours' advance notice prior to removing leachate from the C-746-U Landfill site for transport to the C-615, C-752-A, or C-753-A treatment facilities. Records showing the quantity and concentration of leachate removed from the U-Landfill site, where disposed, and the method of disposal shall be submitted in the quarterly operating report pursuant to 401 KAR 47:190 Section 8(1)(e). [401 KAR 47:120 Section 2]

8. Cover: The owner or operator may use synthetic cover equivalent to Belton 113 as alternate daily cover (ADC). The fabric must be maintained in relatively untoned and good condition and the edges must be covered

PERMIT

with dirt, sandbags or other suitable material (whole tires are not allowed) to hold down the fabric against the wind and to prevent vector attraction. The owner or operator must eliminate boards, pipes and similar tear hazards before covering the solid waste with the fabric and must use the ADC in accordance with the approved applications. [401 KAR 48:090 Section 4(1)]

9. Cover: The owner or operator may use Posi-Shell as alternate daily cover (ADC) in accordance with the APE20120004 approved permit application. The owner or operator shall use the ADC in accordance with the manufacturer's application guidance. In addition, the owner or operator shall use best management practices to prevent erosion of the material and shall control any runoff containing sediment from the ADC material. [401 KAR 48:090 Section 4(1)]

10. Recordkeeping: The owner or operator shall submit an operating report quarterly, by the 15th of January, April, July, and October, which contains 1) construction activities, 2) description of compliance with cover requirements including any approved alternate daily cover materials, 3) the quantity of leachate removed from the site, where disposed, and the method of disposal and concentration of the leachate using the appropriate parameters from Section 10(3) of 401 KAR 48:300, and 4) data and results for other site specific permit conditions. [401 KAR 47:190 Section 8]

11. General: The maximum extent of operation that may be open at any time during the active life of the landfill is 22.10 acres. [401 KAR 48:070 Section 15(2)(b)]

12. Recordkeeping: The owner or operator shall submit a completed and signed Waste Quantity Report (WQR) quarterly containing the volume of waste received from each source on a form provided by the Cabinet (DEP Form 7046-Q). Per the April 18, 2017 Notice, the owner or operator has a fifteen (15) day grace period; the WQR is due by the 30th of each month following the end of the quarter. [401 KAR 47:190 Section 8]

13. Wastestreams: The C-746-U Contained Landfill may accept for disposal only: 1) non-hazardous solid waste generated by, or on behalf of the United States Department of Energy (USDOE), on the USDOE-owned Paducah Gaseous Diffusion Plant (PGDP); 2) non-hazardous solid waste generated offsite from the DOE-owned PGDP as a result of environmental restoration/management activities (e.g., corrective action, removal action, remedial action, investigations, and/or monitoring) conducted by, or on behalf of, USDOE, associated with releases or potential releases from the PGDP; and 3) any non-hazardous residuals generated from the treatment or analysis of PGDP waste. The C-746-U Landfill may accept for disposal all non-hazardous solid waste including residential, commercial, institutional, industrial, and municipal waste, shredded tires, and non-hazardous spill cleanup residue. The technical requirements for contained landfills are found in 401 KAR 48:050 and 401 KAR 48:070 through 401 KAR 48:090. [401 KAR 47:080 Section 2(1), 401 KAR 47:120 Section 2]

Approved Applications - The owner or operator shall comply with applicable statutes and regulations and the following approved applications:

1. 02/28/95 - APE19930001 - LC1 NW 1 - Construction Permit
2. 01/19/96 - APE19950001 - LC1 MOMN1 - Minor Modification
3. 11/04/96 - APE19930001 - Construction/Operating Permit
4. 01/03/97 - Unnumbered Minor Modification
5. 02/01/01 - LC1 MOGW1 - APE20000002 - Well Corrosion Study Work Plan
6. 02/01/01 - LC1 MOGW2 - APE20000003 - Plan for Abandonment & Replacement of Monitoring Wells
7. 02/01/01 - LC1 MOMN2 - APE20000001 - Minor Modification

PERMIT

8. 01/04/02 - LC1 MOGW3 - Groundwater Monitoring Plan
9. 10/08/02 - Conditional Reopening of the Landfill
10. 10/03/03 - LC1 MOMN 3 and parts of LC1 MOMJ1 - Minor Modification and Part of Major Modification - Waste Acceptance Criteria
11. 07/14/04 - APE20010001 - LC1MOMJ1 - Major Modification - Waste Acceptance Criteria
12. 02/16/06 - APE20040005 - Minor Modification - Leachate Treatment Facility
13. 03/13/06 - APE20060002 - Minor Modification - Waste Acceptance Criteria
14. 03/16/06 - APE20060003 - Minor Modification - TEMPO permit revision
15. 03/20/06 - APE20060003 - Minor Modification - Updated TEMPO permit revision
16. 04/24/06 - APE20060005 - Minor Modification - Add Paducah Remediation Services, LLC (operator)
17. 05/24/07 - APE20060007 - Permit Renewal
18. 06/12/07 - APE20060007 - Revised Permit Issued to replace 5/24/07 permit issued
19. 07/11/07 - APE20060007 - Revised Permit Issued to replace 06/12/07 permit issued
20. 02/12/08 - APE20060011 - Leachate Storage Capacity Minor Modification
21. 02/13/08 - AIN20070003 - Groundwater Contamination Assessment Plan
22. 11/20/08 - APE20080003 - Minor Modification - Revised HELP Model and Leachate Tank Design
23. 11/20/08 - APE20080002 - Groundwater and Surface Water Monitoring Plan Modification
24. 03/08/10 - APE20100001 - Construction Progress Report - Leachate Tank Installation - Approval pursuant to drawing numbers C7DC7460UA002 and S7DC7460UA001
25. 07/28/10 - APE20100005 - Permit Modification to Remove PRS from Permit and Add LATA to Permit
26. 08/02/10 - APE20100005 - Revised Permit Issued to replace 07/28/10 permit issued
27. 04/21/11 - APE20100003 - Minor Modification - Operational and Recordkeeping Changes
28. 01/25/12 - APE20110001 - Minor Modification - Working Face Procedures
29. 01/25/12 - APE20110003 - Minor Modification - Leachate Recirculation
30. 01/25/12 - APE20110004 - Groundwater Monitoring Modification - Remove Iodine-131 parameter
31. 03/30/12 - APE20100007 - Minor Modification - Revised Technical Application, Attachments 1, 5, 16, 22, and 26
32. 07/20/12 - APE20120004 - Minor Modification - Posi-Shell Alternate Daily Cover
33. 09/11/13 - AIN20090008 - Groundwater Contamination Assessment Report
34. 01/07/14 - APE20130005 - Minor Modification - Leachate Collection System
35. 09/05/14 - APE20130007 - Groundwater Monitoring Plan
36. 09/05/14 - APE20140005 - Minor Modification - Leachate Collection and Treatment System
37. 07/21/15 - APE20150004 - Construction Progress Report - Leachate Collection and Treatment System
38. 07/21/15 - APE20150001 - Permit Modification to Remove LATA from Permit and Add FFS to Permit (effective 7-26-15)
39. 09/09/16 - APE20160002 - Permit Renewal
40. 09/28/17 - APE20170004 - Permit Modification to Remove Fluor Federal Services Inc. from Permit and Add Four Rivers Nuclear Partnership LLC to Permit as Operator (effective 10-20-17)
41. 06/12/18 - APE20180001 - Minor Modification - Upgrade to Leachate Collection and Treatment System
42. 07/11/18 - APE20180001 - Revised Permit Issued to replace 6/12/18 permit issued
43. 05/08/19 - APE20190002 - Minor Modification - Decommissioning Landfill Service Building C-746-S1

PERMIT

Financial Assurance**ACTV0002 - Financial Assurance**

The following is a history of the financial assurance for this facility:

Cost Estimates and Financial Assurance holdings are not applicable for this site.

Monitoring Conditions**GSTR0001 - Groundwater Monitoring - SW: 073-00045 C-746-U LF
Groundwater Monitoring Group**

Group Members: STRC0003 - Well MW-357; STRC0004 - Well MW-358; STRC0005 - Well MW-359; STRC0006 - Well MW-360; STRC0007 - Well MW-361; STRC0008 - Well MW-362; STRC0009 - Well MW-363; STRC0010 - Well MW-364; STRC0011 - Well MW-365; STRC0012 - Well MW-366; STRC0014 - Well MW-367; STRC0015 - Well MW-368; STRC0016 - Well MW-371; STRC0017 - Well MW-372; STRC0018 - Well MW-375; STRC0019 - Well MW-376; STRC0020 - Well MW-377; STRC0021 - Well MW-369; STRC0022 - Well MW-370; STRC0023 - Well MW-373; STRC0024 - Well MW-374

Standard Requirements:

1. The owner or operator shall satisfy the requirements of 401 KAR 48:300 for all wastes (or constituents thereof) contained in waste management units at the facility regardless of the time waste was placed in such unit. [401 KAR 48:300 Section 1]
2. The owner or operator shall monitor groundwater on the approved schedule at each approved groundwater monitoring location in accordance with 401 KAR 48:300, the permit, and the approved plans. A table summarizing the parameters to be monitored, their respective limits and monitoring frequency is included herein. [401 KAR 48:300, 401 KAR 47:120 Section 1]
3. The owner or operator shall conduct statistical analysis of the groundwater data in accordance with 401 KAR 48:300 Section 9 and the approved applications. The statistical test chosen shall be conducted separately for each parameter in each well for each monitoring event. The results shall be maintained as part of the facility record throughout the operating and post-closure life of the facility. [401 KAR 48:300 Section 9, 401 KAR 47:120 Section 1]
4. Metal criteria shall be total metals to be measured in an unfiltered sample. [401 KAR 47:030 Section 6(1)]
5. If the analysis of groundwater sample results indicates contamination (i.e., a statistical or MCL exceedence) as specified in 401 KAR 48:300 Section 8(1), the owner or operator shall notify the Cabinet within (forty-eight) 48 hours of receiving the results and shall arrange to split samples no later than ten (10) days from the receipt of the results. [401 KAR 48:300 Section 7]
6. The owner or operator shall be required to prepare and submit a groundwater contamination assessment plan if laboratory analyses of one (1) or more monitoring wells at the site shows the presence of one (1) or more

PERMIT

parameters above the maximum contaminant level (MCL) as specified in 401 KAR 47:030 or a statistically significant increase over background levels for parameters that have no MCL. [401 KAR 48:300 Section 8, 401 KAR 47:120 Section 1]

7. The owner or operator shall provide alternate water supplies to all affected parties within twenty-four (24) hours of notification of the Cabinet that sample results indicate contamination of a drinking water supply if it has been determined that the site or facility is the probable source of the contamination. [401 KAR 48:300 Section 8]

8. If required by the Cabinet, groundwater contamination assessment and corrective action shall be performed in full compliance with all provisions of 401 KAR 48:300 Section 8. [401 KAR 48:300 Section 8]

Variations, Alternate Specifications and Special Conditions:

1. At each approved groundwater monitoring location, the permittee shall monitor quarterly for the parameters listed in 401 KAR 48:300 Section 11(3), minus 2-Chlorovinyl Ethyl Ether, Dichlorodifluoromethane, Ethyl Alcohol, and Ethyl Methacrylate, plus the following: Aluminum, Boron, Bromide, Calcium, Cyanide, Eh, Fluoride, Gross Alpha, Gross Beta, Iodide, Magnesium, Manganese, Molybdenum, Dissolved Oxygen, Potassium, Radium, Rhodium, Strontium-90, Sulfate, Tantalum, Technetium-99, Thorium-230, Tritium, Uranium (total) and Polychlorinated Biphenyls. Metals samples shall not be filtered. [401 KAR 47:120 Section 2, 401 KAR 48:300 Section 11(3)]

2. Groundwater monitoring wells shall be constructed and maintained in accordance with 401 KAR 48:300 Section 6, 401 KAR 6:350, the permit, and the approved plans. [401 KAR 47:120 Section 1, 401 KAR 48:300 Section 6, 401 KAR 6:350]

3. No monitoring well construction, maintenance, or abandonment may be conducted without prior approval by the Division of Waste Management. [401 KAR 47:120 Section 1, 401 KAR 47:120 Section 2, 401 KAR 6:350 Section 12]

4. Only a Kentucky Certified Monitoring Well Driller may construct or abandon monitoring wells. [401 KAR 48:300 Section 7(3), 401 KAR 6:350]

5. The owner or operator shall provide the division a minimum of ten (10) working days advance notice for all groundwater monitoring well construction and abandonment activities. [401 KAR 6:350 Section 12(2)]

GSTR0003 - Groundwater Monitoring - SW: 073-00014 and 073-00015 C-746-S and C-746-T Landfill Combined Groundwater Monitoring Group

Group Members: STRC0021 - Well MW-369; STRC0022 - Well MW-370; STRC0023 - Well MW-373; STRC0060 - Well MW-220; STRC0061 - Well MW-221; STRC0062 - Well MW-222; STRC0063 - Well MW-223; STRC0064 - Well MW-224; STRC0073 - Well MW-384; STRC0074 - Well MW-385; STRC0075 - Well MW-386; STRC0076 - Well MW-387; STRC0077 - Well MW-388; STRC0078 - Well MW-389; STRC0079 - Well MW-390; STRC0080 - Well MW-391; STRC0081 - Well MW-392; STRC0082 - Well MW-393; STRC0083 - Well MW-394; STRC0084 - Well MW-395; STRC0085 - Well MW-396; STRC0086 - Well MW-397; STRC0017 - Well MW-372

PERMIT

Standard Requirements:

1. The owner or operator shall satisfy the requirements of 401 KAR 48:300 for all wastes (or constituents thereof) contained in waste management units at the facility regardless of the time waste was placed in such unit. [401 KAR 48:300 Section 1]
2. The owner or operator shall monitor groundwater on the approved schedule at each approved groundwater monitoring location in accordance with 401 KAR 48:300, the permit, and the approved plans. A table summarizing the parameters to be monitored, their respective limits and monitoring frequency is included herein. [401 KAR 48:300, 401 KAR 47:120 Section 1]
3. The owner or operator shall conduct statistical analysis of the groundwater data in accordance with 401 KAR 48:300 Section 9 and the approved applications. The statistical test chosen shall be conducted separately for each parameter in each well for each monitoring event. The results shall be maintained as part of the facility record throughout the operating and post-closure life of the facility. [401 KAR 48:300 Section 9, 401 KAR 47:120 Section 1]
4. Metal criteria shall be total metals to be measured in an unfiltered sample. [401 KAR 47:030 Section 6(1)]
5. If the analysis of groundwater sample results indicates contamination (i.e., a statistical or MCL exceedence) as specified in 401 KAR 48:300 Section 8(1), the owner or operator shall notify the Cabinet within (forty-eight) 48 hours of receiving the results and shall arrange to split samples no later than ten (10) days from the receipt of the results. [401 KAR 48:300 Section 7]
6. The owner or operator shall be required to prepare and submit a groundwater contamination assessment plan if laboratory analyses of one (1) or more monitoring wells at the site shows the presence of one (1) or more parameters above the maximum contaminant level (MCL) as specified in 401 KAR 47:030 or a statistically significant increase over background levels for parameters that have no MCL. [401 KAR 48:300 Section 8, 401 KAR 47:120 Section 1]
7. The owner or operator shall provide alternate water supplies to all affected parties within twenty-four (24) hours of notification of the Cabinet that sample results indicate contamination of a drinking water supply if it has been determined that the site or facility is the probable source of the contamination. [401 KAR 48:300 Section 8]
8. If required by the Cabinet, groundwater contamination assessment and corrective action shall be performed in full compliance with all provisions of 401 KAR 48:300 Section 8. [401 KAR 48:300 Section 8]

Variations, Alternate Specifications and Special Conditions:

1. At each approved groundwater monitoring location, the permittee shall monitor annually for Polychlorinated biphenyls (PCBs). [401 KAR 48:300 Section 11(3)]
2. With respect to the C-746-S and C-746-T Landfills, the permittee shall comply with all of the requirements of 401 KAR 48:300 except 401 KAR 48:300 Section 8. The groundwater assessment and corrective action requirements of 401 KAR 48:300 Section 8 shall not apply to the C-746-S Residential Landfill and the C-746-T Inert Landfill. The permittee shall perform groundwater assessment and corrective action for these landfills in accordance with the provisions of 401 KAR 34:060, Section 12. [401 KAR 47:120 Section 2]

PERMIT

3. At each approved groundwater monitoring location, the permittee shall monitor quarterly for the parameters listed in 401 KAR 48:300 Section 11(3), minus 2-Chlorovinyl Ethyl Ether, Dichlorodifluoromethane, Ethyl Alcohol, and Ethyl Methacrylate, plus the following: Aluminum, Boron, Bromide, Calcium, Cyanide, Eh, Fluoride, Gross Alpha, Gross Beta, Iodide, Magnesium, Manganese, Molybdenum, Dissolved Oxygen, Potassium, Radium, Rhodium, Strontium-90, Sulfate, Tantalum, Technetium-99, Thorium-230, Tritium, and Uranium (total). Metals samples shall not be filtered. [401 KAR 47:120 Section 2, 401 KAR 48:300 Section 11(3)]
4. Groundwater monitoring wells shall be constructed and maintained in accordance with 401 KAR 48:300 Section 6, 401 KAR 6:350, the permit, and the approved plans. [401 KAR 47:120 Section 1, 401 KAR 48:300 Section 6, 401 KAR 6:350]
5. No monitoring well construction, maintenance, or abandonment may be conducted without prior approval by the Division of Waste Management. [401 KAR 47:120 Section 1, 401 KAR 47:120 Section 2, 401 KAR 6:350]
6. Only a Kentucky Certified Monitoring Well Driller may construct or abandon monitoring wells. [401 KAR 48:300 Section 7(3), 401 KAR 6:350]
7. The owner or operator shall provide the division a minimum of ten (10) working days advance notice for all groundwater monitoring well construction and abandonment activities. [401 KAR 6:350 Section 12(2)]

GSTR0004 - Groundwater Monitoring - SW: 073-00014 and 073-00015 C-746-S and C-746-T Landfill Combined Groundwater Monitoring Group / Water Levels Only

Group Members: STRC0065 - Well MW-225; STRC0071 - Well MW-353

Variations, Alternate Specifications and Special Conditions:

1. The permittee shall monitor these wells for static water levels only on a quarterly basis. [401 KAR 48:300 Section 11, 401 KAR 47:120 Section 2]
2. Groundwater monitoring wells shall be constructed and maintained in accordance with 401 KAR 48:300 Section 6, 401 KAR 6:350, the permit, and the approved plans. [401 KAR 47:120 Section 1, 401 KAR 48:300 Section 6, 401 KAR 6:350]
3. No monitoring well construction, maintenance, or abandonment may be conducted without prior approval by the Division of Waste Management. [401 KAR 47:120 Section 1, 401 KAR 47:120 Section 2, 401 KAR 6:350]
4. Only a Kentucky Certified Monitoring Well Driller may construct or abandon monitoring wells. [401 KAR 48:300 Section 7(3), 401 KAR 6:350]
5. The owner or operator shall provide the division a minimum of ten (10) working days advance notice for all groundwater monitoring well construction and abandonment activities. [401 KAR 6:350 Section 12(2)]

PERMIT

**GMNP0001 - Surface Water Monitoring - SW: 073-00045 C-746-U LF
Surface Water Monitoring Group**

Group Members: MNPT0002 - Upstream Point L154; MNPT0003 - Instream Point L150; MNPT0012 - Downstream Point L351

Standard Requirements:

1. The owner or operator shall monitor surface water in accordance with 401 KAR 48:300 Section 2 and the approved surface water monitoring plan. A table summarizing the parameters to be monitored and the monitoring frequency is included herein. [401 KAR 48:300 Section 2]

Variations, Alternate Specifications and Special Conditions:

1. Subject to applicable law, surface water corrective action shall be completed by the owner or operator as necessary to comply with 401 KAR 47:030 Section 4. [401 KAR 47:030 Section 4]

GMNP0003 - Surface Water Monitoring - SW: 073-00014 and 073-00015 C-746-S and C-746-T Combined Surface Water Monitoring Group

Group Members: MNPT0002 - Upstream Point L154; MNPT0009 - Upstream Point L135; MNPT0010 - Instream Point L136

Standard Requirements:

1. The owner or operator shall monitor surface water in accordance with 401 KAR 48:300 Section 2 and the approved surface water monitoring plan. A table summarizing the parameters to be monitored and the monitoring frequency is included herein. [401 KAR 48:300 Section 2]

Variations, Alternate Specifications and Special Conditions:

1. Subject to applicable law, surface water corrective action shall be completed by the owner or operator as necessary to comply with 401 KAR 47:030 Section 4. [401 KAR 47:030 Section 4]

GMNP0002 - Methane Monitoring - SW: Methane Monitoring Group

Group Members: ACTV0004 - Residential Landfill; ACTV0006 - Contained Landfill

Standard Requirements:

1. Property Line Explosive Gas Monitoring: The owner or operator of a contained landfill shall quarterly monitor for explosive gas at locations along the facility property boundary as shown in the permit. [401 KAR 48:090 Section 5(2)(b)]

2. Quarterly Facility Structure Explosive Gas Monitoring: The owner or operator of a contained landfill shall monitor quarterly for explosive gas underneath or in the low area of each on-site building. [401 KAR 48:090

PERMIT

Section 5(2)(a)]

3. Continuous Facility Structure Explosive Gas Monitoring: The owner or operator shall install, operate, and maintain a gas detector with an alarm set at twenty-five (25) percent of the lower explosive limit in each on-site building. [401 KAR 48:090 Section 5(4)]
4. Passive Gas Vent Explosive Gas Monitoring: The owner or operator of a contained landfill shall quarterly monitor for explosive gas at each passive gas vent installed under the final closure cap. [401 KAR 48:090 Section 5(2)(c)]
5. Problem Area Explosive Gas Monitoring: The owner or operator of a contained landfill shall quarterly monitor for explosive gas at any potential gas problem areas, as revealed by dead vegetation or other indicators. [401 KAR 48:090 Section 5(2)(d)]
6. Other Explosive Gas Monitoring: The owner or operator of a contained landfill shall monitor quarterly for explosive gas at any other points required by the Cabinet in the permit. [401 KAR 48:090 Section 5(2)(e)]
7. Exceedences: If methane gas levels exceeding twenty-five (25) percent of the lower explosive limits (LEL) for methane in facility structures (excluding gas control or recovery system components) or the lower explosive limit for methane at the facility property boundary are detected, the owner or operator shall, within fourteen days, submit to the Cabinet for approval a remediation plan for the methane gas releases. The plan shall describe the extent of the problem and the proposed remedy. The plan shall be implemented upon approval by the Cabinet. [401 KAR 48:090 Section 5(5)(c)]
8. Exceedences: If methane gas levels exceeding twenty-five (25) percent of the lower explosive limits (LEL) for methane in facility structures (excluding gas control or recovery system components) or the lower explosive limit for methane at the facility property boundary are detected, the owner or operator shall immediately notify the Cabinet of the methane gas levels detected and the immediate steps taken to protect human health. [401 KAR 48:090 Section 5(5)(b)]
9. Exceedences: If methane gas levels exceeding twenty-five (25) percent of the lower explosive limits (LEL) for methane in facility structures (excluding gas control or recovery system components) or the lower explosive limit for methane at the facility property boundary are detected, the owner or operator shall take all necessary steps to ensure immediate protection of human health. [401 KAR 48:090 Section 5(5)(a)]
10. Recordkeeping: The owner or operator shall record the date, time, location, percent lower explosive limit and other pertinent information regarding explosive gas monitoring on a recordkeeping form approved by the Cabinet. [401 KAR 48:090 Section 5(3)]

Groundwater Monitoring Limits:

Subject Item	CAS Number	Parameter	Frequency	Lower Limit	Upper Limit	Units	Statistical Limit	Report Only
GSTR0001	630-20-6	1,1,1,2-Tetrachloroethane	quarterly			mg/L	Yes	
GSTR0001	71-55-6	1,1,1-Trichloroethane	quarterly		0.2	mg/L		
GSTR0001	79-34-5	1,1,2,2-Tetrachloroethane	quarterly			mg/L	Yes	
GSTR0001	79-00-5	1,1,2-Trichloroethane	quarterly			mg/L	Yes	
GSTR0001	75-34-3	1,1-Dichloroethane	quarterly			mg/L	Yes	
GSTR0001	75-35-4	1,1-Dichloroethylene	quarterly		0.007	mg/L		
GSTR0001	96-18-4	1,2,3-Trichloropropane	quarterly			mg/L	Yes	
GSTR0001	96-12-8	1,2-Dibromo-3-chloropropane	quarterly			mg/L	Yes	
GSTR0001	106-93-4	1,2-Dibromoethane (EDB)	quarterly			mg/L	Yes	
GSTR0001	95-50-1	1,2-Dichlorobenzene	quarterly			mg/L	Yes	
GSTR0001	107-06-2	1,2-Dichloroethane (EDC)	quarterly		0.005	mg/L		
GSTR0001	78-87-5	1,2-Dichloropropane	quarterly			mg/L	Yes	
GSTR0001	106-46-7	1,4-Dichlorobenzene	quarterly		0.075	mg/L		
GSTR0001	591-78-6	2-Hexanone	quarterly			mg/L	Yes	
GSTR0001	67-64-1	Acetone	quarterly			mg/L	Yes	
GSTR0001	107-02-8	Acrolein	quarterly			mg/L	Yes	
GSTR0001	107-13-1	Acrylonitrile	quarterly			mg/L	Yes	
GSTR0001	7429-90-5	Aluminum	quarterly			mg/L	Yes	
GSTR0001	7440-36-0	Antimony, Total (as Sb)	quarterly			mg/L	Yes	
GSTR0001	7440-38-2	Arsenic, Total (as As)	quarterly		0.05	mg/L		
GSTR0001	7440-39-3	Barium, Total (as Ba)	quarterly		2.0	mg/L		
GSTR0001	71-43-2	Benzene	quarterly		0.005	mg/L		
GSTR0001	7440-41-7	Beryllium, Total	quarterly			mg/L	Yes	
GSTR0001	7440-42-8	Boron	quarterly			mg/L	Yes	
GSTR0001	24959-67-9	Bromide	quarterly			mg/L	Yes	
GSTR0001	75-27-4	Bromodichloromethane	quarterly			mg/L	Yes	
GSTR0001	74-83-9	Bromomethane (Methyl bromide)	quarterly			mg/L	Yes	
GSTR0001	7440-43-9	Cadmium, Total (as Cd)	quarterly		0.005	mg/L		
GSTR0001	7440-70-2	Calcium, total [as Ca]	quarterly			mg/L	Yes	
GSTR0001	75-15-0	Carbon Disulfide	quarterly			mg/L	Yes	
GSTR0001	56-23-5	Carbon Tetrachloride	quarterly		0.005	mg/L		
GSTR0001		Carbon, Total Organic	quarterly			mg/L	Yes	
GSTR0001		Chemical Oxygen Demand (COD)	quarterly			mg/L	Yes	

PERMIT

Subject Item	CAS Number	Parameter	Frequency	Lower Limit	Upper Limit	Units	Statistical Limit	Report Only
GSTR0001	16887-00-6	Chloride	quarterly			mg/L	Yes	
GSTR0001	108-90-7	Chlorobenzene	quarterly			mg/L	Yes	
GSTR0001	74-97-5	Chlorobromomethane	quarterly			mg/L	Yes	
GSTR0001	124-48-1	Chlorodibromomethane	quarterly			mg/L	Yes	
GSTR0001	75-00-3	Chloroethane	quarterly			mg/L	Yes	
GSTR0001	67-66-3	Chloroform	quarterly			mg/L	Yes	
GSTR0001	7440-47-3	Chromium, Total (as Cr)	quarterly		0.1	mg/L		
GSTR0001	10061-01-5	Cis 1,3-Dichloropropylene	quarterly			mg/L	Yes	
GSTR0001	156-59-2	Cis-1,2-Dichloroethylene	quarterly			mg/L	Yes	
GSTR0001	7440-48-4	Cobalt, Total	quarterly			mg/L	Yes	
GSTR0001	7440-50-8	Copper, Total	quarterly			mg/L	Yes	
GSTR0001	57-12-5	Cyanide, Total (as Cn)	quarterly			mg/L	Yes	
GSTR0001	75-09-2	Dichloromethane (Methylene chloride)	quarterly			mg/L	Yes	
GSTR0001		Eh	quarterly			mV	Yes	
GSTR0001	100-41-4	Ethylbenzene	quarterly			mg/L	Yes	
GSTR0001	16984-48-8	Fluoride	quarterly		4.0	mg/L		
GSTR0001		Gross Alpha	quarterly		15	pCi/L		
GSTR0001		Gross Beta	quarterly		50	pCi/L		
GSTR0001		Halides, Total Organic	quarterly			mg/L	Yes	
GSTR0001		Iodide	quarterly			mg/L	Yes	
GSTR0001	74-88-4	Iodomethane	quarterly			mg/L	Yes	
GSTR0001	7439-89-6	Iron, Total (as Fe)	quarterly			mg/L	Yes	
GSTR0001	7439-92-1	Lead, Total (as Pb)	quarterly		0.050	mg/L		
GSTR0001	7439-95-4	Magnesium, Total (as Mg)	quarterly			mg/L	Yes	
GSTR0001	7439-96-5	Manganese	quarterly			mg/L	Yes	
GSTR0001	7439-97-6	Mercury, Total (as Hg)	quarterly		0.002	mg/L		
GSTR0001	78-93-3	Methyl Ethyl Ketone	quarterly			mg/L	Yes	
GSTR0001	108-10-1	Methyl Isobutyl Ketone	quarterly			mg/L	Yes	
GSTR0001	74-87-3	Methyl chloride	quarterly			mg/L	Yes	
GSTR0001	74-95-3	Methylene Bromide	quarterly			mg/L	Yes	
GSTR0001	7439-98-7	Molybdenum	quarterly			mg/L	Yes	
GSTR0001	7440-02-0	Nickel, Total (as Ni)	quarterly			mg/L	Yes	

PERMIT

Subject Item	CAS Number	Parameter	Frequency	Lower Limit	Upper Limit	Units	Statistical Limit	Report Only
GSTR0001		Nitrogen, Nitrate Total (as N)	quarterly		10	mg/L		
GSTR0001		Oxygen, Dissolved	quarterly			mg/L	Yes	
GSTR0001	1336-36-3	Polychlorinated Biphenyls (PCBs)	quarterly			mg/L	Yes	
GSTR0001	7440-09-7	Potassium, Total (as K)	quarterly			mg/L	Yes	
GSTR0001	13982-63-3	Radium-226	quarterly			pCi/L	Yes	
GSTR0001	13982-63-3	Radium-226	quarterly			pCi/L	Yes	
GSTR0001	7440-16-6	Rhodium, Total	quarterly			mg/L	Yes	
GSTR0001	7782-49-2	Selenium, Total (as Se)	quarterly		0.05	mg/L		
GSTR0001	7440-22-4	Silver, Total (as Ag)	quarterly		0.05	mg/L		
GSTR0001	7440-23-5	Sodium	quarterly			mg/L	Yes	
GSTR0001		Solids, Total Dissolved	quarterly			mg/L	Yes	
GSTR0001		Specific Conductance	quarterly			umhos/cm	Yes	
GSTR0001	10098-97-2	Strontium-90	quarterly		8	pCi/L		
GSTR0001	100-42-5	Styrene	quarterly			mg/L	Yes	
GSTR0001	14808-79-8	Sulfate	quarterly			mg/L	Yes	
GSTR0001		Tantalum, Total	quarterly			mg/L	Yes	
GSTR0001	14133-76-7	Technetium 99, Total	quarterly			pCi/L	Yes	
GSTR0001	127-18-4	Tetrachloroethylene (PCE)	quarterly			mg/L	Yes	
GSTR0001	7440-28-0	Thallium, Total	quarterly			mg/L	Yes	
GSTR0001		Thorium-230	quarterly			pCi/L	Yes	
GSTR0001	108-88-3	Toluene	quarterly			mg/L	Yes	
GSTR0001	110-57-6	Trans-1,4-Dichloro-2-Butene	quarterly			mg/L	Yes	
GSTR0001	75-25-2	Tribromomethane	quarterly			mg/L	Yes	
GSTR0001	79-01-6	Trichloroethylene	quarterly		0.005	mg/L		
GSTR0001	75-69-4	Trichlorofluoromethane	quarterly			mg/L	Yes	
GSTR0001	10028-17-8	Tritium, Total	quarterly		20,000	pCi/L	Yes	
GSTR0001	7440-61-1	Uranium, Total	quarterly		30	ug/L		
GSTR0001	7440-62-2	Vanadium, Total	quarterly			mg/L	Yes	
GSTR0001	108-05-4	Vinyl Acetate	quarterly			mg/L	Yes	
GSTR0001	75-01-4	Vinyl Chloride	quarterly		0.002	mg/L		
GSTR0001	1330-20-7	Xylenes (Total)	quarterly			mg/L	Yes	
GSTR0001	7440-66-6	Zinc, Total (as Zn)	quarterly			mg/L	Yes	

PERMIT

Subject Item	CAS Number	Parameter	Frequency	Lower Limit	Upper Limit	Units	Statistical Limit	Report Only
GSTR0001		pH	quarterly			S.U.	Yes	
GSTR0001	156-60-5	trans-1,2-Dichloroethylene	quarterly			mg/L	Yes	
GSTR0001	10061-02-6	trans-1,3-Dichloropropene	quarterly			mg/L	Yes	
GSTR0003	630-20-6	1,1,1,2-Tetrachloroethane	quarterly			mg/L	Yes	
GSTR0003	71-55-6	1,1,1-Trichloroethane	quarterly		0.2	mg/L		
GSTR0003	79-34-5	1,1,2,2-Tetrachloroethane	quarterly			mg/L	Yes	
GSTR0003	79-00-5	1,1,2-Trichloroethane	quarterly			mg/L	Yes	
GSTR0003	75-34-3	1,1-Dichloroethane	quarterly			mg/L	Yes	
GSTR0003	75-35-4	1,1-Dichloroethylene	quarterly		0.007	mg/L		
GSTR0003	96-18-4	1,2,3-Trichloropropane	quarterly			mg/L	Yes	
GSTR0003	96-12-8	1,2-Dibromo-3-chloropropane	quarterly			mg/L	Yes	
GSTR0003	106-93-4	1,2-Dibromoethane (EDB)	quarterly			mg/L	Yes	
GSTR0003	95-50-1	1,2-Dichlorobenzene	quarterly			mg/L	Yes	
GSTR0003	107-06-2	1,2-Dichloroethane (EDC)	quarterly		0.005	mg/L		
GSTR0003	78-87-5	1,2-Dichloropropane	quarterly			mg/L	Yes	
GSTR0003	106-46-7	1,4-Dichlorobenzene	quarterly		0.075	mg/L		
GSTR0003	591-78-6	2-Hexanone	quarterly			mg/L	Yes	
GSTR0003	67-64-1	Acetone	quarterly			mg/L	Yes	
GSTR0003	107-02-8	Acrolein	quarterly			mg/L	Yes	
GSTR0003	107-13-1	Acrylonitrile	quarterly			mg/L	Yes	
GSTR0003	7429-90-5	Aluminum	quarterly			mg/L	Yes	
GSTR0003	7440-36-0	Antimony, Total (as Sb)	quarterly			mg/L	Yes	
GSTR0003	7440-38-2	Arsenic, Total (as As)	quarterly		0.05	mg/L		
GSTR0003	7440-39-3	Barium, Total (as Ba)	quarterly		2.0	mg/L		
GSTR0003	71-43-2	Benzene	quarterly		0.005	mg/L		
GSTR0003	7440-41-7	Beryllium, Total	quarterly			mg/L	Yes	
GSTR0003	7440-42-8	Boron	quarterly			mg/L	Yes	
GSTR0003	24959-67-9	Bromide	quarterly			mg/L	Yes	
GSTR0003	75-27-4	Bromodichloromethane	quarterly			mg/L	Yes	
GSTR0003	74-83-9	Bromomethane (Methyl bromide)	quarterly			mg/L	Yes	
GSTR0003	7440-43-9	Cadmium, Total (as Cd)	quarterly		0.005	mg/L		

PERMIT

Subject Item	CAS Number	Parameter	Frequency	Lower Limit	Upper Limit	Units	Statistical Limit	Report Only
GSTR0003	7440-70-2	Calcium, total [as Ca]	quarterly			mg/L	Yes	
GSTR0003	75-15-0	Carbon Disulfide	quarterly			mg/L	Yes	
GSTR0003	56-23-5	Carbon Tetrachloride	quarterly		0.005	mg/L		
GSTR0003		Carbon, Total Organic	quarterly			mg/L	Yes	
GSTR0003		Chemical Oxygen Demand (COD)	quarterly			mg/L	Yes	
GSTR0003	16887-00-6	Chloride	quarterly			mg/L	Yes	
GSTR0003	108-90-7	Chlorobenzene	quarterly			mg/L	Yes	
GSTR0003	74-97-5	Chlorobromomethane	quarterly			mg/L	Yes	
GSTR0003	124-48-1	Chlorodibromomethane	quarterly			mg/L	Yes	
GSTR0003	75-00-3	Chloroethane	quarterly			mg/L	Yes	
GSTR0003	67-66-3	Chloroform	quarterly			mg/L	Yes	
GSTR0003	7440-47-3	Chromium, Total (as Cr)	quarterly		0.1	mg/L		
GSTR0003	10061-01-5	Cis 1,3-Dichloropropylene	quarterly			mg/L	Yes	
GSTR0003	156-59-2	Cis-1,2-Dichloroethylene	quarterly			mg/L	Yes	
GSTR0003	7440-48-4	Cobalt, Total	quarterly			mg/L	Yes	
GSTR0003	7440-50-8	Copper, Total	quarterly			mg/L	Yes	
GSTR0003	57-12-5	Cyanide, Total (as Cn)	quarterly			mg/L	Yes	
GSTR0003	75-09-2	Dichloromethane (Methylene chloride)	quarterly			mg/L	Yes	
GSTR0003		Eh	quarterly			mV	Yes	
GSTR0003	100-41-4	Ethylbenzene	quarterly			mg/L	Yes	
GSTR0003	16984-48-8	Fluoride	quarterly		4.0	mg/L		
GSTR0003		Gross Alpha	quarterly		15	pCi/L		
GSTR0003		Gross Beta	quarterly		50	pCi/L		
GSTR0003		Halides, Total Organic	quarterly			mg/L	Yes	
GSTR0003		Iodide	quarterly			mg/L	Yes	
GSTR0003	74-88-4	Iodomethane	quarterly			mg/L	Yes	
GSTR0003	7439-89-6	Iron, Total (as Fe)	quarterly			mg/L	Yes	
GSTR0003	7439-92-1	Lead, Total (as Pb)	quarterly		0.050	mg/L		
GSTR0003	7439-95-4	Magnesium, Total (as Mg)	quarterly			mg/L	Yes	
GSTR0003	7439-96-5	Manganese	quarterly			mg/L	Yes	
GSTR0003	7439-97-6	Mercury, Total (as Hg)	quarterly		0.002	mg/L		

PERMIT

Subject Item	CAS Number	Parameter	Frequency	Lower Limit	Upper Limit	Units	Statistical Limit	Report Only
GSTR0003	78-93-3	Methyl Ethyl Ketone	quarterly			mg/L	Yes	
GSTR0003	108-10-1	Methyl Isobutyl Ketone	quarterly			mg/L	Yes	
GSTR0003	74-87-3	Methyl chloride	quarterly			mg/L	Yes	
GSTR0003	74-95-3	Methylene Bromide	quarterly			mg/L	Yes	
GSTR0003	7439-98-7	Molybdenum	quarterly			mg/L	Yes	
GSTR0003	7440-02-0	Nickel, Total (as Ni)	quarterly			mg/L	Yes	
GSTR0003		Nitrogen, Nitrate Total (as N)	quarterly		10	mg/L		
GSTR0003		Oxygen, Dissolved	quarterly			mg/L	Yes	
GSTR0003	1336-36-3	Polychlorinated Biphenyls (PCBs)	annually			mg/L	Yes	
GSTR0003	7440-09-7	Potassium, Total (as K)	quarterly			mg/L	Yes	
GSTR0003	13982-63-3	Radium-226	quarterly			pCi/L	Yes	
GSTR0003	7440-16-6	Rhodium, Total	quarterly			mg/L	Yes	
GSTR0003	7782-49-2	Selenium, Total (as Se)	quarterly		0.05	mg/L		
GSTR0003	7440-22-4	Silver, Total (as Ag)	quarterly		0.05	mg/L		
GSTR0003	7440-23-5	Sodium	quarterly			mg/L	Yes	
GSTR0003		Solids, Total Dissolved	quarterly			mg/L	Yes	
GSTR0003		Specific Conductance	quarterly			umhos/cm	Yes	
GSTR0003	10098-97-2	Strontium-90	quarterly		8	pCi/L		
GSTR0003	100-42-5	Styrene	quarterly			mg/L	Yes	
GSTR0003	14808-79-8	Sulfate	quarterly			mg/L	Yes	
GSTR0003		Tantalum, Total	quarterly			mg/L	Yes	
GSTR0003	14133-76-7	Technetium 99, Total	quarterly			pCi/L	Yes	
GSTR0003	127-18-4	Tetrachloroethylene (PCE)	quarterly			mg/L	Yes	
GSTR0003	7440-28-0	Thallium, Total	quarterly			mg/L	Yes	
GSTR0003		Thorium-230	quarterly			pCi/L	Yes	
GSTR0003	108-88-3	Toluene	quarterly			mg/L	Yes	
GSTR0003	110-57-6	Trans-1,4-Dichloro-2-Butene	quarterly			mg/L	Yes	
GSTR0003	75-25-2	Tribromomethane	quarterly			mg/L	Yes	
GSTR0003	79-01-6	Trichloroethylene	quarterly		0.005	mg/L		
GSTR0003	75-69-4	Trichlorofluoromethane	quarterly			mg/L	Yes	
GSTR0003	10028-17-8	Tritium, Total	quarterly		20,000	pCi/L	Yes	
GSTR0003	7440-61-1	Uranium, Total	quarterly		30	ug/L		

PERMIT

Subject Item	CAS Number	Parameter	Frequency	Lower Limit	Upper Limit	Units	Statistical Limit	Report Only
GSTR0003	7440-62-2	Vanadium, Total	quarterly			mg/L	Yes	
GSTR0003	108-05-4	Vinyl Acetate	quarterly			mg/L	Yes	
GSTR0003	75-01-4	Vinyl Chloride	quarterly		0.002	mg/L		
GSTR0003	1330-20-7	Xylenes (Total)	quarterly			mg/L	Yes	
GSTR0003	7440-66-6	Zinc, Total (as Zn)	quarterly			mg/L	Yes	
GSTR0003		pH	quarterly			S.U.	Yes	
GSTR0003	156-60-5	trans-1,2-Dichloroethylene	quarterly			mg/L	Yes	
GSTR0003	10061-02-6	trans-1,3-Dichloropropene	quarterly			mg/L	Yes	

Surface Water Monitoring Limits:

Subject Item	CAS Number	Parameter	Frequency	Lower Limit	Upper Limit	Units	Statistical Limit	Report Only
GMNP0001		Carbon, Total Organic	quarterly			mg/L		Yes
GMNP0001		Chemical Oxygen Demand (COD)	quarterly			mg/L		Yes
GMNP0001	16887-00-6	Chloride	quarterly			mg/L		Yes
GMNP0001		Gross Alpha	quarterly			pCi/L		Yes
GMNP0001		Gross Beta	quarterly			pCi/L		Yes
GMNP0001	7439-89-6	Iron, Total (as Fe)	quarterly			mg/L		Yes
GMNP0001	7440-23-5	Sodium	quarterly			mg/L		Yes
GMNP0001		Solids, Total	quarterly			mg/L		Yes
GMNP0001		Solids, Total Dissolved	quarterly			mg/L		Yes
GMNP0001		Solids, Total Suspended (TSS)	quarterly			mg/L		Yes
GMNP0001		Specific Conductance	quarterly			umhos/cm		Yes
GMNP0001	14808-79-8	Sulfate	quarterly			mg/L		Yes
GMNP0001	7440-61-1	Uranium, Total	quarterly			mg/L		Yes
GMNP0001		pH	quarterly			S.U.		Yes
GMNP0003		Carbon, Total Organic	quarterly			mg/L		Yes
GMNP0003		Chemical Oxygen Demand (COD)	quarterly			mg/L		Yes
GMNP0003	16887-00-6	Chloride	quarterly			mg/L		Yes

PERMIT

Subject Item	CAS Number	Parameter	Frequency	Lower Limit	Upper Limit	Units	Statistical Limit	Report Only
GMNP0003		Gross Alpha	quarterly			pCi/L		Yes
GMNP0003		Gross Beta	quarterly			pCi/L		Yes
GMNP0003	7439-89-6	Iron, Total (as Fe)	quarterly			mg/L		Yes
GMNP0003	7440-23-5	Sodium	quarterly			mg/L		Yes
GMNP0003		Solids, Total	quarterly			mg/L		Yes
GMNP0003		Solids, Total Dissolved	quarterly			mg/L		Yes
GMNP0003		Solids, Total Suspended (TSS)	quarterly			mg/L		Yes
GMNP0003		Specific Conductance	quarterly			umhos/cm		Yes
GMNP0003	14808-79-8	Sulfate	quarterly			mg/L		Yes
GMNP0003	7440-61-1	Uranium, Total	quarterly			mg/L		Yes
GMNP0003		pH	quarterly			S.U.		Yes

Methane Monitoring Limits:

Subject Item	CAS Number	Parameter	Frequency	Lower Limit	Upper Limit	Units	Statistical Limit	Report Only
GMNP0002		Continuous Facility Structure Explosive Gas Monitoring	continuously		25	% Lower Explosive Limit for Methane		
GMNP0002		Property Line Explosive Gas Monitoring	quarterly		100	% Lower Explosive Limit for Methane		
GMNP0002		Quarterly Facility Structure Explosive Gas Monitoring	quarterly		25	% Lower Explosive Limit for Methane		