

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law (Chapter 644 RSMo, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0121045

Owner: BFI Waste Systems of Missouri, LLC
Address: 325 NW 1st Lane, Lamar, MO 64759

Continuing Authority: Same as above
Address: Same as above

Facility Name: Prairie View Regional Waste Facility
Facility Address: 16 West Highway DD, Lamar, MO 64759

Legal Description: See following page(s)
UTM Coordinates: See following page(s)

Receiving Stream: See following page(s)
First Classified Stream and ID: See following page(s)
USGS Basin & Sub-watershed No: See following page(s)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:


FACILITY DESCRIPTION

Active Landfill, SIC # 4953; NAICS # 562212, This facility does not require a certified wastewater operator per 10 CSR 20-9.030 as this facility is privately owned. Domestic wastewater is managed by sending to POTW. Outfall #001 is associated with the stormwater sedimentation basin located on the east side of the landfill. Outfall #002 is associated with the stormwater sedimentation basin located on the west side of the landfill. Any leachate collected from the facility flows to a lift station on site and is pumped to the local wastewater treatment facility.

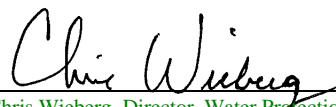
Leachate cannot be discharged. Stormwater which has come into contact with leachate is considered leachate and cannot be discharged. Leachate, and stormwater which has come into contact with leachate, must be managed in accordance with the provisions contained in the Missouri Solid Waste Management Laws, regulations, and Sanitary Landfill Operating Permit; and Hazardous Waste Program (if applicable).

This permit authorizes only stormwater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas.

March 1, 2021
Effective Date


Edward B. Galbraith, Director, Division of Environmental Quality

February 28, 2026
Expiration Date


Chris Wieberg, Director, Water Protection Program

FACILITY DESCRIPTION (CONTINUED)

OUTFALL #001 – Stormwater

Stormwater from the east portion of the facility; settling basin

Legal Description: NE¹/₄, NE¹/₄, Sec.3, T32N, R31W, Barton County
UTM Coordinates: X = 384479, Y = 4157184
Receiving Waterbody: Tributary to Little Dry Wood Creek
First Classified Waterbody and ID: 100K Extent-Remaining Streams (C) WBID# 3960
USGS Basin & Sub-watershed No.: Marmaton (10290104-0401)
Maximum Flow: 12.3 MGD based on a 10 Yr 24 hr storm event discharge

OUTFALL #002 – Stormwater

Stormwater from the west portion of the facility; settling basin

Legal Description: NE¹/₄, NE¹/₄, Sec.3, T32N, R31W, Barton County
UTM Coordinates: X = 383866, Y = 4157611
Receiving Waterbody: Tributary to Little Dry Wood Creek
First Classified Waterbody and ID: 100K Extent-Remaining Streams (C) WBID# 3960
USGS Basin & Sub-watershed No.: Marmaton (10290104-0401)
Maximum Flow: 7.4 MGD based on a 10 Yr 24 hr storm event discharge

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL #001 & #002 <i>Stormwater Only</i>		TABLE A-1 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				
The facility is authorized to discharge from outfall(s) as specified. The final effluent limitations shall become effective on March 1, 2021 and remain in effect until expiration of the permit. Discharges shall be controlled, limited and monitored by the facility as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL LIMITATIONS		BENCH-MARKS	MONITORING REQUIREMENTS **	
		DAILY MAXIMUM	MONTHLY AVERAGE		MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: Q						
PHYSICAL						
Flow	MGD	*		-	once/quarter ◊	24 Hr Est.
Precipitation	inches	*		-	once/quarter ◊	measured
CONVENTIONAL						
Chemical Oxygen Demand	mg/L	**		90	once/quarter ◊	grab
Oil & Grease	mg/L	**		10	once/quarter ◊	grab
pH †	SU	6.5 to 9.0		-	once/quarter ◊	grab
Settleable Solids	mL/L/hr	**		1.5	once/quarter ◊	grab
Total Suspended Solids	mg/L	**		100	once/quarter ◊	grab
METALS						
Aluminum, Total Recoverable	µg/L	**		750	once/quarter ◊	grab
Iron, Total Recoverable	µg/L	**		4,000	once/quarter ◊	grab
NUTRIENTS						
Ammonia as N	mg/L	*		-	once/quarter ◊	grab
OTHER						
Chloride	mg/L	*		-	once/quarter ◊	grab
Chloride + Sulfates	mg/L	**		1,000	once/quarter ◊	grab
Sulfate	mg/L	*		-	once/quarter ◊	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE JULY 28, 2021 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
EFFLUENT PARAMETERS	UNITS	FINAL LIMITATIONS		BENCH-MARKS	MONITORING REQUIREMENTS **	
		DAILY MAXIMUM	MONTHLY AVERAGE		MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: A						
METALS						
Arsenic, Total Recoverable	µg/L	*		-	once/year	grab
Chromium (VI), Dissolved	µg/L	*		-	once/year	grab
Copper, Total Recoverable	µg/L	*		-	once/year	grab
Lead, Total Recoverable	µg/L	*		-	once/year	grab
Selenium, Total Recoverable ††	µg/L	*		-	once/year	grab
Thallium, Total Recoverable ‡	µg/L	*		-	once/year	grab
Zinc, Total Recoverable	µg/L	*		-	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE JANUARY 28, 2022 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

* Monitoring and reporting requirement only

** Monitoring and reporting requirement with benchmark. See Special Conditions for additional requirements.

† pH: the facility will report the minimum and maximum values; pH is not to be averaged.

** Precipitation Event Monitoring Requirement: all samples shall be collected from a discharge resulting from a precipitation event greater than 0.1 inches in magnitude and occurring at least 72 hours from the previously measurable precipitation event. If a discharge does not occur within the reporting period, report as no discharge. The total amount of precipitation should be noted from the event from which the samples were collected.

†† This permit establishes monitoring for total recoverable selenium, which has water quality standards below the most commonly used analytical methods' detection limits. However, 40 CFR 136 indicates effluent characteristics can be effectively quantified using EPA approved method 200.7, 200.9 or 3113B. These methods have detection limits of 0.6 µg/L and 2 µg/L respectively; either may be used to determine compliance with this permit. The facility must choose a sufficiently sensitive method to attain compliance with Standard Conditions Part I Section A 4. Additionally, the reporting limit of the laboratory contracted with for analysis shall be of such precision that the reporting limit is below the water quality standards.

‡ This permit establishes monitoring for total recoverable thallium, which has water quality standards below the most commonly used analytical methods detection limits. However, 40 CFR 136 indicates effluent characteristics can be effectively quantified using EPA approved method 200.7, 200.9 or 3120B. These methods have detection limits of 0.7 µg/L and 1 µg/L respectively; either may be used to determine compliance with this permit. Additionally, if monitoring only, the facility must choose one of the above methods to attain compliance with Standard Conditions Part I Section A 4. Additionally, the reporting limit of the laboratory contracted with for analysis shall be of such precision that the reporting limit is below the water quality standards and the limits of the permit.

◇ Quarterly sampling

MINIMUM QUARTERLY SAMPLING REQUIREMENTS			
QUARTER	MONTHS	QUARTERLY EFFLUENT PARAMETERS	REPORT IS DUE
First	January, February, March	Sample at least once during any month of the quarter	April 28 th
Second	April, May, June	Sample at least once during any month of the quarter	July 28 th
Third	July, August, September	Sample at least once during any month of the quarter	October 28 th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 th

B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Part I Standard conditions dated August 1, 2014, respectively, and hereby incorporated as though fully set forth herein.

C. SPECIAL CONDITIONS

1. Spills, Overflows, and Other Unauthorized Discharges.
 - (a) Any spill, overflow, or other discharge(s) not specifically authorized above are unauthorized discharges.
 - (b) Should an unauthorized discharge cause or permit any contaminants to discharge or enter waters of the state, the unauthorized discharge must be reported to the regional office as soon as practicable but no more than 24 hours after the discovery of the discharge. If the spill or overflow needs to be reported after normal business hours or on the weekend, the facility must call the Department's 24 hour spill line at 573-634-2436.
2. Electronic Discharge Monitoring Report (eDMR) Submission System
Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent monitoring data and any report required by the permit (unless specifically directed otherwise by the permit), shall be submitted via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data about the NPDES program.
 - (a) eDMR Registration Requirements. The facility must register with the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before the first report is due. Registration and other information regarding MoGEM can be found at <https://dnr.mo.gov/mogem>. Information about the eDMR system can be found at <https://dnr.mo.gov/env/wpp/edmr.htm>. The first user shall register as an Organization Official and the association to the facility must be approved by the Department. Regarding Standard Conditions Part I, §B, #7, the eDMR system is currently the only Department approved reporting method for this permit unless a waiver is granted by the Department.
 - (b) Electronic Submissions. To access the eDMR system, use the following link in your web browser: <https://apps5.mo.gov/mogems/welcome.action> If you experience difficulties with using the eDMR system you may contact edmr@dnr.mo.gov or call 855-789-3889 or 573-526-2082 for assistance.
 - (c) Waivers from Electronic Reporting. The facility must electronically submit compliance monitoring data and reports unless a waiver is granted by the Department in compliance with 40 CFR Part 127. Only facilities with an approved waiver request may submit monitoring data and reports on paper to the Department for the period the approved electronic reporting waiver is effective. Facilities may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. The department will either approve or deny this electronic reporting waiver request within 120 calendar days.
3. Stormwater Pollution Prevention Plan (SWPPP).
The facility's SIC code or description is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2) and hence shall implement a Stormwater Pollution Prevention Plan (SWPPP) which must be prepared and implemented upon permit effective date. The SWPPP must be kept on-site and should not be sent to the Department unless specifically requested. The SWPPP must be reviewed and updated annually or if site conditions affecting stormwater change. The facility shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in: *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in 2015 https://www.epa.gov/sites/production/files/2015-11/documents/swppp_guide_industrial_2015.pdf The purpose of the SWPPP and the Best Management Practices (BMPs) listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was ineffective at providing the necessary protections for which it was designed. Corrective action describes the steps the facility took to eliminate the deficiency.
The SWPPP must include:
 - (a) A listing of specific contaminants and their control measures (or BMPs) and a narrative explaining how BMPs are implemented to control and minimize the amount of contaminants potentially entering stormwater.
 - (b) A map with all outfalls and structural BMPs marked.
 - (c) A schedule for at least once per month site inspections and brief written reports. The inspection report must include precipitation information for the entire period since last inspection, as well as observations and evaluations of BMP effectiveness. Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
 - (1) Operational deficiencies must be corrected within seven (7) calendar days.
 - (2) Minor structural deficiencies must be corrected within fourteen (14) calendar days.
 - (3) Major structural deficiencies (deficiencies projected to take longer than 14 days to correct) must be reported as an uploaded attachment through the eDMR system with the DMRs. The initial report shall consist of the deficiency noted, the proposed remedies, the interim or temporary remedies (including proposed timing of the placement of the interim measures), and an estimate of the timeframe needed to wholly complete the repairs or construction. If required by the Department, the facility shall work with the regional office to determine the best course of action. The facility should

C. SPECIAL CONDITIONS (CONTINUED)

consider temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.

- (4) All actions taken to correct the deficiencies shall be included with the written report, including photographs, and kept with the SWPPP. Additionally, corrective action of major structural deficiencies shall be reported as an uploaded attachment through the eDMR system with the DMRs.
 - (5) BMP failure causing discharge through an unregistered outfall is considered an illicit discharge and must be reported in accordance with Standard Conditions Part I.
 - (6) Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to Department personnel upon request. Electronic versions of the documents and photographs are acceptable.
 - (d) A provision for designating an individual to be responsible for environmental matters and a provision for providing training to all personnel involved in housekeeping, material handling (including but not limited to loading and unloading), storage, and staging of all operational, maintenance, storage, and cleaning areas. Proof of training shall be submitted upon request by the Department.
4. Site-wide minimum Best Management Practices (BMPs). At a minimum, the facility shall adhere to the following:
- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, warehouse activities, and other areas, and thereby prevent the contamination of stormwater from these substances.
 - (b) Ensure adequate provisions are provided to protect embankments from erosion.
 - (c) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
 - (d) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so these materials are not exposed to stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater. Spill records should be retained on-site.
 - (e) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
 - (f) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property.
 - (g) Remove sediment from stormwater sediment pond(s) no less than every ten years, or more frequently dependent on the amount of sediment received; sediment accumulated shall be no more than 20% total volume or as prescribed in the engineering design, whichever is less. Records must be retained since last cleanout.
5. Stormwater Benchmarks. This permit stipulates pollutant benchmarks applicable to your stormwater discharges.
- (a) The benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation. Benchmark monitoring and visual inspections shall be used to determine the overall effectiveness of the SWPPP and to assist you in knowing when additional corrective action may be necessary to protect water quality. If a sample exceeds a benchmark concentration you must review your SWPPP and your BMPs to determine what improvements or additional controls are needed to reduce the pollutant in your stormwater discharge(s).
 - (b) Any time a benchmark exceedance occurs, a Corrective Action Report (CAR) must be completed. A CAR is a document recording the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. CARs must be retained with the SWPPP and be available to the Department upon request. If the efforts taken by the facility are not sufficient and subsequent exceedances of a benchmark occur, the facility must contact the Department if a benchmark value cannot be achieved. Failure to take corrective action to address a benchmark exceedance and failure to make measureable progress towards achieving the benchmarks is a permit violation.
6. Petroleum Secondary Containment.
- Before releasing water accumulated in petroleum secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen to protect the general criteria found at 10 CSR 20-7.031(4).
- (a) If odor or sheen is found, the water shall not be discharged without treatment and shall be disposed of in accordance with legally approved methods, such as being sent to an accepting wastewater treatment facility.
 - (b) If the facility wishes to discharge the accumulated stormwater with hydrocarbon odor or presence of sheen, the water shall be treated using an appropriate removal method. Following treatment and before release, the water shall be tested for oil and grease, benzene, toluene, ethylbenzene, and xylene using 40 CFR part 136 methods. All pollutant levels must be below the most protective, applicable standards for the receiving stream, found in 10 CSR 20-7.031 Table A before discharge is authorized. Records of all testing and treatment of water accumulated in secondary containment shall be available on demand to the Department. Electronic records retention is acceptable.

C. SPECIAL CONDITIONS (CONTINUED)

7. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with RSMo 644.051.16 for permit shield, and the CWA §402(k) for toxic substances. This permit may be reopened and modified, or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under CWA §§301(b)(2)(C) and (D), §304(b)(2), and §307(a)(2), if the effluent standard or limitation so issued or approved contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or controls any pollutant not already limited in the permit. This permit may be modified, revoked and reissued, or terminated for cause, including determination new pollutants found in the discharge not identified in the application for the new or revised permit. The filing of a request by the facility for a permit modification, termination, notice of planned changes, or anticipated non-compliance does not stay any permit condition.
8. All outfalls and permitted features must be clearly marked in the field.
9. Report no discharge when a discharge does not occur during the report period. It is a violation of this permit to report no-discharge when a discharge has occurred.
10. The Department may require sampling and reporting as a result of illegal discharges from the site, compliance issues related to water quality concerns or BMP effectiveness, or evidence of off-site impacts from activities or discharges at the facility.
11. This permit does not apply to fertilizer products receiving a current exemption under the Missouri Clean Water Law and regulations in 10 CSR 20-6.015(3)(B)8., and are land applied in accordance with the exemption.
12. Changes in Discharges of Toxic Pollutant.
In addition to the reporting requirements under 40 CFR 122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:
 - (a) An activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
 - (3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
 - (4) One milligram per liter (1 mg/L) for antimony;
 - (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (6) The notification level established by the Department in accordance with 40 CFR 122.44(f).
 - (b) Any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - (1) Five hundred micrograms per liter (500 µg/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
 - (4) The level established by the Director in accordance with 40 CFR 122.44(f).
13. Reporting of Non-Detects.
 - (a) Compliance analysis conducted by the facility or any contracted laboratory shall be conducted in such a way the precision and accuracy of the analyzed result can be enumerated. See sufficiently sensitive test method requirements in Standard Conditions Part I, §A, No. 4 regarding proper testing and detection limits used for sample analysis. For the purposes of this permit, the definitions in 40 CFR 136 apply; method detection limit (MDL) and laboratory established reporting limit (RL) are used interchangeably in this permit.
 - (b) The facility shall not report a sample result as “non-detect” without also reporting the MDL. Reporting “non-detect” without also including the MDL will be considered failure to report, which is a violation of this permit.
 - (c) For the daily maximum, the facility shall report the highest value; if the highest value was a non-detect, use the less than “<” symbol and the laboratory’s highest method detection limit (MDL) or the highest reporting limit (RL); whichever is higher (e.g. <6).
 - (d) When calculating monthly averages, zero shall be used in place of any value(s) not detected. Where all data used in the average are below the MDL or RL, the highest MDL or RL shall be reported as “<#” for the average as indicated in item (c).
14. Failure to pay fees associated with this permit is a violation of the Missouri Clean Water Law (644.055 RSMo).
15. This permit does not authorize the placement of fill materials in flood plains, placement of solid materials into any waterway, the obstruction of stream flow, or changing the channel of a defined drainage course. The facility must contact the U.S. Army Corps

C. SPECIAL CONDITIONS (CONTINUED)

of Engineers (Corps) to determine if a CWA §404 Department of Army permit or §401 water quality certification is required for the project.

16. The permittee will not be required to procure a separate general permit (MO-RAxxx) for on-site land disturbance activities which discharge through outfalls authorized in this permit. Discharges must comply with the limits and conditions of this permit. If land disturbance activities discharge to any location other than through a permitted outfall, a separate MORA general permit may be required, or a modification of this operating permit. The general permit does not cover disturbance of contaminated soils.
17. Renewal Application Requirements.
 - (a) This facility shall submit an appropriate and complete application to the Department no less than 180 days prior to the expiration date listed on page 1 of the permit.
 - (b) Application materials shall include complete Form A, and Form C. If the form names have changed, then the facility should ensure they are submitting the correct forms as required by regulation.
 - (c) The facility must sample the stormwater outfalls and provide analysis for every parameter contained in the permit at any outfall for at the site in accordance with 10 CSR 20-6.200(2)(C)1.E(I) and (II)
 - (d) The facility may use the electronic submission system to submit the application to the Program, if available.
 - (e) This facility must submit all corrective action reports completed for the last permit term if a benchmark exceedance occurred.

E. NOTICE OF RIGHT TO APPEAL

If you were adversely affected by this decision, you may be entitled to pursue an appeal before the administrative hearing commission (AHC) pursuant to §§621.250 and 644.051.6 RSMo. To appeal, you must file a petition with the AHC within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC. Any appeal should be directed to:

Administrative Hearing Commission
U.S. Post Office Building, Third Floor
131 West High Street, P.O. Box 1557
Jefferson City, MO 65102-1557
Phone: 573-751-2422
Fax: 573-751-5018
Website: <https://ahc.mo.gov>

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0121045
PRAIRIE VIEW REGIONAL WASTE FACILITY**

The Federal Water Pollution Control Act (Clean Water Act (CWA) §402 Public Law 92-500 as amended) established the National Pollutant Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (§301 of the Clean Water Act). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal Clean Water Act and Missouri Clean Water Law 644 RSMo as amended). MSOPs may also cover underground injection, non-discharging facilities, and land application facilities. Permits are issued for a period of five (5) years unless otherwise specified for less.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)(A)2.] a factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (MSOP or operating permit) listed below. A factsheet is not an enforceable part of an operating permit.

PART I. FACILITY INFORMATION

Facility Type: Industrial Stormwater >1 MGD
 SIC Code(s): 4953
 NAICS Code(s): 562212
 Application Date: 03/04/2020
 Modification Date: 03/03/2017
 Expiration Date: 08/31/2020
 Last Inspection: 08/29/2019 – Compliance Assistance
 09/21/2020 – Waste Management Program Inspection

FACILITY DESCRIPTION:

This facility is an active sanitary landfill. Outfall #001 is associated with the stormwater sedimentation basin located on the east side of the landfill. Outfall #002 is associated with the stormwater sedimentation basin located on the west side of the landfill. Any leachate collected from the facility flows to a lift station on site and is pumped to the local wastewater treatment facility.

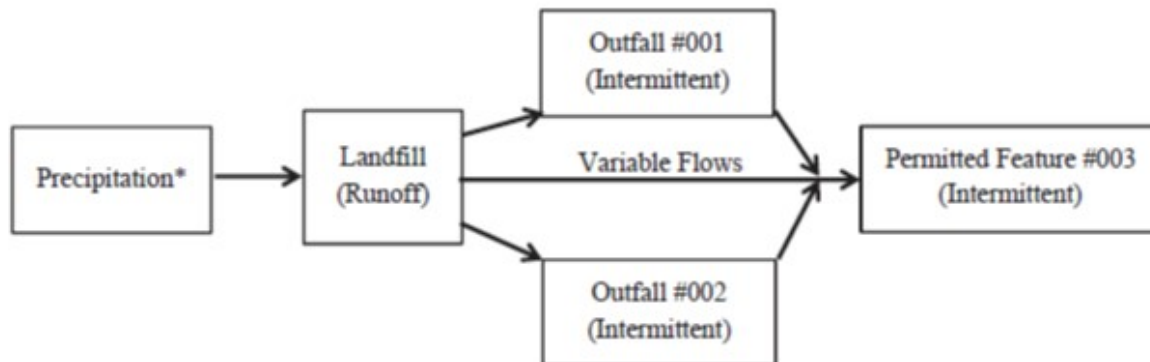
PERMITTED FEATURES TABLE:

OUTFALL	DESIGN FLOW	TREATMENT LEVEL	EFFLUENT TYPE
#001	12.3 MGD	BMPs / Sedimentation	Stormwater
#002	7.4 MGD	BMPs / Sedimentation	Stormwater

FACILITY MAP:



WATER BALANCE DIAGRAM:



FACILITY PERFORMANCE HISTORY & COMMENTS:

The facility was last inspected by the Waste Management Program on 09/21/2020 and found to be in compliance with the Missouri Solid Waste Management Law. The electronic discharge monitoring reports were reviewed for the last five years. There were elevated levels of Iron and Aluminum. The permit writer is requiring monitoring with an associated benchmark to help the facility keep levels below water quality standards.

CONTINUING AUTHORITY:

The Missouri Secretary of State continuing authority charter number for this facility is FL0049625; this number was verified by the permit writer to be associated with the facility and precisely matches the continuing authority reported by the facility.

OTHER ENVIRONMENTAL PERMITS:

In accordance with 40 CFR 122.21(f)(6), the Department evaluated other permits currently held by this facility. This facility has the following permits: Solid Waste Management Permit #101104; Air Pollution Control Program Permit #OP2018-069.

PART II. RECEIVING WATERBODY INFORMATION

RECEIVING WATERBODY TABLE:

PERMITTED FEATURES	WATERBODY NAME	CLASS	WBID	DESIGNATED USES	DISTANCE TO SEGMENT	12-DIGIT HUC
#001	100K Extant-Remaining Stream / Little Dry Wood Creek	C	3960	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)	0.4 mi	10290104-0401 Marmaton
#002					0.4 mi	

Classes are representations of hydrologic flow volume or lake basin size as defined in 10 CSR 20-7.031(1)(F). L1: Lakes with drinking water supply - wastewater discharges are not permitted to occur to L1 watersheds per 10 CSR 20-7.015(3)(C); L2: major reservoirs; L3: all other public and private lakes; P: permanent streams; C: streams which may cease flow in dry periods but maintain pools supporting aquatic life; E: streams which do not maintain surface flow; and W: wetland. Losing streams are defined in 10 CSR 20-7.031(1)(O) and are designated on the losing stream dataset or determined by the Department to lose 30% or more of flow to the subsurface.

WBID = Waterbody Identification: Missouri Use Designation Dataset per 10 CSR 20-7.031(1)(Q) and (S) as 100K Extant-Remaining Streams or newer; data can be found as an ArcGIS shapefile on MSDIS at ftp://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_shp.zip; New C streams described on the dataset per 10 CSR 20-7.031(2)(A)3. as 100K Extant Remaining Streams.

HUC: Hydrologic Unit Code; TMDLs and lake nutrient criteria are the two most common watershed based limits. <https://dnr.mo.gov/env/wpp/watersheds.htm> will have additional information about the watersheds in Missouri

Designated Uses:

10 CSR 20-7.031(1)(C)1.: **ALP** = Aquatic Life Protection (formerly AQL); current uses are defined to ensure the protection and propagation of fish shellfish and wildlife, further subcategorized as: WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat. This permit uses ALP effluent limitations in 10 CSR 20-7.031 Table A1-B3 for all habitat designations unless otherwise specified.

10 CSR 20-7.031(1)(C)2.: Recreation in and on the water

WBC = Whole Body Contact recreation where the entire body is capable of being submerged;

WBC-A = whole body contact recreation supporting swimming uses and has public access;

WBC-B = whole body contact recreation not included in WBC-A;
SCR = Secondary Contact Recreation (like fishing, wading, and boating)
10 CSR 20-7.031(1)(C)3. to 7.:
HHP (formerly HHF) = Human Health Protection as it relates to the consumption of fish and drinking of water;
IRR = irrigation for use on crops utilized for human or livestock consumption, includes aquifers per 10 CSR 20-7.031(6)(A);
LWW = Livestock and Wildlife Watering (current narrative use is defined as LWP = Livestock and Wildlife Protection), includes aquifers per 10 CSR 20-7.031(6)(A);
DWS = Drinking Water Supply, includes aquifers per 10 CSR 20-7.031(6)(A);
IND = industrial water supply
10 CSR 20-7.031(1)(C)8. to 11.: Wetlands (10 CSR 20-7.031 Tables A1-B3 currently does not have corresponding habitat use criteria for these defined uses): WSA = storm- and flood-water storage and attenuation; WHP = habitat for resident and migratory wildlife species; WRC = recreational, cultural, educational, scientific, and natural aesthetic values and uses; WHC = hydrologic cycle maintenance.
10 CSR 20-7.015(7) and 10 CSR 20-7.031(6): **GRW** = Groundwater
10 CSR 20-7.031(4): **GEN** = general criteria; acute toxicity criteria applicable to all waters even those lacking designated uses
n/a = not applicable

WATERS OF THE STATE DESIGNATIONS:

Waters of the state are divided into seven categories per 10 CSR 20-7.015(1)(B)1 through 7. The applicable water of the state category is listed below. Missouri's technology-based effluent regulations are found in [10 CSR 20-7.015] and are implemented in 10 CSR 20-7.015(2) through (8). When implementing technology regulations, considerations are made for the facility type, discharge type, and category of waters of the state. Effluent limitations may not be applicable to certain waters of the state, facility type, or discharge type. In these cases, effluent limitations may be based on a best professional judgment evaluation. The best professional judgment evaluation will take site specific conditions into consideration; including facility type, the receiving water body classification, and type of discharge. Stormwater discharges and land application sites are not directly subject to limitations found in 10 CSR 20-7.015, but may be subject to limitations determined by the best professional judgment evaluation. Effluent limitation derivations are discussed in PART IV: EFFLUENTS LIMITS DETERMINATIONS.

✓ All other waters; identified at 10 CSR 20-7.015(B)7 and 10 CSR 20-7.015(8)

EXISTING WATER QUALITY:

The receiving waterbody has no relevant water quality data available.

303(d) LIST:

Section 303(d) of the federal Clean Water Act requires each state identify waters not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock, and wildlife. The 303(d) list helps state and federal agencies keep track of impaired waters not addressed by normal water pollution control programs. <http://dnr.mo.gov/env/wpp/waterquality/303d/303d.htm>

✓ Applicable; Little Dry Wood Creek is listed on the 2020 Missouri CWA §303(d) list for low Dissolved Oxygen.

- This facility is not considered a source of the above listed pollutant(s) or considered to contribute to the impairment.

TOTAL MAXIMUM DAILY LOAD (TMDL):

A TMDL is a calculation of the maximum amount of a given pollutant a water body can absorb before its water quality is affected; hence, the purpose of a TMDL is to determine the pollutant loading a specific waterbody can assimilate without exceeding water quality standards. If a water body is determined to be impaired as listed on the §303(d) list, then a watershed management plan or TMDL for that watershed may be developed. The TMDL shall include the WLA calculation. <http://dnr.mo.gov/env/wpp/tmdl/>

✓ Applicable; Marmaton River watershed is associated with the 2010 EPA approved TMDL for low dissolved oxygen.

- This facility is not considered to be a source of the above listed pollutant(s) or considered to contribute to the impairment.

UPSTREAM OR DOWNSTREAM IMPAIRMENTS:

The permit writer has reviewed upstream and downstream stream segments of this facility for impairments.

✓ The permit writer has noted downstream of the facility the stream is on the §303(d) list/has a TMDL; see above for specific permitting information. No upstream impairments were noted.

RECEIVING WATERBODY MONITORING REQUIREMENTS:

No receiving water monitoring requirements are recommended at this time. The monitoring at the designated outfalls is sufficient to determine reasonable potential in stream.

WATERBODY MIXING CONSIDERATIONS:

For all outfalls, mixing zone and zone of initial dilution are not allowed per 10 CSR 20-7.031(5)(A)4.B.(I)(a) and (b), as the base stream flow does not provide dilution to the effluent.

PART III. RATIONALE AND DERIVATION OF PERMIT CONDITIONS

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including: land application, discharges to a gaining stream, and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

- ✓ Not applicable; the facility does not discharge to a losing stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], and is an existing facility.

ANTIBACKSLIDING:

Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(l)] require a reissued permit to be as stringent as the previous permit with some exceptions. Backsliding (a less stringent permit limitation) is only allowed under certain conditions.

- ✓ Limitations in this operating permit reissuance conform to the anti-backsliding provisions of CWA §402(o), and 40 CFR 122.44.
 - ✓ Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) which would have justified the application of a less stringent effluent limitation.
 - Five years of DMR data were available to support removing effluent limitations and some parameters. BOD, benzene, and ethylbenzene were removed from outfalls #001 and #002. DMR data showed they did not have the potential to exceed water quality standards, either numeric or narrative, and both BOD and benzene continue to be monitored under other parameters (COD and oil and grease).
 - Antimony, barium, beryllium, cadmium, chromium (III), cobalt, fluoride, mercury, nickel, toluene, and total xylene were removed from monitoring as data was seen to be below the minimum detection limit, showing they are not pollutants of concern at this site.
 - The requirement to monitor in stream has been removed. Therefore permitted feature 003 has been removed. Iron monitoring was conducted upstream and downstream of the site beginning in 2015 to determine if the landfill is contributing to iron concentrations measured downstream of the site. Eleven paired samples were taken upstream and downstream of the site at Permitted feature #003. On average iron concentrations in samples taken downstream of the site were 8.4% lower than those taken at the upstream property boundary, indicating the site does not cause or contribute to an impairment instream; therefore additional monitoring for this parameter instream is unnecessary.
 - The previous permit limits for outfalls #001 and #002 were established in error, based on limits for process wastewater, however, these are stormwater outfalls. Five years of DMR data support limit conversion to benchmarks. Limits were removed from COD, oil and grease, TSS, and SS and replaced with appropriate benchmarks as none showed reasonable potential to exceed acute water quality standards, either numeric or narrative. Also, the previous permit included monthly averages for the stormwater outfall; however, stormwater is not continuous pursuant to 40 CFR 122.45(d) therefore monthly averages are not implemented; stormwater discharges vary widely in frequency, magnitude, and duration. This renewal establishes benchmarks appropriate for stormwater discharges. There will be no changes to industrial activities onsite or the composition of the stormwater discharge as a result of this renewal. The benchmark concentrations and required corrective actions within this permit are protective of the receiving stream's uses to be maintained. The permit writer has determined there is no reasonable potential to cause or contribute to water quality.
 - The previous permit special conditions contained a specific set of prohibitions related to general criteria (GC) found in 10 CSR 20-7.031(4); however, there was no determination as to whether the discharges have reasonable potential to cause or contribute to excursion of those general water quality criteria in the previous permit. This permit assesses each general criteria as listed in the previous permit's special conditions. Federal regulations 40 CFR 122.44(d)(1)(iii) requires instances where reasonable potential (RP) to cause or contribute to an exceedance of a water quality standard exists, a numeric limitation must be included in the permit. Rather than conducting the appropriate RP determination, the previous permit simply placed the prohibitions in the permit. These conditions were removed from the permit. Appropriate reasonable potential determinations were conducted for each general criterion listed in 10 CSR 20-7.031(4)(A) through (I) and effluent limitations were placed in the permit for those general criteria where it was determined the discharge had reasonable potential to cause or contribute to excursions of the general criteria. Specific effluent limitations were not included for those general criteria where it was determined the discharges will not cause or contribute to excursions of general criteria. Removal of the prohibitions does not reduce the protections of the permit or allow for impairment of the receiving stream. The permit maintains sufficient effluent limitations, monitoring requirements and best management practices to protect water quality while maintaining permit conditions applicable to permittee disclosures and in accordance with 10 CSR 20-7.031(4) where no water contaminant by itself or in combination with other substances shall prevent the water of the state from meeting the following conditions:
 - (A) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses.
 - For all outfalls, there is no RP for putrescent bottom deposits preventing full maintenance of beneficial uses because nothing disclosed by the permittee indicates putrescent wastewater would be discharged from the facility.

- For all outfalls, there is no RP for unsightly or harmful bottom deposits preventing full maintenance of beneficial uses because nothing disclosed by the permittee indicates unsightly or harmful bottom deposits would be discharged from the facility.
 - Solid waste regulations found at 10 CSR 80-3.010(7)(B) require operation of the landfill in such a manner as to prevent flow onto the active portion of the sanitary landfill during peak discharge from at least a 25 year storm. In addition, 10 CSR 80-3.010(7)(C) requires water which has contacted solid waste at the working face to be treated as leachate and sent to the leachate disposal system.
- (B) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses.
- For all outfalls, there is no RP for oil in sufficient amounts to be unsightly preventing full maintenance of beneficial uses because nothing disclosed by the permittee indicates oil will be present in sufficient amounts to impair beneficial uses.
 - For all outfalls, there is no RP for scum and floating debris in sufficient amounts to be unsightly preventing full maintenance of beneficial uses because nothing disclosed by the permittee indicates scum and floating debris will be present in sufficient amounts to impair beneficial uses.
 - Solid waste regulations found at 10 CSR 80-3.010(7)(B) require operation of the landfill in such a manner as to prevent flow onto the active portion of the sanitary landfill during peak discharge from at least a 25 year storm. In addition, 10 CSR 80-3.010(7)(C) requires water which has contacted solid waste at the working face to be treated as leachate and sent to the leachate disposal system. These regulations mean no RP for solid waste to contact effluent which is discharged to the receiving stream.
- (C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.
- For all outfalls, there is no RP for unsightly color or turbidity in sufficient amounts preventing full maintenance of beneficial uses because nothing disclosed by the permittee indicates unsightly color or turbidity will be present in sufficient amounts to impair beneficial uses.
 - For all outfalls, there is no RP for offensive odor in sufficient amounts preventing full maintenance of beneficial uses because nothing disclosed by the permittee indicates offensive odor will be present in sufficient amounts to impair beneficial uses.
 - Solid waste regulations found at 10 CSR 80-3.010(7)(B) require operation of the landfill in such a manner as to prevent flow onto the active portion of the sanitary landfill during peak discharge from at least a 25 year storm. In addition, 10 CSR 80-3.010(7)(C) requires water which has contacted solid waste at the working face to be treated as leachate and sent to the leachate disposal system. These regulations mean no RP for solid waste to contact effluent which is discharged to the receiving stream.
- (D) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life.
- The permit writer considered specific toxic pollutants when writing this permit. Numeric effluent limitations are included for those pollutants could be discharged in toxic amounts. These effluent limitations are protective of human health, animals, and aquatic life.
- (E) There shall be no significant human health hazard from incidental contact with the water.
- Much like the condition above, the permit writer considered specific toxic pollutants when writing this permit, including those pollutants could cause human health hazards. The discharge is limited by numeric effluent limitations for those conditions could result in human health hazards.
- (F) There shall be no acute toxicity to livestock or wildlife watering.
- The permit writer considered specific toxic pollutants when writing this permit. Numeric effluent limitations are included for those pollutants could be discharged in toxic amounts. These effluent limitations are protective of livestock and wildlife watering.
- (G) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.
- For all outfalls, there is no RP for physical changes impairing the natural biological community because nothing disclosed by the permittee indicates this is occurring.
 - It has been established any chemical changes are covered by the specific numeric effluent limitations established in the permit.
 - For all outfalls, there is no RP for hydrologic changes impairing the natural biological community because nothing disclosed by the permittee indicates this is occurring.
- (H) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
- There is no reasonable potential for the wastes listed above to be found in the receiving stream at any of the outfalls at this solid waste facility. 10 CSR 80-3.010(16)(A)-(C) require litter and solid wastes be controlled on the site for aesthetic purposes, preventing it from entering the stream. In addition, these regulations require

salvaged materials be removed from the landfill daily or stored in aesthetically acceptable containers or enclosures.

- The previous permit's special conditions required sampling of total petroleum hydrocarbons (TPH) under the decision model to discharge stormwater having a sheen in secondary containment. The special condition has been revised in all permits beginning in 2015 to remove TPH as 40 CFR 136 does not contain any approved methods for the TPH parameter nor are there water quality standards for TPH. This permit requires oil and grease and BTEX (benzene, toluene, ethylbenzene, and xylene) sampling of the potentially contaminated stormwater in secondary containment. The facility need only sample for these constituents prior to release when a sheen or petroleum odor is present.
- The previous permit special condition indicated spills from hazardous waste substances must be reported to the department. However, this condition is covered under standard conditions therefore was removed from special conditions.
- The previous permit special condition #12 indicated all fueling facilities present on the site shall adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures. The permit writer has determined this special condition was outside the scope of NPDES permitting and was removed.

ANTIDEGRADATION REVIEW:

Process water discharges with new, altered, or expanding flows, the Department is to document, by means of antidegradation review, if the use of a water body's available assimilative capacity is justified. In accordance with Missouri's water quality regulations for antidegradation [10 CSR 20-7.031(3)], degradation may be justified by documenting the socio-economic importance of a discharge after determining the necessity of the discharge. Facilities must submit the antidegradation review request to the Department prior to establishing, altering, or expanding discharges. See <http://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm>

- ✓ Not applicable; the facility has not submitted information proposing expanded or altered process water discharge; no further degradation proposed therefore no further review necessary.

This permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) which must include an alternative analysis (AA) of the BMPs. The SWPPP must be developed, implemented, updated, and maintained at the facility. Failure to implement and maintain the chosen alternative, is a permit violation. The AA is a structured evaluation of BMPs to determine which are reasonable and cost effective. Analysis should include practices designed to be 1) non-degrading, 2) less degrading, or 3) degrading water quality. The chosen BMP will be the most reasonable and cost effective while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The analysis must demonstrate why "no discharge" or "no exposure" are not feasible alternatives at the facility. Existing facilities with established SWPPPs and BMPs need not conduct an additional alternatives analysis unless new BMPs are established to address BMP failures or benchmark exceedances. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.015(9)(A)5 and 7.031(3). For stormwater discharges with new, altered, or expanding discharges, the stormwater BMP chosen for the facility, through the AA performed by the facility, must be implemented and maintained at the facility. Failure to implement and maintain the chosen BMP alternative is a permit violation; see SWPPP.

- ✓ Applicable; the facility must review and maintain stormwater BMPs as appropriate.

BEST MANAGEMENT PRACTICES:

Minimum site-wide best management practices are established in this permit to ensure all facilities are managing their sites equally to protect waters of the state from certain activities which could cause negative effects in receiving water bodies. While not all sites require a SWPPP because the SIC codes are specifically exempted in 40 CFR 122.26(b)(14), these best management practices are not specifically included for stormwater purposes. These practices are minimum requirements for all industrial sites to protect waters of the state. If the minimum best management practices are not followed, the facility may violate general criteria [10 CSR 20-7.031(4)]. Statutes are applicable to all permitted facilities in the state, therefore pollutants cannot be released unless in accordance with RSMo 644.011 and 644.016 (17).

COST ANALYSIS FOR COMPLIANCE (CAFCom):

Pursuant to 644.145 RSMo, when incorporating a new requirement for discharges from publicly owned facilities, or when enforcing provisions of this chapter or the CWA, pertaining to any portion of a publicly owned facility, the Department shall make a finding of affordability on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the CWA. This process is completed through a CAFCom. Permits not including new requirements may be deemed affordable.

- ✓ The Department is not required to complete a cost analysis for compliance because the facility is not publicly owned.

CHANGES IN DISCHARGES OF TOXIC POLLUTANT:

This special condition reiterates the federal rules found in 40 CFR 122.44(f) for technology treatments and 122.42(a)(1) for all other toxic substances. In these rules, the facility is required to report changes in amounts of toxic substances discharged. Toxic substances are defined in 40 CFR 122.2 as "...any pollutant listed as toxic under section 307(a)(1)" or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing section 405(d) of the CWA." Section 307 of the clean water act then refers to those parameters listed in 40 CFR 401.15 and any other toxic parameter the Department determines is applicable for reporting under these rules in the permit. The facility should also consider any other toxic pollutant in the discharge as reportable under this condition and must report all increases to the Department as soon as discovered in the effluent. The Department may open the permit to implement any required effluent limits pursuant to CWA §402(k) where sufficient data was not supplied within the application but was supplied at a later date by either the permittee or other resource determined to be representative of the discharge, such as sampling by Department personnel.

COMPLIANCE AND ENFORCEMENT:

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

✓ Not applicable; the facility is not currently under Water Protection Program enforcement action.

DOMESTIC WASTEWATER, SLUDGE, AND BIOSOLIDS:

Domestic wastewater is defined as wastewater (i.e., human sewage) originating primarily from the sanitary conveyances of bathrooms and kitchens. Domestic wastewater excludes stormwater, animal waste, process waste, and other similar waste.

✓ Not applicable; this facility discharges domestic wastewater to an off-site permitted wastewater treatment facility (POTW).

Sewage sludge is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for productive use (i.e. fertilizer) and after having pathogens removed.

Additional information: <http://extension.missouri.edu/main/DisplayCategory.aspx?C=74> (WQ422 through WQ449).

✓ Not applicable; the facility does not manage domestic wastewater on-site.

EFFLUENT LIMITATIONS:

Effluent limitations derived and established for this permit are based on current operations of the facility and applied per 10 CSR 20-7.015(9)(A) as applicable. Any flow through the outfall is considered a discharge and must be sampled and reported as provided in the permit. Future permit action due to facility modification may contain new operating permit terms and conditions which supersede the terms and conditions, including effluent limitations, of this operating permit. Daily maximums and monthly averages are required per 40 CFR 122.45(d)(1) for continuous discharges (not from a POTW).

ELECTRONIC DISCHARGE MONITORING REPORT (EDMR) SUBMISSION SYSTEM:

The U.S. Environmental Protection Agency (EPA) promulgated a final rule on October 22, 2015, to modernize Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. The final rule requires regulated entities and state and federal regulators to use information technology to electronically report data required by the National Pollutant Discharge Elimination System (NPDES) permit program instead of filing paper reports. To comply with the federal rule, the Department is requiring all facilities to begin submitting discharge monitoring data and reports online.

Per 40 CFR 127.15 and 127.24, permitted facilities may request a temporary waiver for up to 5 years or a permanent waiver from electronic reporting from the Department. To obtain an electronic reporting waiver, a facility must first submit an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. A request must be made for each facility. If more than one facility is owned or operated by a single entity, then the entity must submit a separate request for each facility based on its specific circumstances. An approved waiver is not transferable.

The Department must review and notify the facility within 120 calendar days of receipt if the waiver request has been approved or rejected [40 CFR 124.27(a)]. During the Department review period as well as after a waiver is granted, the facility must continue submitting a hard-copy of any reports required by their permit. The Department will enter data submitted in hard-copy from those facilities allowed to do so and electronically submit the data to the EPA on behalf of the facility.

To assist the facility in entering data into the eDMR system, the permit describes limit sets designators in each table in Part A of the permit. The data entry personnel should use these identifiers to ensure data entry is being completed appropriately. For example, M for monthly, Q for quarterly, and others.

✓ The facility is currently using the eDMR data reporting system.

FEDERAL EFFLUENT LIMITATION GUIDELINE:

Effluent Limitation Guidelines, or ELGs, are found at 40 CFR 400-499. These are limitations established by the EPA based on the SIC code and the type of work a facility is conducting. Most ELGs are for process wastewater and some address stormwater. All are technology based limitations which must be met by the applicable facility at all times.

- ✓ The facility has an associated ELG (40 CFR 445) but does not discharge wastewater to waters of the state; uncontaminated stormwater discharges are not addressed by the ELG.

GENERAL CRITERIA CONSIDERATIONS:

In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into permits for pollutants determined to cause, have reasonable potential to cause, or to contribute to, an excursion above any water quality standard, including narrative water quality criteria. In order to comply with this regulation, the permit writer has completed a reasonable potential determination on whether discharges have reasonable potential to cause, or contribute to an excursion of the general criteria listed in 10 CSR 20-7.031(4). In instances where reasonable potential exists, the permit includes limitations within the permit to address the reasonable potential. In discharges where reasonable potential does not exist, the permit may include monitoring to later determine the discharge's potential to impact the narrative criteria. Additionally, 644.076.1 RSMo, as well as Part I §D – Administrative Requirements of Standard Conditions included in this permit state it shall be unlawful for any person to cause or allow any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of §§644.006 to 644.141 of the Missouri Clean Water Law or any standard, rule, or regulation promulgated by the commission. See Part IV for specific determinations.

GROUNDWATER MONITORING:

Groundwater is a water of the state according to RSMo 644.016(27), is subject to regulations at 10 CSR 20-7.015(7) and 10 CSR 20-7.031(6), and must be protected accordingly.

- ✓ This facility is not required to monitor groundwater for the water protection program.

LAND APPLICATION:

Land application, or surficial dispersion of wastewater and/or sludge, is performed by facilities to maintain a basin as no-discharge. Requirements for these types of operations are found in 10 CSR 20-6.015; authority to regulate these activities is from RSMo 644.026.

- ✓ Not applicable; this permit does not authorize operation of a surficial land application system to disperse wastewater or sludge.

LAND DISTURBANCE:

Land disturbance, sometimes called construction activities, are actions which cause disturbance of the root layer or soil; these include clearing, grading, and excavating of the land. 40 CFR 122.26(b)(14) and 10 CSR 20-6.200(3) requires permit coverage for these activities. Coverage is not required for facilities when only providing maintenance of original line and grade, hydraulic capacity, or to continue the original purpose of the facility.

- ✓ Not applicable; this permit does not provide coverage for land disturbance activities. The facility may obtain a separate land disturbance permit (MORA) online at <https://dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm>; MORA permits do not cover disturbance of contaminated soils, however, site specific permits such as this one can be modified to include appropriate controls for land disturbance of contaminated soils by adding site-specific BMP requirements and additional outfalls. However, land disturbance can discharge through any permitted outfall without a permit modification.

MAJOR WATER USER:

Any surface or groundwater user with a water source and the equipment necessary to withdraw or divert 100,000 gallons (or 70 gallons per minute) or more per day combined from all sources from any stream, river, lake, well, spring, or other water source is considered a major water user in Missouri. All major water users are required by law to register water use annually (Missouri Revised Statutes Chapter 256.400 Geology, Water Resources and Geodetic Survey Section). <https://dnr.mo.gov/pubs/pub2236.htm>

- ✓ Not applicable; this facility cannot withdraw water from the state in excess of 70 gpm/0.1 MGD.

NUTRIENT MONITORING:

Nutrient monitoring is required for facilities characteristically or expected to discharge nutrients (nitrogenous compounds and/or phosphorus) when the design flow is equal to or greater than 0.1 MGD per 10 CSR 20-7.015(9)(D)8. This requirement is applicable to all Missouri waterways.

- ✓ This is a stormwater only permit therefore not subject to provisions found in 10 CSR 20-7.015 per 10 CSR 20-7.015(1)(C).

Water quality standards per 10 CSR 20-7.031(5)(N) describe nutrient criteria requirements assigned to lakes (which include reservoirs) in Missouri, equal to or greater than 10 acres during normal pool conditions. The Department's Nutrient Criteria Implementation Plan (NCIP) may be reviewed at: <https://dnr.mo.gov/env/wpp/rules/documents/nutrient-implementation-plan-final-072618.pdf> Discharges of wastewater in to lakes or lake watersheds designated as L1 (drinking water use) are prohibited per 10 CSR 20-7.015(3)(C).

- ✓ This is a stormwater only permit therefore not subject to provisions found in 10 CSR 20-7.015 per 10 CSR 20-7.015(1)(C).

OIL/WATER SEPARATORS:

Oil water separator (OWS) tank systems are frequently found at industrial sites where process water and stormwater may contain oils and greases, oily wastewaters, or other immiscible liquids requiring separation. Food industry discharges typically require pretreatment prior to discharge to municipally owned treatment works. Per 10 CSR 26-2.010(2)(B), all oil water separator tanks must be operated according to manufacturer's specifications and authorized in NPDES permits per 10 CSR 26-2.010(2) or may be regulated as a petroleum tank.

- ✓ Not applicable; the facility has not disclosed the use of any oil water separators they wish to include under the NPDES permit at this facility and therefore oil water separator tanks are not authorized by this permit.

OPERATOR CERTIFICATION REQUIREMENTS:

Operators or supervisors of operations at regulated domestic wastewater treatment facilities shall be certified in accordance with 10 CSR 20-9 and any other applicable state law or regulation.

- ✓ Not applicable; this facility is not required to have a certified operator. This permit does not cover domestic wastewater or the domestic wastewater population equivalent (PE) is less than two hundred (200) individuals. Additionally, this facility is not owned or operated by a municipality, public sewer district, county, public water supply district, or private sewer company regulated by the Public Service Commission, or operated by a state or federal agency. Private entities are exempted from the population equivalent requirement unless the Department has reason to believe a certified operator is necessary.

PRETREATMENT:

This permit does not regulate pretreatment requirements for facilities discharging to an accepting permitted wastewater treatment facility. If applicable, the receiving entity (the publicly owned treatment works - POTW) is to ensure compliance with any effluent limitation guidelines for pretreatment listed in 40 CFR Subchapter N per 10 CSR 20-6.100. Pretreatment regulations per RSMo 644.016 are limitations on the introduction of pollutants or water contaminants into publicly owned treatment works or facilities.

- ✓ Applicable; this facility reported leachate is discharged to a POTW and falls under a category requiring pretreatment requirements.

REASONABLE POTENTIAL (RP):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants which are (or may be) discharged at a level causing or have the reasonable potential to cause (or contribute to) an in-stream excursion above narrative or numeric water quality standards. Per 10 CSR 20-7.031(4), general criteria shall be applicable to all waters of the state at all times; however, acute toxicity criteria may be exceeded by permit in zones of initial dilution, and chronic toxicity criteria may be exceeded by permit in mixing zones. If the permit writer determines any given pollutant has the reasonable potential to cause or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for the pollutant per 40 CFR Part 122.44(d)(1)(iii) and the most stringent limits per 10 CSR 20-7.031(9)(A). Permit writers may use mathematical reasonable potential analysis (RPA) using the Technical Support Document for Water Quality Based Toxics Control (TSD) methods (EPA/505/2-90-001) as found in Section 3.3.2, or may also use reasonable potential determinations (RPD) as provided in Sections 3.1.2, 3.1.3, and 3.2 of the TSD.

- ✓ Not applicable; a mathematical RPA was not conducted on the stormwater for this facility. This permit establishes permit limits and benchmarks for stormwater. The Department has determined stormwater is not a continuous discharge and is therefore not necessarily dependent on mathematical RPAs. However, the permit writer completed an RPD, a reasonable potential determination, using best professional judgment for all of the appropriate parameters in this permit. An RPD consists of reviewing application data and/or discharge monitoring data for the last five years and comparing those data to narrative or numeric water quality criteria.
- ✓ Permit writers use the Department's permit writer's manual (<http://dnr.mo.gov/env/wpp/permits/manual/permit-manual.htm>), the EPA's permit writer's manual (<https://www.epa.gov/npdes/npdes-permit-writers-manual>), program policies, and best professional judgment. For each parameter in each permit, the permit writer carefully considers all applicable information regarding: technology based effluent limitations, effluent limitation guidelines, water quality standards, stream flows and uses, and all applicable site specific information and data gathered by the facility through discharge monitoring reports and renewal (or new) application sampling. Best professional judgment is based on the experience of the permit writer, cohorts in the Department and resources at the EPA, research, and maintaining continuity of permits if necessary. For stormwater permits, the permit writer is required per 10 CSR 6.200(6)(B)2 to consider: A. application and other information supplied by the facility; B. effluent guidelines; C. best professional judgment of the permit writer; D. water quality; and E. BMPs. Part IV provides specific decisions related to this permit.

RENEWAL REQUIREMENTS:

The renewal special condition permit requirement is designed to guide the facility to prepare and include all relevant and applicable information in accordance with 10 CSR 20-6.010(7)(A)-(C), and if applicable, federal regulations. The special condition may not include all requirements and requests for additional information may be made at the time of permit renewal under RSMo 644.051.13(5) and 40 CFR 122.21(h). Prior to submittal, the facility must review the entire submittal to confirm all required information and data is provided; it is the facility's responsibility to discern if additional information is required. Failure to fully disclose applicable information with the application or application addendums may result in a permit revocation per 10 CSR 20-6.010(8)(A) and may result in the forfeiture of permit shield protection authorized in RSMo 644.051.16.

SAMPLING FREQUENCY JUSTIFICATION:

Sampling frequency for stormwater-only outfalls is typically quarterly even though BMP inspection occurs monthly. The facility may sample more frequently if additional data is required to determine if best management operations and technology are performing as expected.

SAMPLING TYPE JUSTIFICATION:

Sampling type was continued from the previous permit. The sampling types are representative of the discharges, and are protective of water quality. Discharges with altering effluent should have composite sampling; discharges with uniform effluent can have grab samples. Grab samples are usually appropriate for stormwater. Parameters which must have grab sampling are: pH, ammonia, *E. coli*, total residual chlorine, free available chlorine, hexavalent chromium, dissolved oxygen, total phosphorus, volatile organic compounds, and others. For further information on sampling and testing methods see 10 CSR 20-7.015(9)(D)2.

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, effluent limits, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. SOC's are allowed under 40 CFR 122.47 and 10 CSR 20-7.031(11) providing certain conditions are met. An SOC is not allowed:

- For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed in accordance with 40 CFR 125.3.
- For a newly constructed facility in most cases per RSMo 644.029. Newly constructed facilities must meet all applicable effluent limitations (technology and water quality) when discharge begins. New facilities are required to install the appropriate control technologies as specified in a permit or antidegradation review. A SOC is allowed for a new water quality based effluent limit not included in a previously public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
- To develop a TMDL, UAA, or other study associated with development of a site specific criterion. A facility is not prohibited from conducting these activities, but a SOC may not be specifically granted for conducting these activities.

In order to provide guidance in developing SOC's, and to attain a greater level of consistency, the Department issued a policy on development of SOC's on October 25, 2012. The policy provides guidance to permit writers on standard time frames for schedules for common activities, and guidance on factors to modify the length of the schedule.

✓ Not applicable; this permit does not contain a SOC.

SPILLS, OVERFLOWS, AND OTHER UNAUTHORIZED DISCHARGE REPORTING:

Per 260.505 RSMo, any emergency involving a hazardous substance must be reported to the Department's 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. The Department may require the submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply whether or not the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the noncompliance reporting requirement found in Standard Conditions Part I. <http://dnr.mo.gov/env/esp/spillbill.htm>

Any other spills, overflows, or unauthorized discharges reaching waters of the state must be reported to the regional office during normal business hours, or after normal business hours, to the Department's 24 hour Environmental Emergency Response spill line at 573-634-2436.

SLUDGE – INDUSTRIAL:

Industrial sludge is solid, semi-solid, or liquid residue generated during the treatment of industrial process or non-process wastewater in a treatment works; including but not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment process; scum and solids filtered from water supplies and backwashed; and any material derived from industrial sludge. Industrial sludge could also be derived from lagoon dredging or other similar maintenance activities.

✓ Not applicable; industrial sludge is not generated at this facility.

STANDARD CONDITIONS:

The standard conditions Part I attached to this permit incorporate all sections of 10 CSR 20-6.010(8) and 40 CFR 122.41(a) through (n) by reference as required by law. These conditions, in addition to the conditions enumerated within the standard conditions should be reviewed by the facility to ascertain compliance with this permit, state regulations, state statues, federal regulations, and the Clean Water Act.

STORMWATER PERMITTING: LIMITATIONS AND BENCHMARKS:

Because of the fleeting nature of stormwater discharges, the Department, under the direction of EPA guidance, has determined monthly averages are capricious measures of stormwater-only discharges. The *Technical Support Document for Water Quality Based Toxics Control* (EPA/505/2-90-001; 1991) §3.1 indicates most procedures within the document apply only to water quality based approaches, not end-of-pipe technology-based controls. Hence, stormwater-only outfalls will generally only contain a maximum daily limit (MDL), a benchmark, or a monitoring requirement as dictated by site specific conditions, the BMPs in place, the BMPs proposed, past performance of the facility, and the receiving water's current quality.

Sufficient rainfall to cause a discharge for one hour or more from a facility would not necessarily cause significant flow in a receiving stream. Acute Water Quality Standards (WQSs) are based on one hour of exposure, and must be protected at all times. Therefore, industrial stormwater facilities with toxic contaminants present in the stormwater may have the potential to cause a violation of acute WQSs if toxic contaminants occur in sufficient amounts. In this instance, the permit writer may apply daily maximum limitations.

Conversely, it is unlikely for rainfall to cause a discharge for four continuous days from a facility; if this does occur however, the receiving stream will also likely sustain a significant amount of flow providing dilution. Most chronic WQSs are based on a four-day exposure with some exceptions. Under this scenario, most industrial stormwater facilities have limited potential to cause a violation of chronic water quality standards in the receiving stream.

A standard mass-balance equation cannot be calculated for stormwater because stormwater flow and flow in the receiving stream cannot be determined for conditions on any given day or storm event without real-time ad-hoc monitoring. The amount of stormwater discharged from the facility will vary based on current and previous rainfall, soil saturation, humidity, detention time, BMPs, surface permeability, etc. Flow in the receiving stream will vary based on climatic conditions, size of watershed, area of surfaces with reduced permeability (houses, parking lots, and the like) in the watershed, hydrogeology, topography, etc. Decreased permeability may increase the stream flow dramatically over a short period of time (flash).

Numeric benchmark values are based on site specific requirements taking in to account a number of factors but cannot be applied to any process water discharges. First, the technology in place at the site to control pollutant discharges in stormwater is evaluated. The permit writer also evaluates other similar permits for similar activities. A review of the guidance forming the basis of Environmental Protection Agency's (EPA's) *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* (MSGP) may also occur. Because precipitation events are sudden and momentary, benchmarks based on state or federal standards or recommendations use the Criteria Maximum Concentration (CMC) value, or acute standard may also be used. The CMC is the estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed briefly without resulting in an unacceptable effect. The CMC for aquatic life is intended to be protective of the vast majority of the aquatic communities in the United States. If a facility has not disclosed BMPs applicable to the pollutants for the site, the facility may not be eligible for benchmarks.

40 CFR 122.44(b)(1) requires the permit implement the most stringent limitations for each discharge, including industrially exposed stormwater; and 40 CFR 122.44(d)(1)(i) and (iii) requires the permit to include water-quality based effluent limitations where reasonable potential has been found. However, because of the non-continuous nature of stormwater discharges, staff are unable to perform statistical Reasonable Potential Analysis (RPA) under most stormwater discharge scenarios. Reasonable potential determinations (RPDs; see REASONABLE POTENTIAL above) using best professional judgment are performed.

Benchmarks require the facility to monitor, and if necessary, replace and update stormwater control measures. Benchmark concentrations are not effluent limitations. A benchmark exceedance, therefore, is not a permit violation; however, failure to take corrective action is a violation of the permit. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the facility in knowing when additional corrective actions may be necessary to comply with the conditions of the permit.

BMP inspections typically occur more frequently than sampling. Sampling frequencies are based on the facility's ability to comply with the benchmarks and the requirements of the permit. Inspections should occur after large rain events and any other time an issue is noted; sampling after a benchmark exceedance may need to occur to show the corrective active taken was meaningful.

When a permitted feature or outfall consists of only stormwater, a benchmark may be implemented at the discretion of the permit writer, if there is no RP for water quality excursions.

- ✓ Applicable, this facility has stormwater-only outfalls where benchmarks or limitations were deemed appropriate contaminant measures.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k), Best Management Practices (BMPs) must be used to control or abate the discharge of pollutants when: 1) Authorized under §304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) Authorized under §402(p) of the CWA for the control of stormwater discharges; 3) Numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in 2015

https://www.epa.gov/sites/production/files/2015-11/documents/swppp_guide_industrial_2015.pdf, BMPs are measures or practices used to reduce the amount of pollution entering waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to 1) identify sources of pollution or contamination, and 2) select and carry out actions which prevent or control the pollution of storm water discharges. Additional information can be found in *Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-006; September 1992).

Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the facility should take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures determined to be adequate to achieve the benchmark values discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.

For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. For further guidance, consult the antidegradation implementation procedure (<http://dnr.mo.gov/env/wpp/docs/AIP050212.pdf>).

Alternative Analysis (AA) evaluation of the BMPs is a structured evaluation of BMPs which are reasonable and cost effective. The AA evaluation should include practices designed to be: 1) non-degrading; 2) less degrading; or 3) degrading water quality. The glossary of AIP defines these three terms. The chosen BMP will be the most reasonable and effective management strategy while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The AA evaluation must demonstrate why "no discharge" or "no exposure" is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and *Antidegradation Implementation Procedure* (AIP), §II.B.

If parameter-specific numeric benchmark exceedances continue to occur and the facility feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the facility can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the Department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification, which includes an appropriate fee; the application is found at: <https://dnr.mo.gov/forms/#WaterPollution>

✓ Applicable; a SWPPP shall be developed and implemented for this facility; see specific requirements in the SPECIAL CONDITIONS section of the permit.

SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:

Please review Standard Conditions Part 1, §A, No. 4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 and/or 40 CFR 136 unless alternates are approved by the Department and incorporated within this permit. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method quantifies the pollutant below the level of the applicable water quality criterion or; 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015 and or 40 CFR 136. These methods are also required for parameters listed as monitoring only, as the data collected may be used to determine if numeric limitations need to be established. A facility is responsible for working with their contractors to ensure the analysis performed is sufficiently sensitive.

UNDERGROUND INJECTION CONTROL (UIC):

The UIC program for all classes of wells in the State of Missouri is administered by the Missouri Department of Natural Resources and approved by EPA pursuant to §§1422 and 1425 of the Safe Drinking Water Act (SDWA) and 40 CFR 147 Subpart AA. Injection wells are classified based on the liquids which are being injected. Class I wells are hazardous waste wells which are banned by RSMo 577.155; Class II wells are established for oil and natural gas production; Class III wells are used to inject fluids to extract minerals; Class IV wells are also banned by Missouri in RSMo 577.155; Class V wells are shallow injection wells; some examples are heat pump wells and groundwater remediation wells. Domestic wastewater being disposed of sub-surface is also considered a Class V well. In accordance with 40 CFR 144.82, construction, operation, maintenance, conversion, plugging, or closure of injection wells shall not cause movement of fluids containing any contaminant into Underground Sources of Drinking Water (USDW) if the presence of any contaminant may cause a violation of drinking water standards or groundwater standards under 10 CSR 20-7.031, or other health based standards, or may otherwise adversely affect human health. If the director finds the injection activity may endanger USDWs, the Department may require closure of the injection wells, or other actions listed in 40 CFR 144.12(c), (d), or (e). In accordance with 40 CFR 144.26, the facility shall submit a Class V Well Inventory Form for each active or new underground injection well drilled, or when the status of a well changes, to the Missouri Department of Natural Resources, Geological Survey Program, P.O. Box 250, Rolla, Missouri 65402. The Class V Well Inventory Form can be requested from the Geological Survey Program or can be found at the following web address: <http://dnr.mo.gov/forms/780-1774-f.pdf> Single family residential septic systems and non-residential septic systems used solely for sanitary waste and having the capacity to serve fewer than 20 persons a day are excluded from the UIC requirements (40 CFR 144.81(9)).

✓ Not applicable; the facility has not submitted materials indicating the facility will be performing UIC at this site.

VARIANCE:

Per the Missouri Clean Water Law §644.061.4, variances shall be granted for such period of time and under such terms and conditions as specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141. Thermal variances are regulated separately and are found under 644.

✓ Not applicable; this permit is not drafted under premise of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010; definitions], the WLA is the maximum amount of pollutant each discharger is allowed to discharge into the receiving stream without endangering water quality. Two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs) are reviewed. If one limit does not provide adequate protection for the receiving water, then the other must be used per 10 CSR 20-7.015(9)(A).

✓ Not applicable, this is a stormwater only permit therefore WLAs were not calculated. See section on stormwater permitting as applying WLAs to stormwater is not normally applicable per TSD §3.1.

WASTELOAD ALLOCATION (WLA) MODELING:

Facilities may submit site specific studies to better determine the site specific wasteload allocations applied in permits.

✓ Not applicable; a WLA study was either not submitted or determined not applicable by Department staff.

WATER QUALITY STANDARD REVISION:

In accordance with 644.058 RSMo, the Department is required to utilize an evaluation of the environmental and economic impacts of modifications to water quality standards of twenty-five percent or more when making individual site-specific permit decisions.

✓ This operating permit does not contain requirements for a water quality standard changing twenty-five percent or more since the previous operating permit.

PART IV. EFFLUENT LIMIT DETERMINATIONS

OUTFALL #001 & #002 – STORMWATER OUTFALLS

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAXIMUM LIMIT	BENCH- MARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL							
FLOW	MGD	*	-	*/*	ONCE/QUARTER	ONCE/QUARTER	24 HR. ESTIMATE
PRECIPITATION	inches	*	-	*/*	ONCE/QUARTER	ONCE/QUARTER	24 HR. TOT
CONVENTIONAL							
BOD	REMOVED						
COD	mg/L	**	90	95/47	ONCE/QUARTER	ONCE/QUARTER	GRAB
OIL & GREASE	mg/L	**	10	15/10	ONCE/QUARTER	ONCE/QUARTER	GRAB
pH †	SU	6.5-9.0	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
SETTLABLE SOLIDS	mL/L/hr	**	1.5	1.5/1.0	ONCE/QUARTER	ONCE/QUARTER	GRAB
TSS	mg/L	**	100	60/30	ONCE/QUARTER	ONCE/QUARTER	GRAB
METALS							
ALUMINUM, TR	µg/L	**	750	*	ONCE/QUARTER	ONCE/QUARTER	GRAB
ANTIMONY, TR	REMOVED						
ARSENIC, TR	µg/L	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
BARIIUM, TR	REMOVED						
BERYLLIUM, TR	REMOVED						
CADMIUM, TR	REMOVED						
CHROMIUM (III), TR	REMOVED						
CHROMIUM (VI), DISSOLVED	µg/L	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
COBALT, TR	REMOVED						
COPPER, TR		*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
IRON, TR	µg/L	**	4,000	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
LEAD, TR	µg/L	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
MERCURY, TR	REMOVED						
NICKEL, TR	REMOVED						
SELENIUM, TR	µg/L	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
THALLIUM, TR	µg/L	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
ZINC, TR	µg/L	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
NUTRIENTS							
AMMONIA AS N	mg/L	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
OTHERS							
BENZENE	REMOVED						
CHLORIDE	mg/L	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
CHLORIDE PLUS SULFATE	mg/L	*	1,000	1,000/-	ONCE/QUARTER	ONCE/QUARTER	GRAB
ETHYLBENZENE	REMOVED						
FLUORIDE	REMOVED						
SULFATE	mg/L	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
TOLUENE	REMOVED						
TOTAL XYLENE	REMOVED						

* monitoring and reporting requirement only
** monitoring with associated benchmark

† report the minimum and maximum pH values; pH is not to be averaged
TR total recoverable

DERIVATION AND DISCUSSION OF LIMITS:

PHYSICAL:

Flow

Quarterly monitoring continued from previous permit. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to ensure compliance with permitted effluent limitations. If the facility is unable to obtain effluent flow, then it is the responsibility of the facility to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD)..

Precipitation

Quarterly monitoring only requirement; measuring the amount of precipitation [(10 CSR 20-6.200(2)(C)1.E(VI)] during an event is necessary to ensure adequate stormwater management exists at the site. Knowing the amount of potential stormwater runoff can provide the facility a better understanding of any specific control measures be employed to ensure protection of water quality. The facility will provide the 24 hour accumulation value of precipitation from the day of sampling the other parameters.

CONVENTIONAL:

Biochemical Oxygen Demand - 5 Day (BOD₅)

Quarterly monitoring for this pollutant is removed. DMR data did not indicate this is a pollutant of concern at the site. The permit already monitors for COD. While they monitor different types of oxygen demand, they both are water quality indicators. COD is a better indicator for stormwater at landfills, and COD is therefore continued in this permit.

Chemical Oxygen Demand (COD)

Quarterly monitoring with a daily maximum benchmark of 90 mg/L. The previous permit required a daily maximum limit of 95 mg/L with a monthly average limit of 47 mg/L. Limits were removed from this parameter, as the permit writer reviewed the submitted DMR data and determined no reasonable potential to exceed water quality standards either numeric or narrative. A benchmark value will be implemented for this parameter. The benchmark value falls within the range of values implemented in other permits that have similar industrial activities. There is no water quality standards for COD; however, increased oxygen demand may impact instream water quality. COD is also a valuable indicator parameter in stormwater. COD monitoring allows the permittee to identify increases in COD that may indicate materials/chemicals coming into contact with stormwater that cause an increase in oxygen demand. Increases in COD may indicate a need for maintenance or improvement of BMPs.

Oil & Grease

Quarterly monitoring with a daily maximum benchmark of 10 mg/L. The previous permit required a daily maximum limit of 15 mg/L, with a monthly average limit of 10 mg/L. Limits were removed from this parameter, as the permit writer reviewed the submitted DMR data and determined no reasonable potential to exceed water quality standards either numeric or narrative. Oil and grease is considered a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or toluene, but these constituents are often lost during testing due to their boiling points. It is recommended to perform separate testing for these constituents if they are a known pollutant of concern at the site, i.e. aquatic life toxicity or human health is a concern. Results do not allow for separation of specific pollutants within the test, they are reported, totaled, as "oil and grease". Per 10 CSR 20-7.031 Table A: Criteria for Designated Uses; 10 mg/L is the standard for protection of aquatic life. 10 mg/L is the level at which sheen is expected to form on receiving waters. Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at levels which vary from 10 mg/L. To protect the general criteria, it is the responsibility of the permittee to visually observe the discharge and receiving waters for sheen or bottom deposits.

pH

Quarterly monitoring, limited to the range of 6.5 to 9.0 SU, continued from the previous permit. The Water Quality Standard at 10 CSR 20-7.031(5)(E) states water contaminants shall not cause pH to be outside the range of 6.5 to 9.0 standard pH units. pH data from this site was variable and indicated reasonable potential to exceed water quality standards.

Settleable Solids (SS)

Quarterly monitoring with a daily maximum benchmark of 1.5 mL/L/hr. The previous permit required a daily maximum limit of 1.5 mL/L/hr, with a monthly average limit of 1/0 mL/L/hr. Limits were removed from this parameter, as the permit writer reviewed the submitted DMR data and determined no reasonable potential to exceed water quality standards either numeric or narrative. There is no water quality standard for SS; however, solids are a primary pollutant of concern in landfill stormwater, and sediment discharges can negatively impact aquatic life habitat. Settleable solids are also a valuable indicator parameter. Solids monitoring allows the permittee to identify increases in sediment and solids that may indicate uncontrolled materials leaving the site. Additionally, a benchmark value will be implemented for this parameter. The benchmark value will be set at 1.5 mL/L/hr. This value falls within the range of values implemented in other permits that have similar industrial activities.

Total Suspended Solids (TSS)

Quarterly monitoring with a daily maximum benchmark of 100 mg/L. The previous permit required a daily maximum limit of 60 mg/L, with a monthly average limit of 30 mg/L. Limits were removed from this parameter, as the permit writer reviewed the submitted DMR data and determined no reasonable potential to exceed water quality standards either numeric or narrative. There is no water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter in stormwater. TSS monitoring allows the permittee to identify increases in TSS that may indicate uncontrolled materials leaving the site. Increased suspended solids in runoff can lead to decreased available oxygen for aquatic life and an increase of surface water temperatures in a receiving stream. Suspended solids can also be carriers of toxins, which can adsorb to the suspended particles; therefore, total suspended solids are a valuable indicator parameter for other pollution. A benchmark value will be implemented for this parameter. The benchmark value is achievable through proper operation and maintenance of BMPs and falls within the range of values implemented in other permits having similar industrial activities.

METALS:

Aluminum, Total Recoverable

Quarterly monitoring with a daily maximum benchmark of 750 µg/L. The previous permit required monitoring only. DMR data showed the facility reported numerous instances of values higher than 750 µg/L in the previous permit cycle.

Antimony, Total Recoverable

Removed from monitoring. DMR data showed no values of water quality concern. All values reported were well below the water quality standards, suggesting this is not a pollutant of concern at this site. Monitoring is not necessary and is therefore removed.

Arsenic, Total Recoverable

Annual Monitoring only continued from previous permit. Arsenic is a pollutant of concern at landfills. It is found in a variety of consumer products that may have been discarded in a landfill, and thus may be a component of leachate. DMR data shows no reasonable potential to cause or contribute to excursions of the water quality standard.

Barium, Total Recoverable

Removed from monitoring. DMR data showed no values of water quality concern. All values reported were well below the water quality standards, suggesting this is not a pollutant of concern at this site. Monitoring is not necessary and is therefore removed.

Beryllium, Total Recoverable

Removed from monitoring. DMR data showed no values of water quality concern. All values reported were well below the water quality standards, suggesting this is not a pollutant of concern at this site. Monitoring is not necessary and is therefore removed.

Cadmium, Total Recoverable

Removed from monitoring. DMR data showed no values of water quality concern. All values reported were well below the water quality standards, suggesting this is not a pollutant of concern at this site. Monitoring is not necessary and is therefore removed.

Chromium (III), Total Recoverable

Removed from monitoring. DMR data showed no values of water quality concern. All values reported were well below the water quality standards, suggesting this is not a pollutant of concern at this site. Monitoring is not necessary and is therefore removed.

Chromium VI, Dissolved

Annual Monitoring only continued from previous permit. Chromium VI has several industrial uses, including chrome plating, the manufacture of dye and pigments, leather and wood preservation, and as an alloy with other metals. It was also used as "chromic acid" for a glass cleaner in industrial settings. There is a potential for wastes from these uses to be found at a solid waste disposal site. DMR data shows no reasonable potential to cause or contribute to excursions of the water quality standard.

Cobalt, Total Recoverable

Removed from monitoring. DMR data showed no values of water quality concern. All values reported were well below the water quality standards, suggesting this is not a pollutant of concern at this site. Monitoring is not necessary and is therefore removed.

Copper, Total Recoverable

Annual Monitoring only continued from previous permit. Copper has numerous industrial uses, from alloys and antimicrobial applications, to wires, cables and paints. It is used as a stabilizing agent in chemical products as well. DMR data shows no reasonable potential to cause or contribute to excursions of the water quality standard.

Iron, Total Recoverable

Quarterly monitoring with a daily maximum benchmark of 4,000 µg/L. Iron is a primary pollutant of concern at landfills and is found in high levels in the leachate of these facilities, and the parameter is also found in the ELG for landfills found at 40 CFR 445. This site reported exceedances of this level during the previous permit cycle.

Lead, Total Recoverable

Annual monitoring, continued from the previous permit. Lead is found in electronics, bullets, construction, and in alloys, among other industrial uses. DMR data shows no reasonable potential to cause or contribute to excursions of the water quality standard.

Mercury, Total Recoverable

Removed from monitoring. DMR data showed no values of water quality concern. All values reported were well below the water quality standards, suggesting this is not a pollutant of concern at this site. Monitoring is not necessary and is therefore removed.

Nickel, Total Recoverable

Removed from monitoring. DMR data showed no values of water quality concern. All values reported were well below the water quality standards, suggesting this is not a pollutant of concern at this site. Monitoring is not necessary and is therefore removed.

Selenium, Total Recoverable

Annual monitoring continued from previous permit. Selenium is primarily used in the production of glass and electronics. It can also be found as an alloy with other metals. It is a known pollutant of concern at waste disposal sites, therefore monitoring is continued. DMR data shows no reasonable potential to cause or contribute to excursions of the water quality standard.

Thallium, Total Recoverable

Annual monitoring continued from previous permit. Thallium is primarily used industrially in electronics and optics, and can be found in consumer goods discarded in landfills. DMR data shows no reasonable potential to cause or contribute to excursions of the water quality standard.

Zinc, Total Recoverable

Annual monitoring continued from previous permit. Zinc has numerous industrial applications, the most prevalent of which are batteries and anti-corrosion agents. It is also commonly used as an alloy and in industrial chemical compounds such as flame retardants and wood preservatives. Zinc is a pollutant of concern at solid waste landfills as identified in the landfill ELG found at 40 CFR 445. DMR data shows no reasonable potential to cause or contribute to excursions of the water quality standard.

NUTRIENTS:

Ammonia, Total as Nitrogen

Quarterly monitoring, continued from the previous permit. Ammonia is a pollutant of concern at landfills as it is a primary component of leachate. Data from this site does not indicate the potential to exceed water quality standards; therefore, monitoring is continued.

OTHER:

Benzene

Removed from monitoring. The DMR data at this site does not indicate benzene is a pollutant of concern. Monitoring for oil and grease is continued, and is believed to be an appropriate indicator pollutant for any possible petroleum discharges at the site.

Chloride

Quarterly monitoring only, continued from the previous permit, and is required to determine chloride plus sulfate below. The facility shall sample and independently report the analytical value of chloride.

Chloride Plus Sulfate

Quarterly monitoring with a daily maximum benchmark of 1,000 mg/L, continued from the previous permit. Chloride and sulfate are pollutants of concern at landfill sites. This technology based value is achievable through proper operation and maintenance of BMPs and falls within the range of values implemented in other permits having similar industrial activities. DMR data shows no reasonable potential to cause or contribute to excursions of the water quality standard. Data ranged from 18 mg/L to 180 mg/L.

Ethylbenzene

Removed from monitoring. The DMR data at this site does not indicate ethylbenzene is a pollutant of concern. Monitoring for oil and grease is continued, and is believed to be an appropriate indicator pollutant for any possible petroleum discharges at the site.

Fluoride

Removed from monitoring. DMR data showed no values of water quality concern. All values reported were well below the water quality standards, suggesting this is not a pollutant of concern at this site. Monitoring is not necessary and is therefore removed.

Sulfate

Quarterly monitoring required to determine chloride plus sulfate below. The facility shall sample and independently report the analytical value of sulfate.

Toluene

Removed from monitoring. DMR data showed no values of water quality concern. All values reported were well below the water quality standards, suggesting this is not a pollutant of concern at this site. Monitoring is not necessary and is therefore removed.

Total Xylene

Removed from monitoring. DMR data showed no values of water quality concern. All values reported were well below the water quality standards, suggesting this is not a pollutant of concern at this site. Monitoring is not necessary and is therefore removed.

PART V. ADMINISTRATIVE REQUIREMENTS

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PERMIT SYNCHRONIZATION:

Permits are normally issued on a five-year term, but to achieve watershed synchronization some permits will need to be issued for less than the full five years as allowed by regulation. The intent is all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. <http://dnr.mo.gov/env/wpp/cpp/docs/watershed-based-management.pdf>. This will allow the Department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than two years old, such data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit.

- ✓ This permit is not being synchronized at this time because the permit would expire during the 3rd quarter of 2021 which would cause the permit to be issued for 11 months. This permit will be renewed for a full five year term.

PUBLIC NOTICE:

The Department shall give public notice a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in or with concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and facility must be notified of the denial in writing. <http://dnr.mo.gov/env/wpp/permits/pn/index.html> The Department must issue public notice of a pending operating permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wishing to submit comments regarding this proposed operating permit, please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments. All comments must be in written form.

- ✓ The Public Notice period for this operating permit was from January 8, 2021 to February 8 2021. No responses were received.

DATE OF FACT SHEET: SEPTEMBER 29, 2020

COMPLETED BY:

KYLE O'ROURKE, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - INDUSTRIAL UNIT
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STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
 - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
 - a. Records of monitoring information shall include:
 - i. The date, exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.
 - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
 - a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
 - b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

Section B – Reporting Requirements

1. **Planned Changes.**
 - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42;
 - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
 - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
 - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - ii. Any upset which exceeds any effluent limitation in the permit.
 - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
 - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
 4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
 5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
 6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
 7. **Discharge Monitoring Reports.**
 - a. Monitoring results shall be reported at the intervals specified in the permit.
 - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
 - c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.
- b. Notice.
 - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
 - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
 - c. Prohibition of bypass.
 - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
 1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 3. The permittee submitted notices as required under paragraph 2. b. of this section.
 - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
 - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
 - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being properly operated; and
 - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
 - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
 - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Section C – Bypass/Upset Requirements

1. **Definitions.**
 - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
 - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
 - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.

Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
 - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
 - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement



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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittee with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a 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.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department 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 Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
 - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
 - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
 - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
 - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
 - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

04 March 2020

Ms. Heather Peters
Chief, Industrial Permits Unit
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, Missouri 65102

Subject: Prairie View Regional Waste Facility Operating Permit (MO-0121045) Renewal Application

Ms. Peters,

On behalf of BFI Waste Systems of Missouri LLC, please find enclosed the completed Missouri State Operating Permit (MO-0121045) renewal application materials for the Prairie View Regional Waste Facility (Prairie View). Forms A and C are included with this application in accordance with Missouri Department of Natural Resources guidelines for facilities with stormwater discharge.

The current permit contains both daily maximum and monthly average numeric effluent limitations (NEL) for Outfalls 001 and 002 which discharge from stormwater detention basins that collect runoff from the east and west sides of the active landfill areas. The current NEL's are highly conservative values for intermittent, short-term stormwater events. Frequently there are months in which only one discharge occurs over the course of several hours. In such cases, it is unreasonable for Prairie View to meet conservative limits based on protections for long-term conditions. This is especially true for Total Suspended Solids, where background concentrations are often above recommended benchmarks (100 mg/L) during precipitation driven runoff events. We request the Department consider implementation of benchmarks in the Prairie View operating permit.

In addition, iron monitoring was conducted upstream and downstream of the site beginning in 2015 to determine if the landfill is contributing to iron concentrations measured downstream of the site. Eleven paired samples were taken upstream and downstream of the site at Permitted Feature #003. On average, iron concentrations in samples taken downstream of the site were 8.4% lower than those taken at the upstream property boundary. These findings indicate that iron concentrations measured at the downstream property boundary of Prairie View Regional Waste Facility do not originate on-site and are representative of background conditions. We therefore request that the instream iron monitoring requirement be removed from the renewed permit.

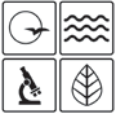
If you need additional information or clarification regarding the renewal application, please let me know. We appreciate your time and attention on this matter.

Sincerely,



Nick Muenks
Senior Water Quality Scientist

Enclosures: Prairie View Regional Waste Facility Operating Permit (MO-0121045) Renewal Application



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM
**FORM A – APPLICATION FOR NONDOMESTIC PERMIT UNDER MISSOURI
 CLEAN WATER LAW**

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
JET PAY CONFIRMATION NUMBER	

**PLEASE READ ALL THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.
 SUBMITTAL OF AN INCOMPLETE APPLICATION MAY RESULT IN THE APPLICATION BEING RETURNED.**

IF YOUR FACILITY IS ELIGIBLE FOR A NO EXPOSURE EXEMPTION:

Fill out the No Exposure Certification Form (Mo 780-2828): <https://dnr.mo.gov/forms/780-2828-f.pdf>

1. REASON FOR APPLICATION:

- a. This facility is now in operation under Missouri State Operating Permit (permit) MO – 0121045, is submitting an application for renewal, and there is no proposed increase in design wastewater flow. Annual fees will be paid when invoiced and there is no additional permit fee required for renewal.
- b. This facility is now in operation under permit MO – _____, is submitting an application for renewal, and there is a proposed increase in design wastewater flow. Antidegradation Review may be required. Annual fees will be paid when invoiced and there is no additional permit fee required for renewal.
- c. This is a facility submitting an application for a new permit (for a new facility). Antidegradation Review may be required. New permit fee is required.
- d. This facility is now in operation under Missouri State Operating Permit (permit) MO – _____ and is requesting a modification to the permit. Antidegradation Review may be required. Modification fee is required.

2. FACILITY

NAME Prairie View Regional Waste Facility		TELEPHONE NUMBER WITH AREA CODE (417) 865-1717	
ADDRESS (PHYSICAL) 16 West Highway DD	CITY Lamar	STATE MO	ZIP CODE 64759

3. OWNER

NAME BFI Waste Systems of Missouri, LLC		TELEPHONE NUMBER WITH AREA CODE (573) 636-1141	
EMAIL ADDRESS DKempker@republicservices.com			
ADDRESS (MAILING) 325 NW 1st Lane	CITY Lamar	STATE MO	ZIP CODE 64759

4. CONTINUING AUTHORITY

NAME Same as owner		TELEPHONE NUMBER WITH AREA CODE	
EMAIL ADDRESS			
ADDRESS (MAILING)	CITY	STATE	ZIP CODE

5. OPERATOR CERTIFICATION

NAME Not applicable	CERTIFICATE NUMBER	TELEPHONE NUMBER WITH AREA CODE	
ADDRESS (MAILING)	CITY	STATE	ZIP CODE

6. FACILITY CONTACT

NAME David Kempker	TITLE Area Environmental Manager	TELEPHONE NUMBER WITH AREA CODE (573) 636-1141	
E-MAIL ADDRESS DKempker@republicservices.com			

7. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary.

NAME Roy Rice			
ADDRESS 56680 E. 310 Rd. #26	CITY Monkey Island	STATE OK	ZIP CODE 74331

8. ADDITIONAL FACILITY INFORMATION**8.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)**

For Universal Transverse Mercator (UTM), use Zone 15 North referenced to North American Datum 1983 (NAD83)

001	NE ¼	NE ¼	Sec 3	T 32N	R 31W	Barton County
UTM Coordinates Easting (X): 384479 Northing (Y): 4157184						
002	NE ¼	NE ¼	Sec 3	T 32N	R 31W	Barton County
UTM Coordinates Easting (X): 383866 Northing (Y): 4157611						
003	NE ¼	NE ¼	Sec 3	T 32N	R 31W	Barton County
UTM Coordinates Easting (X): 384000 Northing (Y): 4157779						
004	¼	¼	Sec	T	R	County
UTM Coordinates Easting (X): Northing (Y):						

8.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.

Primary SIC 4953	and NAICS 562212	SIC 4953	and NAICS 562212
SIC 4953	and NAICS 562212	SIC	and NAICS

9. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION

- A. Is this permit for a manufacturing, commercial, mining, solid/hazardous waste, or silviculture facility? YES NO
If yes, complete Form C.
- B. Is the facility considered a "Primary Industry" under EPA guidelines (40 CFR Part 122, Appendix A) : YES NO
If yes, complete Forms C and D.
- C. Is wastewater land applied? YES NO
If yes, complete Form I.
- D. Are sludge, biosolids, ash, or residuals generated, treated, stored, or land applied? YES NO
If yes, complete Form R.
- E. Have you received or applied for any permit or construction approval under the CWA or any other environmental regulatory authority? YES NO
If yes, please include a list of all permits or approvals for this facility.
- F. Do you use cooling water in your operations at this facility? YES NO
If yes, please indicate the source of the water: _____
- G. Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale. **See Attachment 1**

10. ELECTRONIC DISCHARGE MONITORING REPORT (eDMR) SUBMISSION SYSTEM

Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data. **One of the following must be checked in order for this application to be considered complete.** Please visit <http://dnr.mo.gov/env/wpp/edmr.htm> to access the Facility Participation Package.

- You have completed and submitted with this permit application the required documentation to participate in the eDMR system.
- You have previously submitted the required documentation to participate in the eDMR system and/or you are currently using the eDMR system.
- You have submitted a written request for a waiver from electronic reporting. See instructions for further information regarding waivers.

11. FEES

Permit fees may be paid by attaching a check, or online by credit card or eCheck through the JetPay system. Use the URL provided to access JetPay and make an online payment: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/>

12. CERTIFICATION

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.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)

Darrin Kempker

Environmental Manager

TELEPHONE NUMBER WITH AREA CODE

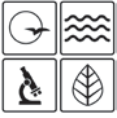
573-636-1141

SIGNATURE

[Signature]

DATE SIGNED

03/04/2020



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH
**FORM C – APPLICATION FOR DISCHARGE PERMIT – MANUFACTURING, COMMERCIAL,
 MINING, SILVICULTURE OPERATIONS, AND STORMWATER**

GENERAL INFORMATION (PLEASE SEE INSTRUCTIONS)

1.0 NAME OF FACILITY
 Prairie View Regional Waste Facility

1.1 THIS FACILITY IS OPERATING UNDER MISSOURI STATE OPERATING PERMIT (MSOP) NUMBER:
 MO-0121045

1.2 IS THIS A NEW FACILITY? PROVIDE CONSTRUCTION PERMIT (CP) NUMBER IF APPLICABLE.
 No

1.3 Describe the nature of the business, in detail. Identify the goods and services provided by the business. Include descriptions of all raw, intermediate, final products, byproducts, or waste products used in the production or manufacturing process, stored outdoors, loaded or transferred and any other pertinent information for potential sources of wastewater or stormwater discharges.

Prairie View Regional Waste Facility is a sanitary landfill. All outfalls are for stormwater with flow dependent on precipitation.

FLOWS, TYPE, AND FREQUENCY

2.0 Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in item B. Construct a water balance on the line drawing by showing average and maximum flows between intakes, operations, treatment units, evaporation, public sewers, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures. **See Attachment 2**

2.1 For each outfall (1) below, provide: (2) a description of all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, stormwater runoff, and any other process or non-process wastewater, (3) the average flow and maximum flow (put max in parentheses) contributed by each operation and the sum of those operations, (4) the treatment received by the wastewater, and (5) the treatment type code. Continue on additional sheets if necessary.

1. OUTFALL NO.	2. OPERATION(S) CONTRIBUTING FLOW; INCLUDE ALL PROCESSES AND SUB PROCESSES AT EACH OUTFALL	3. AVERAGE FLOW AND (MAXIMUM FLOW), INCLUDE UNITS.	4. TREATMENT DESCRIPTION	5. TREATMENT CODES FROM TABLE A
001	Stormwater	Intermittent/Rainfall	Sedimentation basin	1-U
002	Stormwater	Intermittent/Rainfall	Sedimentation basin	1-U
PF 003	Monitoring downstream of Outfalls 001 and 002 as well as upstream of site.	Intermittent/Rainfall	Stream Monitoring	Not Applicable

Attach additional pages if necessary.

2.2 INTERMITTENT DISCHARGES

Except for stormwater runoff, leaks, or spills, are any of the discharges described in items 2.0 or 2.1 intermittent or seasonal?

Yes (complete the following table) No (go to section 2.3)

1. OUTFALL NUMBER	2. OPERATION(S) CONTRIBUTING FLOW	3. FREQUENCY		4. FLOW				C. DURATION (in days)
				A. FLOW RATE (in mgd)		B. TOTAL VOLUME (specify with units)		
		A. DAYS PER WEEK (specify average)	B. MONTHS PER YEAR (specify average)	1. MAXIMUM DAILY	2. LONG TERM AVERAGE	4. LONG TERM DAILY	3. MAXIMUM AVERAGE	
	Not Applicable							

2.3 PRODUCTION

A. Does an effluent limitation guideline (ELG) promulgated by EPA under section 304 of the Clean Water Act apply to your facility? Indicate the part and subparts applicable.

Yes 40 CFR 445 Subpart(s) B No (go to section 2.5)

B. Are the limitations in the effluent guideline(s) expressed in terms of production (or other measure of operation)? Describe in C below.

Yes (complete C.) No (go to section 2.5)

C. If you answered "yes" to B, list the quantity representing an actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline and indicate the affected outfalls.

A. OUTFALL(S)	B. QUANTITY PER DAY	C. UNITS OF MEASURE	D. OPERATION, PRODUCT, MATERIAL, ETC. (specify)
			Not Applicable

2.4 IMPROVEMENTS

A. Are you required by any federal, state, or local authority to meet any implementation schedule for the construction, upgrading, or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

Yes (complete the following table) No (go to 2.6)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
			A. REQUIRED	B. PROJECTED
Not Applicable				

B. Optional: provide below or attach additional sheets describing water pollution control programs or other environmental projects which may affect discharges. Indicate whether each program is underway or planned, and indicate actual or planned schedules for construction. This may include proposed bmp projects for stormwater.

Not Applicable

2.5 SLUDGE MANAGEMENT

Describe the removal of any industrial or domestic biosolids or sludges generated at your facility. Include names and contact information for any haulers used. Note the frequency, volume, and methods (incineration, landfilling, composting, etc) used. See Form A for additional forms which may need to be completed.

Not applicable

DATA COLLECTION AND REPORTING REQUIREMENTS FOR APPLICANTS

3.0 EFFLUENT (AND INTAKE) CHARACTERISTICS (SEE INSTRUCTIONS)

A. & B. See instructions before continuing – complete one Table 1 for **each outfall** (and intake) – annotate the outfall (intake) number or designation in the space provided. The facility is not required to complete intake data unless required by the department or rule.

C. Use the space below to list any pollutants listed in the instructions section 3.0 C. Table B which you know or have reason to believe is discharged or may be discharged from any outfall not listed in parts 3.0 A or B on Table 1. For every pollutant listed, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	3. OUTFALL(S)	4. ANALYTICAL RESULTS (INCLUDE UNITS)
Not Applicable			

3.1 Whole Effluent Toxicity Testing

A. To your knowledge, have any Whole Effluent Toxicity (WET) tests been performed on the facility discharges (or on receiving waters in relation to your discharge) within the last three years?

Yes (go to 3.1 B) No (go to 3.2)

3.1 B

Disclose wet testing conditions, including test duration (chronic or acute), the organisms tested, and the testing results. Provide any results of toxicity identification evaluations (TIE) or toxicity reduction evaluations (TRE) if applicable. Please indicate the conclusions of the test(s) including any pollutants identified as causing toxicity and steps the facility is taking to remedy the toxicity.

Not applicable

3.2 CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported herein, above, or on Table 1 performed by a contract laboratory or consulting firm?

Yes (list the name, address, telephone number, and pollutants analyzed by each laboratory or firm.) No (go to 4.0)

A. LAB NAME	B. ADDRESS	C. TELEPHONE <i>(area code and number)</i>	D. POLLUTANTS ANALYZED <i>(list or group)</i>
Pace Analytical Services, LLC	7726 Moller Rd, Indianapolis, IN 46268	317-228-3100	All pollutants analyzed

4.0 STORMWATER

4.1

Do you have industrial stormwater discharges from the site? If so, attach a site map outlining drainage areas served by each outfall. Indicate the following attributes within each drainage area: pavement or other impervious surfaces; buildings; outdoor storage areas; material loading and unloading areas; outdoor industrial activities; structural stormwater control measures; hazardous waste treatment, storage, and disposal units; and wells or springs in the area.

OUTFALL NUMBER	TOTAL AREA DRAINED (PROVIDE UNITS)	TYPES OF SURFACES (VEGETATED, STONE, PAVED, ETC)	BEST MANAGEMENT PRACTICES EMPLOYED; INCLUDE STRUCTURAL BMPS AND TREATMENT DESIGN FLOW FOR BMPS DESCRIBE HOW FLOW IS MEASURED
001	78 (acres)	60% grass, 40% non-vegetated soil, <1% paved	Stormwater detention pond See Attachment 3
002	47 (acres)	60% grass, 10% woodland, 25% non-vegetated soil, 5% water-body, <1% paved	Stormwater detention pond See Attachment 4
PF003	700 (acres)	55% grass, 20% non-vegetated soil, 10% water-body, 15% woodland, <1% paved	Not Applicable See Attachment 5

4.2 STORMWATER FLOWS

Provide the date of sampling with the flows, and how the flows were estimated.

See Attachment 6

SIGNATORY REQUIREMENTS

5.0 CERTIFICATION

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.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)

Darrin Kempker Environmental Manager

TELEPHONE NUMBER WITH AREA CODE

573-636-1141

SIGNATURE (SEE INSTRUCTIONS)

DY

DATE SIGNED

03/04/2020

SEE INSTRUCTIONS; PLEASE PRINT OR TYPE.

You may report some or all of this information on separate sheet (use similar format) instead of completing these pages.

FORM C TABLE 1 FOR 3.0 - ITEMS A AND B

EFFLUENT (AND INTAKE) CHARACTERISTICS	THIS OUTFALL IS: Stormwater Collection	OUTFALL NO. 001
--	--	-----------------

3.0 PART A – You must provide the results of at least one analysis for every pollutant in Part A. Complete one table for each outfall or proposed outfall. See instructions.

1. POLLUTANT	2. VALUES						3. UNITS (specify if blank)		
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCENTRATION	B. 1MASS
	(1) CONCENTRATION	(2) 1MASS	(1) CONCENTRATION	(2) 1MASS	(1) CONCENTRATION	(2) 1MASS			
A. Biochemical Oxygen Demand, 5-day (BOD ₅)	3.5	---	3.5	---	1.7	---	14	mg/L	---
B. Chemical Oxygen Demand (COD)	51.1	---	51.1	---	18	---	14	mg/L	---
C. Total Organic Carbon (TOC) ⁵	4.4	---	---	---	---	---	1	mg/L	---
D. Total Suspended Solids (TSS)	50	---	50	---	15.5	---	14	mg/L	---
E. Ammonia as N	0.53	---	0.53	---	0.2	---	10	mg/L	---
F. Flow ³	VALUE 1.71		VALUE 1.71		VALUE 0.4		13	MILLIONS OF GALLONS PER DAY (MGD)	
G. Temperature ⁴ (winter)	VALUE 54.5		VALUE ---		VALUE 44.0		---	°F	
H. Temperature ⁴ (summer)	VALUE 81.3		VALUE ---		VALUE 70.9		---	°F	
I. pH	MINIMUM 7.0		MAXIMUM 8.3		AVERAGE 7.8		14	STANDARD UNITS (SU)	

3.0 PART B – Mark “X” in column 2A for each pollutant you know or have reason to believe is present. Mark “X” in column 2B for each pollutant you believe to be absent. If you mark Column 2A for any pollutant, you must provide the results for at least one analysis for the pollutant. Complete one table for each outfall (intake). Provide results for additional parameters not listed here in Part 3.0 C.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK “X”		3. VALUES						4. UNITS		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCENTRATION	B. 1MASS
			CONCENTRATION	1MASS	CONCENTRATION	1MASS	CONCENTRATION	1MASS			

Subpart 1 – Conventional and Non-Conventional Pollutants

A. Alkalinity (CaCO ₃)		X	MINIMUM		MINIMUM		MINIMUM				
B. Bromide (24959-67-9)		X									
C. Chloride (16887-00-6)	X		41.9	---	41.9	---	18.3	---	13	mg/L	---
D. Chlorine, Total Residual		X									
E. Color		X									
F. Conductivity	X		1010	---	1010	---	472.7	---	14	umhos/cm	---
F. Cyanide, Amenable to Chlorination		X									

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. VALUES						4. UNITS		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. 1MASS
			CONCENTRATION	1MASS	CONCENTRATION	1MASS	CONCENTRATION	1MASS			
Subpart 1 – Conventional and Non-Conventional Pollutants (Continued)											
G. <i>E. coli</i>		X									
H. Fluoride (16984-48-8)	X		1.3	---	1.3	---	0.4	---	12	mg/L	---
I. Nitrate plus Nitrate (as N)		X									
J. Kjeldahl, Total (as N)		X									
K. Nitrogen, Total Organic (as N)		X									
L. Oil and Grease		X	<5.4	---	<5.4	---	<5	---	14	mg/L	---
M. Phenols, Total		X									
N. Phosphorus (as P), Total (7723-14-0)		X									
O. Sulfate (as SO ⁴) (14808-79-8)	X		139	---	139	---	84.3	---	13	mg/L	---
P. Sulfide (as S)		X									
Q. Sulfite (as SO ³) (14265-45-3)		X									
R. Surfactants		X									
S. Trihalomethanes, Total		X									
Subpart 2 – Metals											
1M. Aluminum, Total Recoverable (7429-90-5)	X		113000	---	113000	---	2815	---	12	ug/L	---
2M. Antimony, Total Recoverable (7440-36-9)		X	<6	---	<6	---	<6	---	13	ug/L	---
3M. Arsenic, Total Recoverable (7440-38-2)		X	<10	---	<10	---	<10	---	13	ug/L	---
4M. Barium, Total Recoverable (7440-39-3)	X		93	---	93	---	68.7	---	13	ug/L	---
5M. Beryllium, Total Recoverable (7440-41-7)		X	<4	---	<4	---	<4	---	13	ug/L	---
6M. Boron, Total Recoverable (7440-42-8)		X	<100	---					1	ug/L	---
7M. Cadmium, Total Recoverable (7440-43-9)		X	<2	---	<2	---	<2	---	13	ug/L	---
8M. Chromium III Total Recoverable (16065-83-1)	X		5	---	5	---	4.26	---	10	ug/L	---
9M. Chromium VI, Dissolved (18540-29-9)		X	<0.2	---	<0.2	---	<0.04	---	10	mg/L	---
10M. Cobalt, Total Recoverable (7440-48-4)		X	<10	---	<10	---	<10	---	13	ug/L	---

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. VALUES						4. UNITS		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. 1 ^{MASS}
			CONCENTRATION	1 ^{MASS}	CONCENTRATION	1 ^{MASS}	CONCENTRATION	1 ^{MASS}			
Subpart 2 – Metals (Continued)											
11M. Copper, Total Recoverable (7440-50-8)		X	<10	---	<10	---	<10	---	13	ug/L	---
12M. Iron, Total Recoverable (7439-89-6)	X		8800	---	8800	---	1587	---	14	ug/L	---
13M. Lead, Total Recoverable (7439-92-1)		X	<10	---	<10	---	<9.4	---	13	ug/L	---
14M. Magnesium, Total Recoverable (7439-95-4)		X									
15M. Manganese, Total Recoverable (7439-96-5)	X		181	---					1	ug/L	
16M. Mercury, Total Recoverable (7439-97-6)		X	<0.2	---	<0.2	---	<0.2	---	13	ug/L	
17M. Methylmercury (22967926)		X									
18M. Molybdenum, Total Recoverable (7439-98-7)		X									
19M. Nickel, Total Recoverable (7440-02-0)	X		13	---	13	---	5.6	---	13	ug/L	---
20M. Selenium, Total Recoverable (7782-49-2)		X	<10	---	<10	---	<10	---	13	ug/L	---
21M. Silver, Total Recoverable (7440-22-4)		X	<10	---					1	ug/L	---
22M. Thallium, Total Recoverable (7440-28-0)		X	<10	---	<10	---	<10	---	13	ug/L	---
23M. Tin, Total Recoverable (7440-31-5)		X									
24M. Titanium, Total Recoverable (7440-32-6)		X									
25M. Zinc, Total Recoverable (7440-66-6)	X		327	---	327	---	45.2	---	13	ug/L	---
Subpart 3 – Radioactivity											
1R. Alpha Total		X									
2R. Beta Total		X									
3R. Radium Total		X									
4R. Radium 226 plus 228 Total		X									

SEE INSTRUCTIONS; PLEASE PRINT OR TYPE.

You may report some or all of this information on separate sheet (use similar format) instead of completing these pages.

FORM C TABLE 1 FOR 3.0 - ITEMS A AND B

EFFLUENT (AND INTAKE) CHARACTERISTICS	THIS OUTFALL IS: Stormwater Collection	OUTFALL NO. 002
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3.0 PART A – You must provide the results of at least one analysis for every pollutant in Part A. Complete one table for each outfall or proposed outfall. See instructions.

1. POLLUTANT	2. VALUES						3. UNITS (specify if blank)		
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCENTRATION	B. 1MASS
	(1) CONCENTRATION	(2) 1MASS	(1) CONCENTRATION	(2) 1MASS	(1) CONCENTRATION	(2) 1MASS			
A. Biochemical Oxygen Demand, 5-day (BOD ₅)	5.2	---	5.2	---	1.9	---	14	mg/L	---
B. Chemical Oxygen Demand (COD)	61.7	---	61.7	---	16.9	---	14	mg/L	--
C. Total Organic Carbon (TOC) ⁵	4.4	---	---	---	---	---	1	mg/L	---
D. Total Suspended Solids (TSS)	30	---	30	---	17	---	15	mg/L	
E. Ammonia as N	0.51	---	0.51	---	0.2	---	11	mg/L	
F. Flow ³	VALUE 1.71		VALUE 1.71		VALUE 0.3		15	MILLIONS OF GALLONS PER DAY (MGD)	
G. Temperature ⁴ (winter)	VALUE 54.5		VALUE ---		VALUE 44.0		---	°F	
H. Temperature ⁴ (summer)	VALUE 81.3		VALUE ---		VALUE 70.9		---	°F	
I. pH	MINIMUM 7		MAXIMUM 8.3		AVERAGE 7.8		14	STANDARD UNITS (SU)	

3.0 PART B – Mark “X” in column 2A for each pollutant you know or have reason to believe is present. Mark “X” in column 2B for each pollutant you believe to be absent. If you mark Column 2A for any pollutant, you must provide the results for at least one analysis for the pollutant. Complete one table for each outfall (intake). Provide results for additional parameters not listed here in Part 3.0 C.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK “X”		3. VALUES						4. UNITS		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCENTRATION	B. 1MASS
			CONCENTRATION	1MASS	CONCENTRATION	1MASS	CONCENTRATION	1MASS			

Subpart 1 – Conventional and Non-Conventional Pollutants

A. Alkalinity (CaCO ₃)		X	MINIMUM		MINIMUM		MINIMUM				
B. Bromide (24959-67-9)		X									
C. Chloride (16887-00-6)	X		26.8	---	26.8	---	15.2	---	13	mg/L	---
D. Chlorine, Total Residual											
E. Color		X									
F. Conductivity	X		532	---	532	---	405	---	14	umhos/cm	---
F. Cyanide, Amenable to Chlorination		X									

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. VALUES						4. UNITS		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. 1MASS
			CONCENTRATION	1MASS	CONCENTRATION	1MASS	CONCENTRATION	1MASS			
Subpart 1 – Conventional and Non-Conventional Pollutants (Continued)											
G. <i>E. coli</i>		X									
H. Fluoride (16984-48-8)	X		0.49	---	0.49	---	0.3	---	12	mg/L	---
I. Nitrate plus Nitrate (as N)		X									
J. Kjeldahl, Total (as N)		X									
K. Nitrogen, Total Organic (as N)		X									
L. Oil and Grease		X	<5.7	---	<5.7	---	<5.2	---	14	mg/L	---
M. Phenols, Total		X									
N. Phosphorus (as P), Total (7723-14-0)		X									
O. Sulfate (as SO ⁴) (14808-79-8)	X		141	---	141	---	84.2	---	13	mg/L	---
P. Sulfide (as S)		X									
Q. Sulfite (as SO ³) (14265-45-3)		X									
R. Surfactants		X									
S. Trihalomethanes, Total		X									
Subpart 2 – Metals											
1M. Aluminum, Total Recoverable (7429-90-5)	X		9620	---	9620	---	2535	---	12	ug/L	---
2M. Antimony, Total Recoverable (7440-36-9)		X	<6	---	<6	---	<6	---	13	ug/L	---
3M. Arsenic, Total Recoverable (7440-38-2)		X	<10	---	<10	---	<10	---	13	ug/L	---
4M. Barium, Total Recoverable (7440-39-3)	X		94.6	---	94.6	---	71	---	13	ug/L	---
5M. Beryllium, Total Recoverable (7440-41-7)		X	<10	---	<10	---	<4.4	---	13	ug/L	---
6M. Boron, Total Recoverable (7440-42-8)		X	<100	---					1	ug/L	---
7M. Cadmium, Total Recoverable (7440-43-9)		X	<2	---	<2	---	<1.8	---	13	ug/L	---
8M. Chromium III Total Recoverable (16065-83-1)	X		6.4	---	6.4	---	1.88	---	12	ug/L	---
9M. Chromium VI, Dissolved (18540-29-9)		X	<0.2	---	<0.2	---	<0.02	---	12	mg/L	---
10M. Cobalt, Total Recoverable (7440-48-4)		X	<10	---	<10	---	<10	---	13	ug/L	---

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. VALUES						4. UNITS		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. 1MASS
			CONCENTRATION	1MASS	CONCENTRATION	1MASS	CONCENTRATION	1MASS			
Subpart 2 – Metals (Continued)											
11M. Copper, Total Recoverable (7440-50-8)		X	<10	---	<10	---	<10	---	13	ug/L	---
12M. Iron, Total Recoverable (7439-89-6)	X		6700	---	6700	---	1486	---	14	ug/L	---
13M. Lead, Total Recoverable (7439-92-1)		X	<10	---	<10	---	<9.4	---	13	ug/L	---
14M. Magnesium, Total Recoverable (7439-95-4)		X									
15M. Manganese, Total Recoverable (7439-96-5)	X		182	---					1	ug/L	
16M. Mercury, Total Recoverable (7439-97-6)		X	<0.2	---	<0.2	---	<0.2	---	13	ug/L	---
17M. Methylmercury (22967926)		X									
18M. Molybdenum, Total Recoverable (7439-98-7)		X									
19M. Nickel, Total Recoverable (7440-02-0)	X		12	---	12	---	5.5	---	13	ug/L	---
20M. Selenium, Total Recoverable (7782-49-2)		X	<10	---	<10	---	<10	---	13	ug/L	---
21M. Silver, Total Recoverable (7440-22-4)		X	<10	---					1	ug/L	---
22M. Thallium, Total Recoverable (7440-28-0)		X	<10	---	<10	---	<10	---	13	ug/L	---
23M. Tin, Total Recoverable (7440-31-5)		X									
24M. Titanium, Total Recoverable (7440-32-6)		X									
25M. Zinc, Total Recoverable (7440-66-6)	X		315	---	315	---	56.2	---	13	ug/L	---
Subpart 3 – Radioactivity											
1R. Alpha Total		X									
2R. Beta Total		X									
3R. Radium Total		X									
4R. Radium 226 plus 228 Total		X									

SEE INSTRUCTIONS; PLEASE PRINT OR TYPE.

You may report some or all of this information on separate sheet (use similar format) instead of completing these pages.

FORM C TABLE 1 FOR 3.0 - ITEMS A AND B

EFFLUENT (AND INTAKE) CHARACTERISTICS	THIS OUTFALL IS: Monitoring Upstream of Site	OUTFALL NO. PF 003 Upstream
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3.0 PART A – You must provide the results of at least one analysis for every pollutant in Part A. Complete one table for each outfall or proposed outfall. See instructions.

1. POLLUTANT	2. VALUES						3. UNITS (specify if blank)		
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCENTRATION	B. 1MASS
	(1) CONCENTRATION	(2) 1MASS	(1) CONCENTRATION	(2) 1MASS	(1) CONCENTRATION	(2) 1MASS			
A. Biochemical Oxygen Demand, 5-day (BOD ₅)	13.4	---	13.4	---	5.8	---	3	mg/L	---
B. Chemical Oxygen Demand (COD)	89.3	---	89.3	---	50.8	---	3	mg/L	---
C. Total Organic Carbon (TOC) ⁵	4.4	---	---	---	---	---	1	mg/L	---
D. Total Suspended Solids (TSS)	0.1	---	0.1	---	0.07	---	3	mg/L	---
E. Ammonia as N	<0.1	---					1	mg/L	---
F. Flow ³	VALUE 6.5		VALUE 6.5		VALUE 3.0		12	MILLIONS OF GALLONS PER DAY (MGD)	
G. Temperature ⁴ (winter)	VALUE 54.5		VALUE ---		VALUE 44.0		---	°F	
H. Temperature ⁴ (summer)	VALUE 81.3		VALUE ---		VALUE 70.9		---	°F	
I. pH	MINIMUM 7.0		MAXIMUM 7.7		AVERAGE 7.3		3	STANDARD UNITS (SU)	

3.0 PART B – Mark “X” in column 2A for each pollutant you know or have reason to believe is present. Mark “X” in column 2B for each pollutant you believe to be absent. If you mark Column 2A for any pollutant, you must provide the results for at least one analysis for the pollutant. Complete one table for each outfall (intake). Provide results for additional parameters not listed here in Part 3.0 C.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK “X”		3. VALUES						4. UNITS		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCENTRATION	B. 1MASS
			CONCENTRATION	1MASS	CONCENTRATION	1MASS	CONCENTRATION	1MASS			

Subpart 1 – Conventional and Non-Conventional Pollutants

A. Alkalinity (CaCO ₃)		X	MINIMUM		MINIMUM		MINIMUM				
B. Bromide (24959-67-9)		X									
C. Chloride (16887-00-6)	X		See Note 2	---	See Note 2	---	See Note 2	---			
D. Chlorine, Total Residual											
E. Color		X									
F. Conductivity	X		See Note 2	---	See Note 2	---	See Note 2	---			
F. Cyanide, Amenable to Chlorination											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. VALUES						4. UNITS		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	A. CONCENTRATION	B. 1MASS
			CONCENTRATION	1MASS	CONCENTRATION	1MASS	CONCENTRATION	1MASS			
Subpart 1 – Conventional and Non-Conventional Pollutants (Continued)											
G. <i>E. coli</i>		X									
H. Fluoride (16984-48-8)	X		See Note 2	---	See Note 2	---	See Note 2	---			
I. Nitrate plus Nitrate (as N)		X									
J. Kjeldahl, Total (as N)		X									
K. Nitrogen, Total Organic (as N)		X									
L. Oil and Grease		X									
M. Phenols, Total		X									
N. Phosphorus (as P), Total (7723-14-0)											
O. Sulfate (as SO ⁴) (14808-79-8)	X		See Note 2	---	See Note 2	---	See Note 2	---			
P. Sulfide (as S)		X									
Q. Sulfite (as SO ³) (14265-45-3)		X									
R. Surfactants		X									
S. Trihalomethanes, Total		X									
Subpart 2 – Metals											
1M. Aluminum, Total Recoverable (7429-90-5)	X		See Note 2	---	See Note 2	---	See Note 2	---			
2M. Antimony, Total Recoverable (7440-36-9)		X									
3M. Arsenic, Total Recoverable (7440-38-2)		X									
4M. Barium, Total Recoverable (7440-39-3)	X		See Note 2	---	See Note 2	---	See Note 2	---			
5M. Beryllium, Total Recoverable (7440-41-7)		X									
6M. Boron, Total Recoverable (7440-42-8)		X									
7M. Cadmium, Total Recoverable (7440-43-9)		X									
8M. Chromium III Total Recoverable (16065-83-1)		X									
9M. Chromium VI, Dissolved (18540-29-9)		X									
10M. Cobalt, Total Recoverable (7440-48-4)		X									

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. VALUES						4. UNITS		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	A. CONCENTRATION	B. 1MASS
			CONCENTRATION	1MASS	CONCENTRATION	1MASS	CONCENTRATION	1MASS			
Subpart 2 – Metals (Continued)											
11M. Copper, Total Recoverable (7440-50-8)		X									
12M. Iron, Total Recoverable (7439-89-6)	X		2320	---	2320	---	1003	---	9	ug/L	
13M. Lead, Total Recoverable (7439-92-1)		X									
14M. Magnesium, Total Recoverable (7439-95-4)		X									
15M. Manganese, Total Recoverable (7439-96-5)	X		See Note 2	---	See Note 2	---	See Note 2	---			
16M. Mercury, Total Recoverable (7439-97-6)		X									
17M. Methylmercury (22967926)		X									
18M. Molybdenum, Total Recoverable (7439-98-7)		X									
19M. Nickel, Total Recoverable (7440-02-0)	X		See Note 2	---	See Note 2	---	See Note 2	---			
20M. Selenium, Total Recoverable (7782-49-2)		X									
21M. Silver, Total Recoverable (7440-22-4)		X									
22M. Thallium, Total Recoverable (7440-28-0)		X									
23M. Tin, Total Recoverable (7440-31-5)		X									
24M. Titanium, Total Recoverable (7440-32-6)		X									
25M. Zinc, Total Recoverable (7440-66-6)	X		See Note 2	---	See Note 2	---	See Note 2	---			
Subpart 3 – Radioactivity											
1R. Alpha Total		X									
2R. Beta Total		X									
3R. Radium Total		X									
4R. Radium 226 plus 228 Total		X									

SEE INSTRUCTIONS; PLEASE PRINT OR TYPE.

You may report some or all of this information on separate sheet (use similar format) instead of completing these pages.

FORM C TABLE 1 FOR 3.0 - ITEMS A AND B

EFFLUENT (AND INTAKE) CHARACTERISTICS	THIS OUTFALL IS: Monitoring Downstream of Outfall 001 and Outfall 002	OUTFALL NO. PF 003 Downstream
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3.0 PART A – You must provide the results of at least one analysis for every pollutant in Part A. Complete one table for each outfall or proposed outfall. See instructions.

1. POLLUTANT	2. VALUES						3. UNITS (specify if blank)		
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCENTRATION	B. 1MASS
	(1) CONCENTRATION	(2) 1MASS	(1) CONCENTRATION	(2) 1MASS	(1) CONCENTRATION	(2) 1MASS			
A. Biochemical Oxygen Demand, 5-day (BOD ₅)	3.6	---	3.6	---	2.2	---	9	mg/L	---
B. Chemical Oxygen Demand (COD)	51.2	---	51.2	---	16.2	---	9	mg/L	---
C. Total Organic Carbon (TOC) ⁵	4.4	---	---	---	---	---	1	mg/L	---
D. Total Suspended Solids (TSS)	64	---	64	---	23.1	---	9	mg/L	---
E. Ammonia as N	<0.1	---					1	mg/L	---
F. Flow ³	VALUE 6.5		VALUE 6.5		VALUE 3.0		12	MILLIONS OF GALLONS PER DAY (MGD)	
G. Temperature ⁴ (winter)	VALUE 54.5		VALUE ---		VALUE 44.0		---	°F	
H. Temperature ⁴ (summer)	VALUE 81.3		VALUE ---		VALUE 70.9		---	°F	
I. pH	MINIMUM 7.0		MAXIMUM 7.9		AVERAGE 7.6		9	STANDARD UNITS (SU)	

3.0 PART B – Mark “X” in column 2A for each pollutant you know or have reason to believe is present. Mark “X” in column 2B for each pollutant you believe to be absent. If you mark Column 2A for any pollutant, you must provide the results for at least one analysis for the pollutant. Complete one table for each outfall (intake). Provide results for additional parameters not listed here in Part 3.0 C.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK “X”		3. VALUES						4. UNITS		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCENTRATION	B. 1MASS
			CONCENTRATION	1MASS	CONCENTRATION	1MASS	CONCENTRATION	1MASS			

Subpart 1 – Conventional and Non-Conventional Pollutants

A. Alkalinity (CaCO ₃)		X	MINIMUM		MINIMUM		MINIMUM			
B. Bromide (24959-67-9)		X								
C. Chloride (16887-00-6)	X		12.3	---				1	mg/L	
D. Chlorine, Total Residual										
E. Color		X								
F. Conductivity	X		929	---				1	umhos/cm	
F. Cyanide, Amenable to Chlorination										

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. VALUES						4. UNITS		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	A. CONCENTRATION	B. 1MASS
			CONCENTRATION	1MASS	CONCENTRATION	1MASS	CONCENTRATION	1MASS			
Subpart 1 – Conventional and Non-Conventional Pollutants (Continued)											
G. <i>E. coli</i>		X									
H. Fluoride (16984-48-8)	X		0.2	---					1	mg/L	
I. Nitrate plus Nitrate (as N)		X									
J. Kjeldahl, Total (as N)		X									
K. Nitrogen, Total Organic (as N)		X									
L. Oil and Grease		X									
M. Phenols, Total		X									
N. Phosphorus (as P), Total (7723-14-0)											
O. Sulfate (as SO ⁴) (14808-79-8)	X		405	---					1	mg/L	
P. Sulfide (as S)		X									
Q. Sulfite (as SO ³) (14265-45-3)		X									
R. Surfactants		X									
S. Trihalomethanes, Total		X									
Subpart 2 – Metals											
1M. Aluminum, Total Recoverable (7429-90-5)	X		See Note 2	---	See Note 2	---	See Note 2	---			
2M. Antimony, Total Recoverable (7440-36-9)		X									
3M. Arsenic, Total Recoverable (7440-38-2)		X									
4M. Barium, Total Recoverable (7440-39-3)	X		See Note 2	---	See Note 2	---	See Note 2	---			
5M. Beryllium, Total Recoverable (7440-41-7)		X									
6M. Boron, Total Recoverable (7440-42-8)		X									
7M. Cadmium, Total Recoverable (7440-43-9)		X									
8M. Chromium III Total Recoverable (16065-83-1)		X									
9M. Chromium VI, Dissolved (18540-29-9)		X									
10M. Cobalt, Total Recoverable (7440-48-4)		X									

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. VALUES						4. UNITS		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	A. CONCENTRATION	B. 1MASS
			CONCENTRATION	1MASS	CONCENTRATION	1MASS	CONCENTRATION	1MASS			
Subpart 2 – Metals (Continued)											
11M. Copper, Total Recoverable (7440-50-8)		X									
12M. Iron, Total Recoverable (7439-89-6)	X		3400	---	3400	---	1173	---	9	ug/L	
13M. Lead, Total Recoverable (7439-92-1)		X									
14M. Magnesium, Total Recoverable (7439-95-4)		X									
15M. Manganese, Total Recoverable (7439-96-5)	X		See Note 2	---	See Note 2	---	See Note 2	---			
16M. Mercury, Total Recoverable (7439-97-6)		X									
17M. Methylmercury (22967926)		X									
18M. Molybdenum, Total Recoverable (7439-98-7)		X									
19M. Nickel, Total Recoverable (7440-02-0)	X		See Note 2	---	See Note 2	---	See Note 2	---			
20M. Selenium, Total Recoverable (7782-49-2)		X									
21M. Silver, Total Recoverable (7440-22-4)		X									
22M. Thallium, Total Recoverable (7440-28-0)		X									
23M. Tin, Total Recoverable (7440-31-5)		X									
24M. Titanium, Total Recoverable (7440-32-6)		X									
25M. Zinc, Total Recoverable (7440-66-6)	X		See Note 2	---	See Note 2	---	See Note 2	---			
Subpart 3 – Radioactivity											
1R. Alpha Total		X									
2R. Beta Total		X									
3R. Radium Total		X									
4R. Radium 226 plus 228 Total		X									

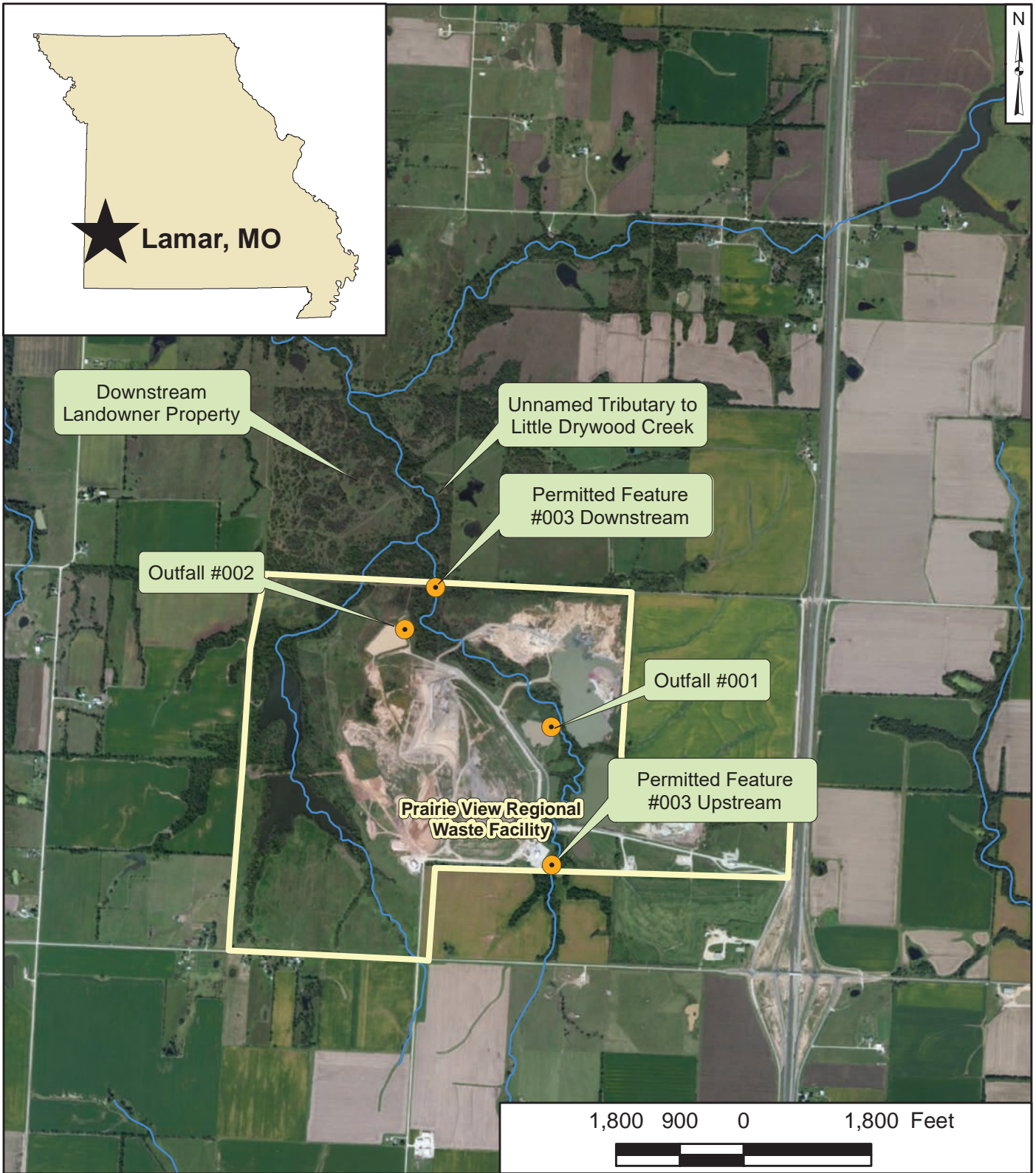
¹Mass was not calculated because flows were estimated (as required by the permit) and were not available for each sampling event.

²Effluent from Outfalls 001 and 002 flow through Permitted Feature 003 Downstream. Therefore, we expect that pollutants measured in the upstream outfalls may be present in Permitted Feature 003 Downstream. However, monitoring requirements for many of those pollutants were not included in the most recent permit for the facility. We expect that data reported in Outfalls 001 and 002 adequately represents Permitted Feature 003 Downstream.

³The current permit required that flows be estimated at the time samples were collected. Therefore, they may not accurately reflect flows over the duration of a given storm event.

⁴Temperature monitoring was not required in the current permit. Temperatures presented in the table reflect ambient air temperatures measured at the Lamar, MO weather station between January 2015 and January 2020, and are expected to adequately reflect average stormwater temperatures at the site.

⁵The current permit does not require Total Organic Carbon (TOC) monitoring. TOC results are based on a sample collection for the 2009 operating permit application. Given the current low levels of Biochemical and Chemical Oxygen Demand, we expect TOC concentration to remain near these levels or lower in the effluent.



Legend

- Existing Outfall Locations
- Classified Streams
- Approximate Property Boundary

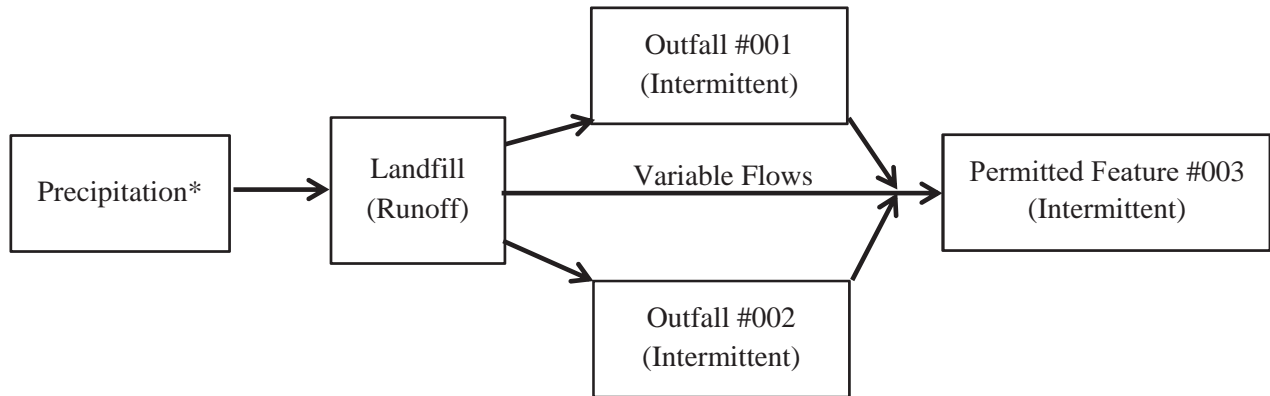
Notes

Map of the Prairie View Regional Waste Facility study area prepared to satisfy requirement 9 of operating permit application Form A.

<p>Prairie View Regional Waste Facility Study Area</p> <p>Lamar, Missouri</p>	
<p>Geosyntec </p> <p>consultants</p>	
<p>Jefferson City, Missouri</p>	<p>14-February-2020</p>
<p>Attachment 1</p>	

**Prairie View Regional Waste Facility Operating
Permit (MO-0121045) Renewal Application
Attachment 2**

Section 2.0 (Form C, page 2) – Line Drawing of Water Flow through Area

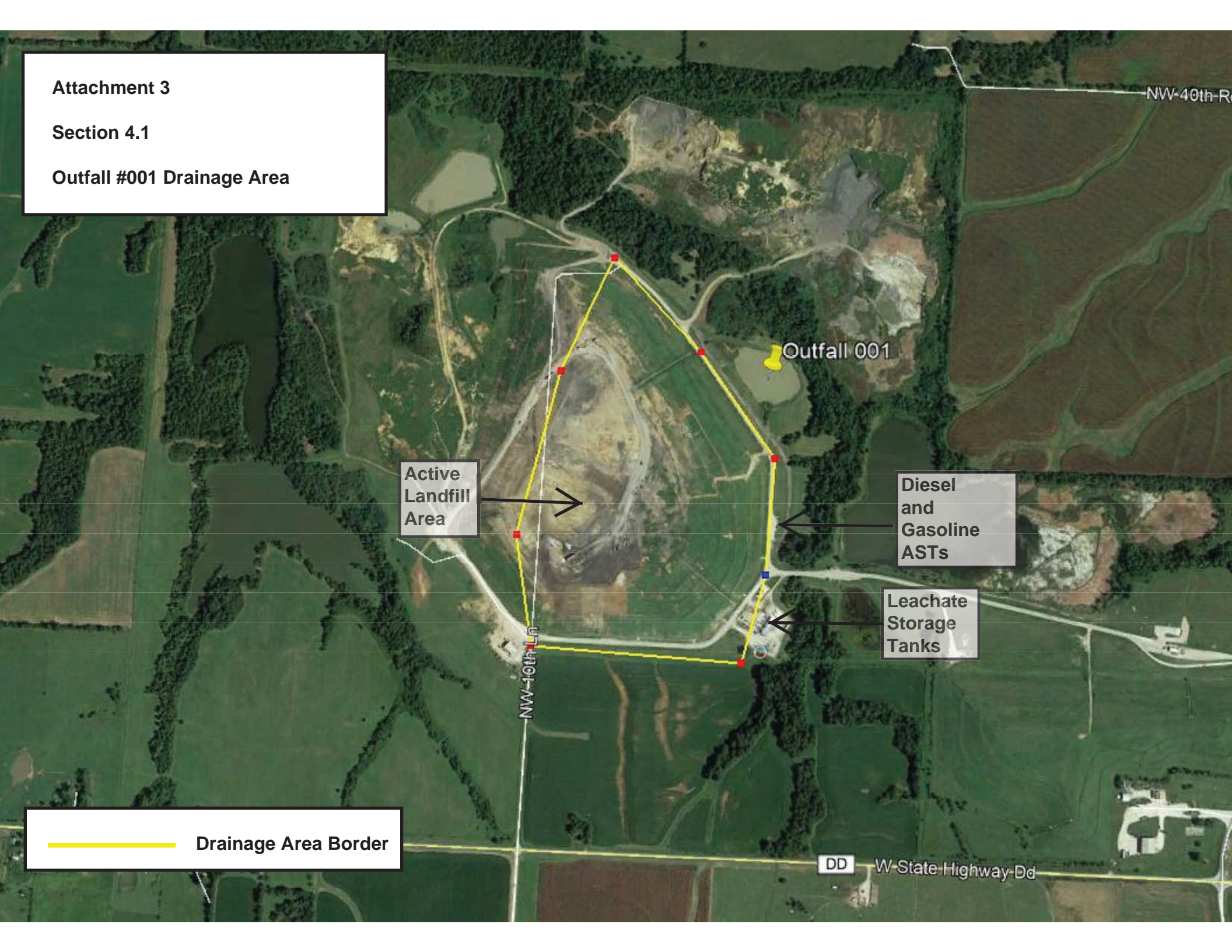


*Average Annual Rainfall = 41.6" over the last 10 years at City of Lamar weather station; Midwest Regional Climate Center

Attachment 3

Section 4.1

Outfall #001 Drainage Area



NW-40th-R

Outfall 001

Active
Landfill
Area

Diesel
and
Gasoline
ASTs

Leachate
Storage
Tanks

NW-40th Ln

DD W State Highway Dd

— Drainage Area Border

Attachment 4

Section 4.1

Outfall #002 Drainage Area

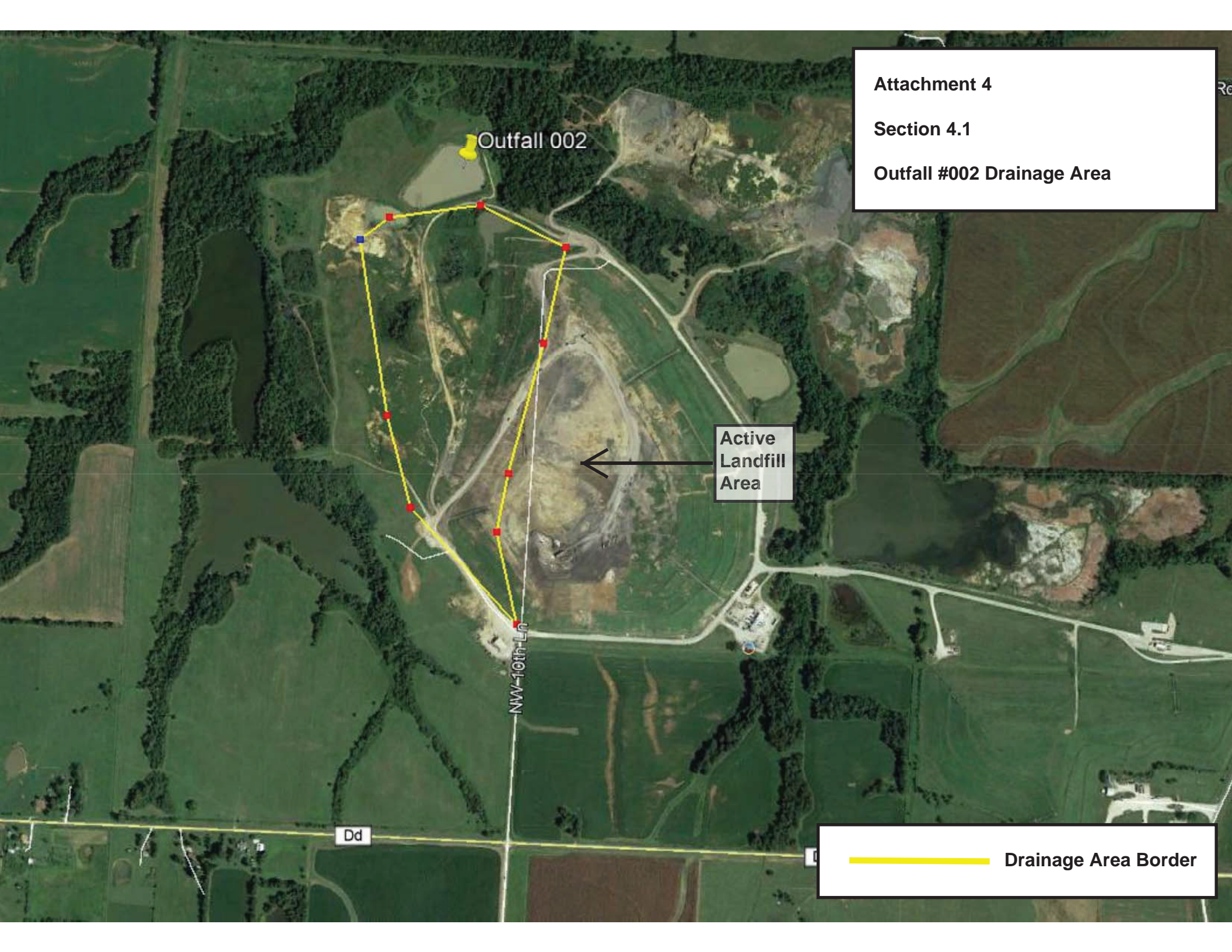
Outfall 002

Active
Landfill
Area

NW-10th Ln

Dd

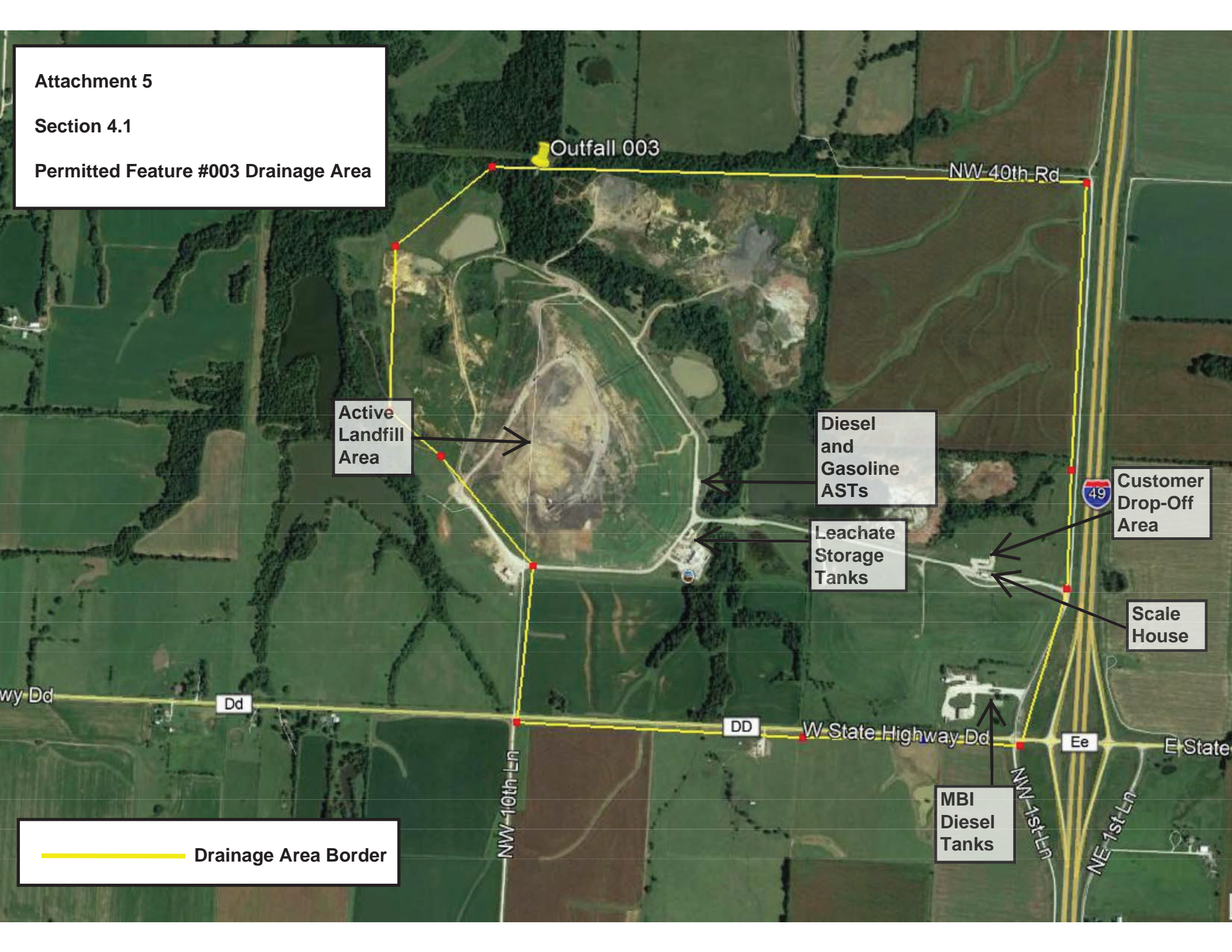
— Drainage Area Border



Attachment 5

Section 4.1

Permitted Feature #003 Drainage Area



Outfall 003

NW 40th Rd

Active Landfill Area

Diesel and Gasoline ASTs

Leachate Storage Tanks

Customer Drop-Off Area

Scale House

wy Dd

Dd

DD

W State Highway Dd

Ee

E State

MBI Diesel Tanks

NW 1st Ln

NE 1st Ln

NW 10th Ln

Drainage Area Border

**Prairie View Regional Waste Facility Operating
Permit (MO-0121045) Renewal Application
Attachment 6**

Section 4.2 (Form C, page 4) – Stormwater Flow Calculations

Peak Flow = 1.008 x Runoff Coefficient x Rainfall Intensity (inches/hour) x Area (acres)

001 Flow: $1.008 \times 0.45 \times 0.025833 \times 78 = 0.914004$ cfs = 0.5907 MGD

002 Flow: $1.008 \times 0.45 \times 0.025833 \times 47 = 0.550746$ cfs = 0.3559 MGD

003 Flow: $1.008 \times 0.45 \times 0.025833 \times 700 = 8.2026$ cfs = 5.3011 MGD

Flows estimated from storm event on March 29th, 2019 with a duration of approximately 4 hours.