

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 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0122416

Owner: Prairie Valley Disposal, Inc.
Address: P.O. Box 10, Cuba, MO 65453

Continuing Authority: Same as above
Address: Same as above

Facility Name: Prairie Valley Landfill
Facility Address: 3975 Highway 19 North, Cuba, MO 65453

Legal Description: See Page Two
UTM Coordinates: See Page Two

Receiving Stream: See Page Two
First Classified Stream and ID: See Page Two
USGS Basin & Sub-watershed No.: See Page Two

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

FACILITY DESCRIPTION

Industrial - Sanitary Waste Landfill - SIC Code(s): # 4953
The use or operation of this facility does not require a Certified Wastewater Operator.
Stormwater runoff from landfill and borrow operations.

Actual flow is dependent upon precipitation.
Leachate cannot be discharged. Stormwater that has come into contact with leachate is considered leachate and cannot be discharged. Leachate and stormwater that 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 wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

March 1, 2015
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

September 30, 2019
Expiration Date

John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (continued)

Outfall # 001 – Eliminated January 11, 2013.

Outfall # 002 – Inactive – Open Sanitary Waste Landfill – Standard Industrial Classification (SIC) Code(s): # 4953 (Refuse Systems)
Future stormwater runoff/sedimentation basin (reserved for future use North Borrow Area).

Outfall # 003 – Eliminated (effective date prior to November 10, 2005)

Outfall # 004 – Eliminated (effective date prior to November 10, 2005; former in-stream monitoring point)

Outfall # 005 – Eliminated (September 19, 2014; former in-stream monitoring point)

Outfall # 006 – Eliminated (September 19, 2014; former in-stream monitoring point)

Outfall # 007 – Open Sanitary Waste Landfill and Borrow Operations – SIC Code(s): # 4953 (Refuse Systems)
North Detention Pond – Stormwater runoff/sedimentation basin.

Design flow = 0.74 million gallons per day (MGD) (variable; actual flow dependent on precipitation)

Legal Description: SE ¼, SE ¼, Sec. 1, T39N, R5W, Crawford County

UTM Coordinates: (X = 0638840, Y = 4220642)

Receiving Stream: Unnamed tributary to Prairie Creek

First Classified Stream and ID: Unnamed tributary to Prairie Creek (C) (3960)

Second Classified Stream and ID: Prairie Creek (C) (2059)

USGS Basin and Sub-watershed No.: (07140103–0205)

Outfall # 008 – Open Sanitary Waste Landfill and Borrow Operations – SIC Code(s): # 4953 (Refuse Systems).

South Detention Pond – Stormwater runoff/sedimentation basin. Construction will be completed in the future.

Design flow = 0.85 MGD (variable; actual flow dependent on precipitation)

Legal Description: NE ¼, NE ¼, Sec. 12, T39N, R5W, Crawford County

UTM Coordinates: (X = 0639163, Y = 4220225)

Receiving Stream: Unnamed tributary to Prairie Creek

First Classified Stream and ID: Unnamed tributary to Prairie Creek (C) (3960)

Second Classified Stream and ID: Prairie Creek (C) (2059)

USGS Basin and Sub-watershed No.: (07140103–0205)

Outfall # 009 (former Outfall # 001) – Open Sanitary Waste Landfill and Borrow Operations – SIC Code(s): # 4953 (Refuse Systems); Maintenance facility floor drains and vehicle wash wastewater will be collected in a holding tank for pump and haul to a permitted wastewater treatment facility.

Small North Detention Pond – Stormwater runoff/sedimentation basin

Design flow = 0.47 MGD (variable, actual flow dependent on precipitation)

Legal Description: NW ¼, NE ¼, Sec. 12, T39N, R5W, Crawford County

UTM Coordinates: (X = 0638729, Y = 4220542)

Receiving Stream: Unnamed tributary to Prairie Creek

First Classified Stream and ID: Unnamed tributary to Prairie Creek (C) (3960)

Second Classified Stream and ID: Prairie Creek (C) (2059)

USGS Basin and Sub-watershed No.: (07140103–0205)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR STORMWATER RUNOFF IN CONTACT WITH LANDFILL

EFFLUENT PARAMETER(S) (Note 1, page 4)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*	-	*	once/quarter****	24 hr. estimate
Precipitation	Inches	*	-	*	once/day	total measured
Biochemical Oxygen Demand ₅	mg/L	45	-	30	once/quarter****	grab
Chemical Oxygen Demand	mg/L	90	-	60	once/quarter****	grab
Total Suspended Solids	mg/L	80	-	50	once/quarter****	grab
Settleable Solids	mL/L/hr	1.5	-	1.0	once/quarter****	grab
pH – Units	SU	***	-	***	once/quarter****	grab
Ammonia as N	mg/L	**	-	-	once/quarter****	grab
Chloride + Sulfate	mg/L	1,000	-	-	once/quarter****	grab
Chloride	mg/L	*	-	-	once/quarter****	grab
Oil & Grease	mg/L	**	-	-	once/quarter****	grab
Benzene	mg/L	*	-	-	once/quarter****	grab
Ethylbenzene	mg/L	*	-	-	once/quarter****	grab
Toluene	mg/L	*	-	-	once/quarter****	grab
Total Xylene	mg/L	*	-	-	once/quarter****	grab
Conductivity	µS/cm	**	-	-	once/quarter****	grab
Aluminum, Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Antimony, Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Arsenic, Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Beryllium, Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Cadmium, Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Chromium (III), Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Chromium (VI), Dissolved	µg/L	**	-	-	once/quarter****	grab
Copper, Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Iron, Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Lead, Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Mercury, Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Nickel, Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Selenium, Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Silver, Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Thallium, Total Recoverable	µg/L	**	-	-	once/quarter****	grab
Zinc, Total Recoverable	µg/L	**	-	-	once/quarter****	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE JULY 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS FOR STORMWATER RUNOFF IN CONTACT WITH LANDFILL (continued)

- * Monitoring requirement only.
- ** Monitoring requirement with a benchmark value. See special condition #11.
- *** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
- **** See table below for quarterly sampling.

Minimum Sampling Requirements			
Quarter	Months	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

Note 1- For flow-through BMP's, all samples shall be collected within the first 60 minutes of discharge resulting from a precipitation event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable precipitation event. If a precipitation event 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.

For retention BMPs, stormwater samples shall be collected once per quarter when a discharge occurs.

PERMITTED FEATURE #009	TABLE A-2. SYSTEM LIMITATIONS AND MONITORING REQUIREMENTS FOR NO-DISCHARGE HOLDING TANK AT MAINTENANCE FACILITY AND VEHICLE WASH WASTEWATER AT OUTFALL #009						
	EFFLUENT PARAMETER(S)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS	
			DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
The permittee is authorized to store wastewater as specified in the application for this permit. The final limitations shall become effective on March 1, 2015 , and remain in effect until expiration of the permit. Storage and disposal of wastewater shall be controlled, limited and monitored by the permittee as specified below:							
Holding Tank Operational Monitoring (Notes 1 & 2)							
Volume Pumped	gallons	*	-	-	-	once/day	total
Freeboard in Tank (Note 3)	ft	*	-	-	-	once/month	total
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>JULY 28, 2015</u> .							

* Monitoring requirement only. See part E. Holding Tank Conditions below for additional requirements.

Note 1 – Records shall be maintained and summarized into an annual operating report, which shall be submitted by January 28th of each year for the previous calendar year period using report forms approved by the Department. The summarized annual report is in addition to the reporting requirements listed in Table A. The summarized annual report shall include the following:

- a. Record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;
- b. The number of days the storage basin has discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed; and
- c. A summary of the operations including number of days in operation, number of times pumped, volume pumped each time, and total volume pumped.

Note 2 – If pumping did not occur during the report period, report as “Not Pumped”.

Note 3 – Freeboard is the difference in elevation between the static liquid level and the level where accumulated liquid would discharge from the holding tank.

B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Parts I & III standard conditions dated August 1, 2014 and March 1, 2014, and hereby incorporated as though fully set forth herein.

C. SPECIAL CONDITIONS

1. This permit establishes ammonia monitoring requirement and associated benchmark value based on Missouri's current Water Quality Standard. On August 22, 2013, the U.S. Environmental Protection Agency (EPA) published a notice in the Federal Register announcing of the final national recommended ambient water quality criteria for protection of aquatic life from the effects of ammonia in freshwater. The EPA's guidance, Final Aquatic Life Ambient Water Quality Criteria for Ammonia – Fresh Water 2013, is not a rule, nor automatically part of a state's water quality standards. States must adopt new ammonia criteria consistent with EPA's published ammonia criteria into their water quality standards that protect the designated uses of the water bodies. The Department of Natural Resources has initiated stakeholder discussions on how to best incorporate these new criteria into the State's rules. A date for when this rule change will occur has not been determined. Also, refer to Section IV of this permit's factsheet for further information including estimated future effluent limits for this facility. It is recommended the permittee view the Department's 2013 EPA criteria Factsheet located at <http://dnr.mo.gov/pubs/pub2481.htm>.
2. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

3. All outfalls must be clearly marked in the field.
4. Water Quality Standards
 - (a) To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
 - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) 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;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) 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.

C. SPECIAL CONDITIONS (continued)

5. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge 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; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established by the Director in accordance with 40 CFR 122.44(f).
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

6. Report as no-discharge when a discharge does not occur during the report period.

7. Reporting of Non-Detects:

- (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
- (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
- (c) The permittee shall provide the "Non-Detect" sample result using the less than sign and the minimum detection limit (e.g. <10).
- (d) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for that parameter.
- (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.

8. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).

9. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 et. seq.) and the use of such pesticides shall be in a manner consistent with its label.

D. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) CONDITIONS

1. The permittee shall implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be prepared and implemented within 90 days of permit issuance. 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, if needed, every five (5) years or as site conditions change. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators, (Document number EPA 833-B-09-002) published by the United States Environmental Protection Agency (USEPA) in February 2009.

The SWPPP must include the following:

- (a) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter stormwater. The BMPs at the facility should be designed to meet this value during rainfall event up to the 10 year, 24 hour rain event.
- (b) The SWPPP must include a schedule for once per month site inspections and brief written reports. The inspection report must include observations and evaluations of BMP effectiveness. Deficiencies must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report, including photographs. Any corrective measure that necessitates major construction may also need a construction permit. 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.
- (c) A provision for designating an individual to be responsible for environmental matters.
- (d) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of the department.

D. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) CONDITIONS (continued)

2. This permit stipulates pollutant benchmarks applicable to your discharge. 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 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 that pollutant in your stormwater discharge(s).

For flow-through BMPs, stormwater samples shall be collected once per quarter within the first 60 minutes of discharge occurring as a result of precipitation events of 0.1 inches or greater. Precipitation events include rainfall as well as run-off from the melting of frozen precipitation.

For retention BMPs, stormwater samples shall be collected once per quarter when a discharge occurs.

<i>Outfall #007, #008, & #009</i>		
PARAMETER	BENCHMARK	
	Value	Unit
Ammonia as N	12.1	mg/L
Oil & Grease	15	mg/L
Conductivity	500	µS/cm
Aluminum, Total Recoverable	750	µg/L
Antimony, Total Recoverable	4,300	µg/L
Arsenic, Total Recoverable	20	µg/L
Beryllium, Total Recoverable	5	µg/L
Cadmium, Total Recoverable	10	µg/L
Chromium (III), Total Recoverable	3,090	µg/L
Chromium (VI), Dissolved	15	µg/L
Copper, Total Recoverable	26	µg/L
Iron, Total Recoverable	1,000	µg/L
Lead, Total Recoverable	188	µg/L
Mercury, Total Recoverable	3	µg/L
Nickel, Total Recoverable	819	µg/L
Selenium, Total Recoverable	5	µg/L
Silver, Total Recoverable	12	µg/L
Thallium, Total Recoverable	6	µg/L
Zinc, Total Recoverable	209	µg/L

Any time a benchmark exceedance occurs a Corrective Action Report (CAR) must be completed. A CAR is a document that records the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. CARs must be retained with the SWPPP and 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 tangible progress towards achieving the benchmarks is a permit violation.

3. Permittee shall adhere to the following minimum Best Management Practices (BMPs):
- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
 - (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
 - (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of storm water 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.
 - (d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
 - (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits.

D. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) CONDITIONS (continued)

13. The purpose of the SWPPP and the BMPs listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.
14. 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.
15. Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the SWPPP and made available to the department upon request.

E. HOLDING TANK CONDITIONS

1. Permittee will cease pumping and hauling activities by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.
2. Bypasses are to be reported to the Northeast Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours.
3. The facility must be sufficiently secured to restrict entry by children and unauthorized persons as well as to protect the facility from vandalism. Access hatches and alarm control panels shall remain locked at all times unless undergoing maintenance or pumping activities.
4. A holding tank is not a wastewater treatment device. Discharge of untreated wastewater effluent poses a significant risk to public health and the environment. At no time shall a discharge be allowed to occur from the holding tank, collection system, or appurtenances. The permittee will take whatever steps are necessary to ensure that wastewater is collected and properly disposed of at a permitted treatment facility, and prevent a discharge.
5. An Operation and Maintenance (O&M) manual shall be maintained by the permittee and made available to the operator. The O&M manual shall include key operating procedures and a brief summary of the operation of the holding tank. The O&M manual shall contain contact information for at least two contract haulers.
6. At least one facility staff member familiar with the O&M manual shall be present on site when the facility is being pumped. Documentation of training of responsible staff shall be maintained on site and made available during an inspection.
7. High-level alarms and associated telemetry equipment on the holding tank shall be maintained in good working order. High-level alarms shall be positioned in a location to allow adequate time for the operator of the facility to have the accumulated liquid removed before an unpermitted discharge would occur. The alarms and telemetry system shall be tested at least once per quarter.
8. An all-weather access road shall be provided to the facility.
9. Once per quarter, the permittee shall report to the department the following information:
 - Date(s) the facility was pumped
 - Name, business address, and phone number of the contract hauler
 - Copy of the written contract between permittee and contract hauler
 - Documentation of approval from permitted facility receiving wastewater from contract hauler
 - Volume of effluent removed
 - Destination of the pumped effluent
 - Documentation that high-level alarms and telemetry system have been tested

The above information shall be reported by the 28th day of the month following the reporting period, and shall summarize activities conducted for the month/quarter prior. The first report is due JULY 28, 2015.

10. Land application of effluent or sludge is not authorized by this permit. Land application may occur after treatment if authorized by the Missouri State Operating Permit for the facility receiving the wastewater or sludge.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
 FACT SHEET
 INDUSTRIAL STORMWATER RUNOFF FROM LANDFILL ACTIVITIES
 STANDARD INDUSTRIAL CLASSIFICATION (SIC): 4953
 FOR THE PURPOSE OF RENEWAL
 OF
 MO-0122416
 PRAIRIE VALLEY DISPOSAL, INC.**

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution 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 (Section 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 (MCWL)" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Fact Sheet 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 (operating permit) listed below.

A Fact Sheet is not an enforceable part of an operating permit.

Part I – Applicability & Facility Description

Landfill are to obtain a MSOP in accordance the MCWL, documented above, and its implementing regulations 10 CSR 20-6.010(1)(A); 10 CSR 20-6.010(5)(A); and 10 CSR 20-6.200(1)(A). Stormwater runoff from landfills are considered Industrial activities in accordance with 10 CSR 20-6.200(2)(B)3.B. Closed landfills may also be required to maintain a MSOP in accordance with 10 CSR 20-6.200(1)(B)10.

Facility Description:

Industrial stormwater associated with sanitary waste landfill operations.
 Actual flow dependent upon precipitation.

Leachate cannot be discharged. Stormwater that has come into contact with leachate is considered leachate and cannot be discharged. Leachate and stormwater that 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).

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
001	N/A – eliminated January 11, 2013		
002	N/A – inactive		
003	N/A – eliminated prior to November 10, 2005		
004	N/A – eliminated prior to November 10, 2005		
005	N/A – eliminated September 19, 2014		
006	N/A – eliminated September 19, 2014		
007	Dependent upon precipitation	BMP's	Stormwater in contact with landfill
008	Dependent upon precipitation	BMP's	Stormwater in contact with landfill
009	Wet weather - dependent upon precipitation Dry weather - intermittent flows depending on operations	BMP's	Stormwater in contact with landfill Maintenance facility and vehicle wash water

Facility Performance History & Comments:

The most recent site inspection to determine compliance with MSOP MO-0122416 was conducted on October 10, 2013. The facility was found to be in non-compliance during the time of the inspection. The following observations resulted in this determination:

1. Prairie Valley Landfill does not have adequate sediment and erosion control in place thereby allowing sediment to be discharged into and caused pollution to waters of the state.

Additionally, the permittee was issued a Notice of Violation (NOV) on April 21, 2014 for failing to meet effluent limitations for total fluoride as (F).

Part II – Receiving Stream Information

Receiving Water Body’s Water Quality

A stream survey was conducted on the Prairie Creek (C) (2059) on July 8, 2011. Two sites were included in this stream survey; the first just west of the landfill and the second 30 yards below the landfill sediment basin. The database notes no observable impacts on the receiving stream in the upstream location just west of the landfill. However, it was noted the presence of fine sediment deposits in the receiving stream in the downstream location, 30 yards below the landfill sediment basin. The sediment deposits were determined to have an impact on the designate use of Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL).

Neither the receiving stream nor the Prairie Creek (C) (2059) are on the 303(d) List of impaired waters or have an associated TMDL.

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

As per Missouri’s Stormwater Regulations [10 CSR 20.6.200(6)(B)2.], the department shall establish effluent limits as necessary to protect waters of the state. Effluent limitations for stormwater are established using best professional judgment based on the category and designated uses of the receiving stream.

- Missouri or Mississippi River:
- Lake or Reservoir:
- Losing:
- Metropolitan No-Discharge:
- Special Stream:
- Subsurface Water:
- All Other Waters:

10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream’s beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	DISTANCE TO CLASSIFIED SEGMENT	12-DIGIT HUC**
#007	Unnamed tributary to Prairie Creek	-	N/A	GEN	0.09	07140103–0205
#008	Unnamed tributary to Prairie Creek	-	N/A	GEN	0.04	
#009	Unnamed tributary to Prairie Creek	-	N/A	GEN	0.18	
All	Unnamed tributary to Prairie Creek	C	3960	AQL, GEN, HPP, IRR, LWW, SCR, WBC-B	N/A	
All	Prairie Creek	C	2059	AQL, GEN, HHP, IRR, LWW, SCR, WBC-B	N/A	

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).

** - Hydrologic Unit Code (Ecological Drainage Unit)

Part III – Rationale and Derivation of Effluent Limitations & Permit Conditions

ANTI-BACKSLIDING:

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

- Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.

- The Department determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b). Due to the nature of the discharges from these outfalls being stormwater, only a maximum daily limit (MDL) or monitoring requirement will be implemented for many of the parameters listed in the permit. Stormwater events are acute occurrences that result in the greatest concentrations of pollutants being discharged in the first part of the runoff. This first flush can best be represented by a grab sample within the first hours of runoff. Additionally, stormwater events are highly variable. Recording an average monthly limit (AML) is not representative of the nature of these discharges. Many of these parameters that require just a MDL monitoring only requirement will now have a benchmark value associated with that monitoring only requirement. These benchmark values will be listed under special condition #11 of the permit. For the complete list of parameters that only contain a MDL, have monitoring only as a MDL, or have monitoring only as a MDL with benchmark values, please see Part V of the factsheet.

Additionally, several parameters were implemented in the previous permit in order to protect groundwater use. However, neither the receiving stream nor first classified stream have a use designation for groundwater or have been designated as losing. The permit writer feels that requiring monitoring or limits to protect groundwater is unnecessarily restrictive. Therefore, the following parameters were removed from the permit: phosphorus, nitrate and nitrite as N, fluoride, barium, boron, cobalt, magnesium, and manganese. The following parameters are not listed in the water quality standards and thus have been removed from the permit: sodium and vanadium.

- Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. The monitoring requirement for Total Hardness was removed from the permit. There are no water quality standards for this parameter and effluent hardness is not relevant to calculating limits. The instream hardness must be considered when calculating such effluent limitations. The instream hardness provides consideration to amount of pollutants that may be bioavailable in the receiving stream. Monitoring the hardness of stormwater runoff does not adequately characterize the receiving stream conditions. Furthermore, the pollutants affected by hardness will use a default value of 193 mg/L in the calculations, which is consistent with other stormwater and landfill permits issued in the state of Missouri. Therefore, the permit writer has used best professional judgment to remove this parameter from the permit.

Instream monitoring has been removed from the permit. Both of these outfalls are located downstream on the discharge outfalls discussed above. Thus, there is no determination of how the stream is being impacted by the discharges, as there is no comparison of upstream data to downstream data. In addition to the unrepresentative sampling locations, the parameters listed to be monitored at each location were inconsistent with the discharge parameters and between each instream monitoring locations. Furthermore, a land disturbance site has been identified downstream of the discharges, but still upstream from the instream monitoring locations. This site may have an impact on the stream and any runoff from this site could be influencing the sample results for this facility. Therefore, it is the permit writer's best professional judgment to remove these instream monitoring locations from the permit. There will be no environmental benefit to conducting instream monitoring.

ANTIDegradation:

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

- Renewal no degradation proposed and no further review necessary.

BIOSOLIDS & SEWAGE SLUDGE:

Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, 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 a 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. Additional information regarding biosolids and sludge is located at the following web address:

<http://extension.missouri.edu/main/DisplayCategory.aspx?C=74>, items WQ422 through WQ449.

Not applicable; This condition is not applicable to the permittee for this facility.

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 permittee/facility is not currently under Water Protection Program enforcement action.

FLOW BASED PERMITTING:

A standard mass-balance equation cannot be calculated for stormwater from this facility because the stormwater flow and flow in the receiving stream cannot be determined for conditions on any given day. The amount of stormwater discharged from the facility will vary based on previous rainfall, soil saturation, humidity, detention time, BMPs, surface permeability, etc. Flow in the receiving stream will vary based on similar climatic conditions, size of watershed, and amount of surfaces with reduced permeability (houses, parking lots, and the like) in the watershed, hydrogeology, topography, etc.

It is likely that sufficient rainfall to cause a discharge for four continuous days from a facility will also cause some significant amount of flow in the receiving stream. Chronic WQSs are based on a four-day exposure (except Ammonia, which is based on a thirty day exposure). In the event that discharge does occur from this facility for four continuous days, some amount of flow will occur in the receiving stream. This flow will dilute stormwater discharges from a facility. For these reasons, most industrial stormwater facilities have limited potential to cause a violation of chronic water quality standards in the receiving stream.

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 WQSs are based on a one hour of exposure, and must be protected at all times in unclassified streams, and within mixing zones of class P streams [10 CSR 20-7.031(3) and (4)]. Therefore, industrial stormwater facilities with toxic contaminants do have the potential to cause a violation of acute WQSs if those toxic contaminants occur in sufficient amounts.

It is due to the items stated above that staff drafting this fact sheet are unable to perform statistical Reasonable Potential Analysis and calculate Wasteload Allocations via a mass-balance equation for effluent limit determination. However, staff may use their best professional judgment in determining if a facility has a potential to violate Missouri's Water Quality Standards.

REASONABLE POTENTIAL ANALYSIS (RPA):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any give pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

Not Applicable; A RPA was not conducted for this facility.

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, 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.

Not Applicable; This permit does not contain a SOC.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 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, (Document number EPA 833-B-09-002), BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. 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 stormwater discharges.

Applicable; A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.

SPILL REPORTING:

Per 10 CSR 24-3.010, 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.

VARIANCE:

As 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 shall be 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.

Not Applicable; This operating permit is not drafted under premises of a petition for variance.

WLA MODELING:

There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

Not Applicable; A WLA study was either not submitted or determined not applicable by Department staff.

WATER QUALITY STANDARDS:

Per [10 CSR 20-7.031(3)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TEST:

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

Not Applicable for all stormwater discharges; At this time, the permittee is not required to conduct WET test for the stormwater discharges from Outfalls #007, #008 and #009.

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are 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 waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

Not Applicable; This facility does not discharge to a 303(d) listed stream.

Part IV – 2013 Water Quality Criteria for Ammonia

Upcoming changes to the Water Quality Standard for ammonia may require significant upgrades to wastewater treatment facilities.

On August 22, 2013, the U.S. Environmental Protection Agency (EPA) finalized new water quality criteria for ammonia, based on toxicity studies of mussels and gill breathing snails. Missouri's current ammonia criteria are based on toxicity testing of several species, but did not include data from mussels or gill breathing snails. Missouri is home to 69 of North America's mussel species, which are spread across the state. According to the Missouri Department of Conservation nearly two-thirds of the mussel species in Missouri are considered to be "of conservation concern". Nine species are listed as federally endangered, with an additional species currently proposed as endangered and another species proposed as threatened.

The adult forms of mussels that are seen in rivers, lakes, and streams are sensitive to pollutants because they are sedentary filter feeders. They vacuum up many pollutants with the food they bring in and cannot escape to new habitats, so they can accumulate toxins in their bodies and die. But very young mussels, called glochidia, are exceptionally sensitive to ammonia in water. As a result of a citizen suit, the EPA was compelled to conduct toxicity testing and develop ammonia water quality criteria that would be protective if young mussels may be present in a waterbody. These new criteria will apply to any discharge with ammonia levels that may pose a reasonable potential to violate the standards. Nearly all discharging domestic wastewater treatment facilities (cities, subdivisions, mobile home parks, etc.), as well as certain industrial and stormwater dischargers with ammonia in their effluent, will be affected by this change in the regulations.

When new water quality criteria are established by the EPA, states must adopt them into their regulations in order to keep their authorization to issue permits under the National Pollutant Discharge Elimination System (NPDES). States are required to review their water quality standards every three years, and if new criteria have been developed they must be adopted. States may be more protective than the Federal requirements, but not less protective. Missouri does not have the resources to conduct the studies necessary for developing new water quality standards, and therefore our standards mirror those developed by the EPA; however, we will utilize any available flexibility based on actual species of mussels that are native to Missouri and their sensitivity to ammonia.

Many treatment facilities in Missouri are currently scheduled to be upgraded to comply with the current water quality standards. But these new ammonia standards may require a different treatment technology than the one being considered by the permittee. It is important that permittees discuss any new and upcoming requirements with their consulting engineers to ensure that their treatment systems are capable of complying with the new requirements. The Department encourages permittees to construct treatment technologies that can attain effluent quality that supports the EPA ammonia criteria.

Ammonia toxicity varies by temperature and by pH of the water. Assuming a stable pH value, but taking into account winter and summer temperatures, Missouri includes two seasons of ammonia effluent limitations. Current effluent limitations in this permit are:

Summer – monitoring only.

Winter – monitoring only.

Under the new EPA criteria, where mussels of the family Unionidae are present or expected to be present, the estimated effluent limitations for a facility in a location such as this that discharges to a receiving stream with no mixing will be:

Summer – 1.7 mg/L daily maximum, 0.6 mg/L monthly average.

Winter – 5.6 mg/L daily maximum, 2.1 mg/L monthly average.

Actual effluent limits will depend in part on the actual performance of the facility.

Operating permits for facilities in Missouri must be written based on current statutes and regulations. Therefore permits will be written with the existing effluent limitations until the new standards are adopted. To aid permittees in decision making, an advisory will be added to permit Fact Sheets notifying permittees of the expected effluent limitations for ammonia. When setting schedules of compliance for ammonia effluent limitations, consideration will be given to facilities that have recently constructed upgraded facilities to meet the current ammonia limitations.

For more information on this topic feel free to contact the Missouri Department of Natural Resources, Water Protection Program, Water Pollution Control Branch, Operating Permits Section at (573) 751-1300.

Part V – Effluent Limits Determination

Outfall #007, #008, & #009 – Main Stormwater Outfalls

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

Due to the nature of the discharges from these outfalls being stormwater, only a maximum daily limit (MDL) or monitoring requirement will be implemented for many of the parameters listed below. Stormwater events are acute occurrences that result in the greatest concentrations of pollutants being discharged in the first part of the runoff. This first flush can best be represented by a grab sample within the first hours of runoff. Additionally, stormwater events are highly variable. Recording an average monthly limit (AML) is not representative of the nature of these discharges. Many of these parameters that require just a MDL monitoring only requirement will now have a benchmark value associated with that monitoring only requirement. These benchmark values will be listed under the individual discussion and derivation of each parameter containing such a value.

Benchmarks

Benchmark concentrations are **not** effluent limitations; benchmark exceedance, therefore, is not a permit violation. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the permittee in knowing when additional corrective action(s) may be necessary to comply with the technology based effluent limitations (TBEL). Failure to take corrective action is a violation of the permit. Benchmark exceedance alone is not a permit violation.

It is the permit writer's best professional judgment to require monitoring only for the parameters previously listed as effluent limitations. Based on the nature of the discharge as stormwater, the facility does not have reasonable potential to cause an exceedance of water quality standards in the receiving stream for the following parameters: Conductivity, Oil & Grease, Ammonia as N, and all total recoverable metals. Therefore, benchmarks will be placed in the permit rather than effluent limitations. The benchmarks listed in the derivation discussion below have been determined to be feasible, affordable and protective of water quality. These benchmark values are consistent with other stormwater permits including the EPA MSGP. The facility will be required to monitor for all these parameters and if the benchmarks are exceeded at all in the following permit cycle, then the permit writer will use best professional judgment to determine if effluent limitations will again be necessary to protect water quality.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	gpd	1	*	-	*	NO	*/*
PRECIPITATION	Inches	6	*	-	*	NO	*/*
COD	mg/L	6	90	-	60	NO	90/60
BOD ₅	mg/L	6	45	-	30	NO	45/30
TSS	mg/L	6	80	-	50	NO	80/50
SETTLABLE SOLIDS	mL/L/hr	6	1.5	-	1.0	NO	1.5/1.0
PH	SU	1, 6	6.5 – 9.0	-	6.5 – 9.0	NO	6.5-9.0
TOTAL AMMONIA AS N	mg/L	1, 6	**	-	****	YES	12.1/4.6
NITRATE AND NITRITE AS N	mg/L	6	****	-	****	YES	*/*
TOTAL PHOSPHORUS	mg/L	6	****	-	****	YES	*/*
CHLORIDES + SULFATES	mg/L	1	1,000	-	****	YES	1,000/*
CHLORIDE	mg/L	1, 6	**	-	****	YES	858.7/428
FLUORIDE	mg/L	1, 6	****	-	****	YES	6.5/3.3
SODIUM	mg/L	6	****	-	****	YES	*/*
OIL & GREASE	mg/L	1, 6	**	-	****	YES	15/10
BENZENE	µg/L	1, 6	*	-	****	YES	116.3/58
ETHYLBENZENE	µg/L	1, 6	*	-	****	YES	524.3/261.3
TOLUENE	µg/L	1, 6	*	-	****	YES	328/163.4
TOTAL XYLENE	µg/L	1, 6	*	-	****	YES	1.6/0.8

EFFLUENT LIMITATIONS TABLE (CONTINUED):

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
CONDUCTIVITY	mhos/cm	6	**	-	****	YES	*/*
TOTAL HARDNESS	mg/L	6	****	-	****	YES	*/*
ALUMINUM, TR	µg/L	1, 6	*	-	-	YES	***
ANTIMONY, TR	µg/L	1, 6	*	-	****	YES	*/*
ARSENIC, TR	µg/L	1, 6	*	-	****	YES	*/*
BARIUM, TR	µg/L	1, 6	****	-	****	YES	*/*
BERYLLIUM, TR	µg/L	1, 6	*	-	****	YES	*/*
BORON, TR	µg/L	1, 6	****	-	****	YES	*/*
CADMIUM, TR	µg/L	1, 6	**	-	****	YES	*/*
CHROMIUM (III), TR	µg/L	1, 6	**	-	****	YES	*/*
CHROMIUM (VI), TR	µg/L	1, 6	**	-	****	YES	*/*
COBALT, TR	µg/L	1, 6	****	-	****	YES	*/*
COPPER, TR	µg/L	1, 6	**	-	****	YES	*/*
IRON, TR	µg/L	1, 6	*	-	****	YES	*/*
LEAD, TR	µg/L	1, 6	**	-	****	YES	*/*
MAGNESIUM, TR	µg/L	1, 6	****	-	****	YES	*/*
MANGANESE, TR	µg/L	1, 6	****	-	****	YES	*/*
MERCURY, TR	µg/L	1, 6	**	-	****	YES	*/*
NICKEL, TR	µg/L	1, 6	**	-	****	YES	*/*
SELENIUM, TR	µg/L	1, 6	*	-	****	YES	*/*
SILVER, TR	µg/L	1, 6	*	-	****	YES	*/*
THALLIUM, TR	µg/L	1, 6	*	-	****	YES	*/*
VANADIUM, TR	µg/L	6	****	-	****	YES	*/*
ZINC, TR	µg/L	1, 6	**	-	****	YES	*/*
WET TEST	TU	1, 6	****	-	-	YES	% SURVIVAL
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

* - Monitoring requirement only

** - Monitoring requirement with a benchmark value.

*** - Parameter not previously established in previous state operating permit.

**** - Parameter removed from permit.

TR - Total Recoverable

Basis for Limitations Codes:

- | | |
|--|-----------------------------------|
| 1. State or Federal Regulation/Law | 5. Water Quality Model |
| 2. Water Quality Standard (includes RPA) | 6. Best Professional Judgment |
| 3. Water Quality Based Effluent Limits | 7. TMDL or Permit in lieu of TMDL |
| 4. Antidegradation Review/Policy | 8. WET Test Policy |

OUTFALL #007, #008, & #009 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** Monitoring only requirement in accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification to determine an alternate location for flow monitoring.
- **Precipitation.** Monitoring only requirement. Precipitation data obtained from DMRs is used to aid in the determination of this facilities specific runoff coefficient and theoretical loading in the watershed.
- **Chemical Oxygen Demand (COD).** Effluent limitations of 90 mg/L as a MDL and 60 mg/L as a AML are applicable to this facility and are consistent with other landfill operating permits. Effluent limitations have been retained from previous state operating permit.

- **Biological Oxygen Demand₅ (BOD₅)**. Effluent limitations of 45 mg/L as a MDL and 30 mg/L as a AML are applicable to this facility and are consistent with other landfill operating permits. Effluent limitations have been retained from previous state operating permit.
- **Total Suspended Solids (TSS)**. Effluent limitations of 80 mg/L as a MDL and 50 mg/L as a AML are applicable to this facility and are consistent with other landfill operating permits. Effluent limitations have been retained from previous state operating permit.
- **Settleable Solids**. Effluent limitations of 1.5 mL per L per hour as a MDL and 1.0 mL per L per hour as a Monthly Average are applicable and are consistent with other landfill operating permits.
- **pH**. 6.5-9.0 SU. Technology based effluent limitations of 6.0-9.0 SU [10 CSR 20-7.015] are not protective of the Water Quality Standard, which states that water contaminants shall not cause pH to be outside the range of 6.5-9.0 SU. No mixing zone is allowed due to the classification of the receiving stream, therefore the water quality standard must be met at the outfall.
- **Total Ammonia Nitrogen**. Effluent limitations have been removed from the permit and replaced with a monitoring only requirement for the MDL. The Discharge Monitoring Reports and permit renewal application show values below the acute wasteload allocation of 12.1 mg/L. Additionally, a benchmark value will be implemented for this parameter. The benchmark value will be set at the Protection of Aquatic Life Acute Criteria of 12.1 mg/L.

Outfall #007: DMRs = 0.10 mg/L, renewal application = < 0.1 mg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 0.10 - 10 mg/L, renewal application = < 0.1 – 10 mg/L

- **Nitrate + Nitrite as N**. Monitoring only removed from the permit. This parameter does not have any AQL or HHF water quality criteria listed in the regulations. The reported values are all less than 1.0 mg/L. The only criteria existing in the regulations is for DWS and GRW, both at 10 mg/L. This facility does not have any reasonable potential to cause an impairment of this parameter to the receiving stream. Therefore, the permit writer has used best professional judgment to remove this parameter from the permit.

Outfall #007: DMRs = 0.020-0.066 mg/L, renewal application = 0.066 mg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 0.091-0.68 mg/L, renewal application = 0.091-0.68 mg/L

- **Phosphorous**. Monitoring only removed from the permit. This parameter does not have any AQL or HHF water quality criteria listed in the regulations. It also does not discharge to the water bodies specifically listed in the regulations that require permittees to comply with effluent limitations for this parameter ((1) [10 CSR 20-7.015(3)(F)] to Lake Taneycomo and its tributaries between Table Rock Dam and Power Site Dame (and excluding the discharges from the dams) and permitted after May 9, 1994 shall not exceed 0.5 mg/L as a Monthly Average; or (2) [10 CSR 20-7.015(G)] if the permittee discharges within the watersheds of either 11010001 or 11010002 shall not exceed 0.5 mg/L as a Monthly Average). This facility does not have any reasonable potential to cause an impairment of this parameter to the receiving stream. Therefore, the permit writer has used best professional judgment to remove this parameter from the permit.

Outfall #007: DMRs = 150 mg/L, renewal application = 0.15 mg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 190 mg/L, renewal application = 190 mg/L

- **Chlorides + Sulfate**. Only applicable to facilities that discharge to a receiving water body with a 7Q10 low flow of less than one (1) cfs for waters with the designated use of AQL only. The permit writer will need to review the facility's DMRs to determine if this parameter is applicable. Effluent limitation of 1000 mg/L as a MDL is applicable as per [10 CSR 20-7.031(L)1.].
- **Chlorides**. Effluent limitations removed and replaced with monitoring only for the MDL. The permittee has reported values well below the AQL acute criterion of 860 mg/L. Therefore, it is the permit writer's best professional judgment to remove effluent limitations. Additionally, a benchmark value will be implemented for this parameter. The benchmark value will be set at the AQL acute criteria of 860 mg/L.

Outfall #007: DMRs = 6.2-10 mg/L, renewal application = not required

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 25-54 mg/L, renewal application = 25 mg/L

- **Fluoride**. Effluent limitations have been removed from the permit. The previous permit writer used protection of groundwater (GRW) criterion of 4.0 mg/L to establish effluent limitations. However, this facility does not discharge to groundwater and the surface water has not been designated as losing. This parameter does not have criteria for AQL or HFF. This facility does not have any reasonable potential to cause an impairment of this parameter to the receiving stream. Therefore, it is the permit writer's best professional judgment to remove the effluent limitations.

Outfall #007: DMRs = 0.472 mg/L, renewal application = 0.472 mg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 18.8 mg/L, renewal application = 0.543 mg/L

- **Sodium**. There are no water quality standards for this parameter, thus no legal justification to require monitoring to ensure protection of AQL or HFF in the receiving stream. The permit writer has used best professional judgment to remove this parameter from the permit.
- **Oil & Grease**. Effluent limitations have been removed and replaced with monitoring only for the MDL. The reported values are all well below both the chronic and acute AQL criteria. This facility does not have any reasonable potential to cause an impairment of this parameter to the receiving stream. Therefore, it is the permit writer's best professional judgment to remove effluent limitations. Additionally, a benchmark value has been established at the acute AQL criterion of 15 mg/L.

Outfall #007: DMRs = 5.1 mg/L, renewal application = < 5.1 mg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 5.1-5.2 mg/L, renewal application = < 5.1- < 5.2 mg/L

- **Benzene**. Effluent limitations have been removed and replaced with monitoring only for the MDL. The reported values are all well below both the HFF criteria of 71 µg/L. This facility does not have any reasonable potential to cause an impairment of this parameter to the receiving stream. Therefore, it is the permit writer's best professional judgment to remove effluent limitations. Due to the fact that there is not an acute HFF criterion in the regulations, no benchmark value will be established for this parameter.

Outfall #007: DMRs = 5.0 µg/L, renewal application = not required

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 5.0 µg/L, renewal application = not required

- **Ethylbenzene**. Effluent limitations have been removed and replaced with monitoring only for the MDL. The reported values are all well below both the AQL criteria of 320 µg/L. This facility does not have any reasonable potential to cause an impairment of this parameter to the receiving stream. Therefore, it is the permit writer's best professional judgment to remove effluent limitations. Due to the fact that there is not an acute AQL criterion in the regulations, no benchmark value will be established for this parameter.

Outfall #007: DMRs = 5.0 µg/L, renewal application = not required

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 5.0 µg/L, renewal application = not required

- **Toluene**. Effluent limitations have been removed and replaced with monitoring only for the MDL. The reported values are all well below both the HFF criteria of 200,000 µg/L. This facility does not have any reasonable potential to cause an impairment of this parameter to the receiving stream. Therefore, it is the permit writer's best professional judgment to remove effluent limitations. Due to the fact that there is not an acute HFF criterion in the regulations, no benchmark value will be established for this parameter.

Outfall #007: DMRs = 5.0 µg/L, renewal application = not required

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 5.0 µg/L, renewal application = not required

- **Total Xylene**. Effluent limitations have been removed and replaced with monitoring only for the MDL. The previous permit writer used protection of groundwater (GRW) criterion of 10,000 µg/L to establish effluent limitations. However, this facility does not discharge to groundwater and the surface water has not been designated as losing. This parameter does not have criteria for AQL. This facility does not have any reasonable potential to cause an impairment of this parameter to the receiving stream. Therefore, it is the permit writer's best professional judgment to remove effluent limitations.

Outfall #007: DMRs = 15.0 µg/L, renewal application = not required

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 15.0 µg/L, renewal application = not required

- **Conductivity.** The monitoring only requirement has been reassessed and determined to still be protective of water quality. The permit writer has used best professional judgment to continue monitoring for this parameter. High conductivity correlates to high concentrations of dissolved solids in the water. This would indicate that the solids from the stormwater runoff are not settling properly in the retention basins. Monitoring for conductivity provides the permittee and the Department with an indicator that operations and maintenance need to be evaluated to ensure the facility is treating the stormwater runoff adequately to protect the water quality in the receiving stream. EPA references studies that indicate streams supporting good mixed fisheries have a range of specific conductance between 150 and 500 umhos/cm. Therefore, the permit writer has implemented a benchmark value at the top of this range, which is 500 umhos/cm. This value will be used as an indicator that levels of specific conductance resulting in values at or above 500 umhos/cm may be causing impairment to water quality in the receiving stream. If levels consistently exceed this benchmark value, effluent limitations may be considered for conductivity.
- **Total Hardness.** Monitoring only requirement removed. There are no water quality standards for this parameter. Additionally, effluent hardness is not relevant to calculating limits. The instream hardness must be considered when calculating such effluent limitations. This instream hardness provides consideration to amount of pollutants that may be bioavailable in the receiving stream. Monitoring the hardness of stormwater runoff does not adequately characterize the receiving stream conditions. Furthermore, the pollutants affected by hardness will use a default value of 193 mg/L in the calculations, which is consistent with other stormwater and landfill permits issued in the state of Missouri. Therefore, the permit writer has used best professional judgment to remove this parameter from the permit.

Metals

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in EPA/505/2-90-001 and “The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion” (EPA 823-B-96-007). General warm-water fishery criteria apply and hardness of 193 mg/L.

Due to the absence of contemporaneous effluent and instream data for total recoverable metals, dissolved metals, hardness, and total suspended solids with which to calculate metals translators, partitioning between the dissolved and absorbed phases was assumed to be minimal (Section 5.7.3, EPA/505/2-90-001). Freshwater criteria conversion factors for dissolved metals were used as the metals translator as recommended in guidance (Section 1.3, 1.5.3, and Table 1, EPA 823-B-96-007). If concurrent site-specific data for total recoverable metals, dissolved metals, hardness, and total suspended solids are provided to the department, partitioning evaluations may be considered and site-specific translators developed.

METAL	CONVERSION FACTORS	
	ACUTE	CHRONIC
Aluminum	NA	NA
Antimony	NA	NA
Arsenic	1	NA
Beryllium	NA	NA
Cadmium	0.916	NA
Chromium III	0.316	NA
Chromium VI	NA	NA
Copper	0.960	NA
Iron	NA	NA
Lead	0.695	NA
Mercury	0.85	NA
Nickel	0.998	NA
Selenium	NA	NA
Silver	0.850	NA
Thallium	NA	NA
Zinc	0.980	NA

Conversion factors for Cd and Pb are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 193 mg/L.

N/A = Chronic Conversion Factors is not applicable for stormwater.

Per 10 CSR 20-7.031(4)(B)2.A., the permittee shall comply with the water quality standard associated with the use designation of aquatic life protection and human health-fish consumption. Table A of 10 CSR 20-7.031 does list separate water quality standards for protection of aquatic life (AQL) and human health protection – fish consumption (HHF). Therefore, the permit writer will use the more stringent of the two standards in order to comply with the above listed regulation requiring the combination of both use designations.

- **Aluminum, Total Recoverable.** AQL Criteria Chronic = N/A, Acute = 750 µg/L. HFF Criteria = N/A. There is no conversion factor from dissolved to total recoverable for Aluminum; therefore [10 CSR 20-7.031 Table A] is the criteria. No mixing allowed; therefore the criteria = the WLA. Monitoring only has been established in this permit. The previous permit did not contain monitoring or effluent limitations for this parameter; thus no DMR data exists to make a reasonable potential determination based on performance. Therefore, the permit writer has used best professional judgment to require monitoring only for this parameter. Additionally, a benchmark value has been established at the acute AQL criterion of 750 µg/L.

Benchmark Value = WLA = 750 µg/L

Outfall #007: DMRs = not required, renewal application = marked “believed absent”

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = not required, renewal application = marked “believed absent”

- **Antimony, Total Recoverable.** AQL Criteria = N/A. HFF Criteria = 4,300 µg/L. Monitoring only will continue. Additionally, a benchmark value has been established at the HFF criterion of 4,300 µg/L.

Benchmark Value = WLA = 4,300 µg/L

Outfall #007: DMRs = 20.0 µg/L, renewal application = < 20.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 20.0 µg/L, renewal application = < 20.0 µg/L

- **Arsenic, Total Recoverable.** AQL Criteria = 20 µg/L. HFF Criteria = N/A. Monitoring only will continue. Additionally, a benchmark value has been established at the acute AQL criterion of 20 µg/L.

Criteria with consideration to conversion factors:

Acute = $20.0/1 = 20.0$ µg/L

Outfall #007: DMRs = 20.0 µg/L, renewal application = < 20.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 20.0 µg/L, renewal application = < 20.0 µg/L

- **Barium, Total Recoverable.** AQL Criteria = N/A. HFF Criteria = N/A. Monitoring requirement removed. There are no water quality standards for this parameter, thus no legal justification to require monitoring to ensure protection of AQL or HFF in the receiving stream. The permit writer has used best professional judgment to remove this parameter from the permit.

Outfall #007: DMRs = 56.0 µg/L, renewal application = 56.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 15.0 µg/L, renewal application = 15.0 - 44µg/L

- **Beryllium, Total Recoverable.** AQL Criteria = 5 µg/L. HFF Criteria = N/A. Monitoring only will continue. Additionally, a benchmark value has been established at the acute AQL criterion of 5 µg/L.

Benchmark Value = WLA = 5 µg/L

Outfall #007: DMRs = 5.0 µg/L, renewal application = < 5.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 5.0 µg/L, renewal application = < 5.0 µg/L

- **Boron, Total Recoverable.** AQL Criteria = N/A. HFF Criteria = N/A. Monitoring requirement removed. There are no water quality standards for this parameter, thus no legal justification to require monitoring to ensure protection of AQL or HFF in the receiving stream. The permit writer has used best professional judgment to remove this parameter from the permit.

Outfall #007: DMRs = 16.0 µg/L, renewal application = 16.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 66 µg/L, renewal application = 190 µg/L

- **Cadmium, Total Recoverable.** AQL Criteria Chronic = 0.44 µg/L, Acute = 9.83 µg/L. HFF Criteria = N/A. Monitoring only will continue. Additionally, a benchmark value will be implemented for this parameter. The benchmark value will be set at the AQL Acute Criteria of 10 µg/L.

Criteria with consideration to conversion factors:

$$\text{Acute} = 9.0/0.916 = 9.83 \mu\text{g/L}$$

Outfall #007: DMRs = 2.0 µg/L, renewal application = < 2.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 2.0 µg/L, renewal application = < 2.0 µg/L

- **Chromium (III), Total Recoverable.** AQL Criteria Chronic = 148 µg/L, Acute = 3,090 µg/L. HFF Criteria = N/A. Monitoring only will continue. Additionally, a benchmark value will be implemented for this parameter. The benchmark value will be set at the AQL Acute Criteria of 3,090 µg/L.

Criteria with consideration to conversion factors:

$$\text{Acute} = 976/0.316 = 3,089.64 \mu\text{g/L}$$

Outfall #007: DMRs = 9.0 µg/L, renewal application = < 9.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 9.0 µg/L, renewal application = < 9.0 µg/L

- **Chromium (VI), Total Recoverable.** AQL Criteria Chronic = 10 µg/L, Acute = 15 µg/L. HFF Criteria = N/A. Monitoring only will continue. Additionally, a benchmark value will be implemented for this parameter. The benchmark value will be set at the AQL Acute Criteria of 15 µg/L. No mixing allowed; therefore the criteria = the WLA = benchmark value.

$$\text{Benchmark Value} = \text{WLA} = 15 \mu\text{g/L}$$

Outfall #007: DMRs = 5.0 µg/L, renewal application = < 5.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 5.0 µg/L, renewal application = < 5.0 µg/L

- **Cobalt, Total Recoverable.** AQL Criteria = N/A. HFF Criteria = N/A. Monitoring requirement removed. There are no water quality standards for this parameter, thus no legal justification to require monitoring to ensure protection of AQL or HFF in the receiving stream. The permit writer has used best professional judgment to remove this parameter from the permit.

Outfall #007: DMRs = 5.0 µg/L, renewal application = < 5.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 12 µg/L, renewal application = < 5.0 - 12 µg/L

- **Copper, Total Recoverable.** AQL Criteria Chronic = 16.36 µg/L, Acute = 26 µg/L. HFF Criteria = N/A. Monitoring only will continue. Additionally, a benchmark value will be implemented for this parameter. The benchmark value will be set at the AQL Acute Criteria of 26 µg/L.

Criteria with consideration to conversion factors:

$$\text{Acute} = 25.0/0.960 = 26.0 \mu\text{g/L}$$

Outfall #007: DMRs = 30.0 µg/L, renewal application = < 30.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 30.0 µg/L, renewal application = < 30.0 µg/L

- **Iron, Total Recoverable.** AQL Criteria = 1,000 µg/L. HFF Criteria = N/A. Monitoring only will continue. Additionally, a benchmark value has been established at the AQL criterion of 1,000 µg/L.

$$\text{Benchmark Value} = \text{WLA} = 1,000 \mu\text{g/L}$$

Outfall #007: DMRs = 120.0 µg/L, renewal application = 120.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 1200 - 1400 µg/L, renewal application = 1200 - 1400 µg/L

- **Lead, Total Recoverable.** AQL Criteria Chronic = 7.35 µg/L, Acute = 188.47 µg/L. HFF Criteria = N/A. Monitoring only will continue. Additionally, a benchmark value will be implemented for this parameter. The benchmark value will be set at the AQL Acute Criteria of 188 µg/L.

Criteria with consideration to conversion factors:

Acute = $131/0.695 = 188.47$ µg/L

Outfall #007: DMRs = 10.0 µg/L, renewal application = < 100.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 10.0 µg/L, renewal application = < 10.0 - < 100.0 µg/L

- **Magnesium, Total Recoverable.** AQL Criteria = N/A. HFF Criteria = N/A. Monitoring requirement removed. There are no water quality standards for this parameter, thus no legal justification to require monitoring to ensure protection of AQL or HFF in the receiving stream. The permit writer has used best professional judgment to remove this parameter from the permit.

Outfall #007: DMRs = 14.0 µg/L, renewal application = marked “believed absent”

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 3800 µg/L, renewal application = 1400 µg/L (marked “believed absent”)

- **Manganese, Total Recoverable.** AQL Criteria = N/A. HFF Criteria = N/A. Monitoring requirement removed. There are no water quality standards for this parameter, thus no legal justification to require monitoring to ensure protection of AQL or HFF in the receiving stream. The permit writer has used best professional judgment to remove this parameter from the permit.

Outfall #007: DMRs = 62.0 µg/L, renewal application = marked “believed absent”

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 2000 µg/L, renewal application = 190 - 2000 µg/L

- **Mercury, Total Recoverable.** AQL Criteria Chronic = 0.5 µg/L, Acute = 2.82 µg/L. HFF Criteria = N/A. Monitoring only will continue. Additionally, a benchmark value will be implemented for this parameter. The benchmark value will be set at the AQL Acute Criteria of 3.0 µg/L.

Criteria with consideration to conversion factors:

Acute = $2.4/0.85 = 2.82$ µg/L

Outfall #007: DMRs = 0.2 µg/L, renewal application = not required

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 0.2 µg/L, renewal application = not required

- **Nickel, Total Recoverable.** AQL Criteria Chronic = 91.03 µg/L, Acute = 818.84 µg/L. HFF Criteria = N/A. Monitoring only will continue. Additionally, a benchmark value will be implemented for this parameter. The benchmark value will be set at the AQL Acute Criteria of 819.0 µg/L.

Criteria with consideration to conversion factors:

Acute = $817/0.998 = 818.84$ µg/L

Outfall #007: DMRs = 10.0 µg/L, renewal application = < 10.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 17.0 µg/L, renewal application = < 10.0 - 17 µg/L

- **Selenium, Total Recoverable.** AQL Criteria = 5 µg/L. HFF Criteria = N/A. Monitoring only will continue. Additionally, a benchmark value has been established at the AQL criterion of 5 µg/L.

Benchmark Value = WLA = 5 µg/L

Outfall #007: DMRs = 10.0 µg/L, renewal application = < 10.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 21.0 µg/L, renewal application = < 10.0 - 21 µg/L

- **Silver, Total Recoverable.** AQL Criteria = 11.75 µg/L. HFF Criteria = N/A. Monitoring only will continue. Additionally, a benchmark value has been established at the AQL criterion of 12 µg/L.

Benchmark Value = WLA = 11.75 µg/L

Outfall #007: DMRs = 10.0 µg/L, renewal application = < 10.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 10.0 µg/L, renewal application = < 10.0 µg/L

- **Thallium, Total Recoverable.** AQL Criteria = N/A. HFF Criteria = 6.3 µg/L. Monitoring only will continue. Additionally, a benchmark value has been established at the HFF criterion of 6 µg/L.

Benchmark Value = WLA = 6.3 µg/L

Outfall #007: DMRs = 10.0 µg/L, renewal application = < 10.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 10.0 µg/L, renewal application = < 10.0 µg/L

- **Vanadium, Total Recoverable.** AQL Criteria = N/A. HFF Criteria = N/A. Monitoring requirement removed. There are no water quality standards for this parameter, thus no legal justification to require monitoring to ensure protection of AQL or HFF in the receiving stream. The permit writer has used best professional judgment to remove this parameter from the permit.

Outfall #007: DMRs = not listed, renewal application = not required

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 10.0 µg/L, renewal application = not required

- **Zinc, Total Recoverable.** AQL Criteria Chronic = 209.16 µg/L, Acute = 209.16. HFF Criteria = N/A. Monitoring only will continue. Additionally, a benchmark value will be implemented for this parameter. The benchmark value will be set at the AQL Acute Criteria of 209 µg/L.

Criteria with consideration to conversion factors:

Acute = $204.97/0.980 = 209.16 \mu\text{g/L}$

Outfall #007: DMRs = 10.0 µg/L, renewal application = < 10.0 µg/L

Outfall #008: no data, landfill has not been developed in this area

Outfall #009: DMRs = 29 µg/L, renewal application = < 10.0 - 29 µg/L

- **Whole Effluent Toxicity (WET) Test.** Removed from the permit. WET tests are not applicable to intermittent discharges, such as stormwater runoff.

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	once/quarter	once/quarter
PRECIPITATION	once/day	once/quarter
COD	once/quarter	once/quarter
TSS	once/quarter	once/quarter
pH	once/quarter	once/quarter
SETTLABLE SOLIDS	once/quarter	once/quarter
CONDUCTIVITY	once/quarter	once/quarter
OIL & GREASE	once/quarter	once/quarter
AMMONIA AS N	once/quarter	once/quarter
CHLORIDE + SULFATE	once/quarter	once/quarter
FLUORIDE	once/quarter	once/quarter
BENZENE	once/quarter	once/quarter
ETHYLBENZENE	once/quarter	once/quarter
TOLUENE	once/quarter	once/quarter
TOTAL XYLENE	once/quarter	once/quarter
ALUMINUM, TR	once/quarter	once/quarter
ANTIMONY, TR	once/quarter	once/quarter

ARSENIC, TR	once/quarter	once/quarter
BERYLLIUM, TR	once/quarter	once/quarter
CADMIUM, TR	once/quarter	once/quarter
CHROMIUM (III), TR	once/quarter	once/quarter
CHROMIUM (VI), DISSOLVED	once/quarter	once/quarter
COPPER, TR	once/quarter	once/quarter
IRON, TR	once/quarter	once/quarter
LEAD, TR	once/quarter	once/quarter
MERCURY, TR	once/quarter	once/quarter
NICKEL, TR	once/quarter	once/quarter
SELENIUM, TR	once/quarter	once/quarter
SILVER, TR	once/quarter	once/quarter
THALLIUM, TR	once/quarter	once/quarter
ZINC, TR	once/quarter	once/quarter

Sampling Frequency Justification:

Sampling and Reporting Frequency was increased to once per quarter for all parameters. In order to obtain sufficient data to determine the reasonable potential for the facility to exceed water quality standards, more samples need to be taken than just once per year. Additionally, many of the parameters now have associated benchmark values. Once per quarter sampling will provide increased assurance that best management practices are functioning properly to meet those benchmark values.

Sampling Type Justification

Due to the nature of the discharge being stormwater, the permit writer has best professional judgment to continue requiring grab samples for all parameters except flow and rainfall. Flow should be a 24 hour estimate and total rainfall should be measured.

Outfall #009 – Holding Tank for Maintenance Facility and Vehicle Wash Wastewater Collection and Pump and Haul

Monitoring requirements derived and established in the below Monitoring Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

Holding tank facilities have been demonstrated to pose an unacceptable risk to public health and the environment. Many different facilities’ failure to properly operate their holding tanks has resulted in discharge of untreated wastewater. This has occurred in multiple settings, from surfacing sewage in residential areas to discharges directly to waters in which public recreation occurs. Because a holding tank is only designed to contain the wastewater for a short number of days, they must be pumped out routinely. Therefore, they are overwhelmed with only short term inattention from their owners, or in many cases by an event for which they are not designed to receive the volume of waste generated.

MONITORING TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
VOLUME PUMPED	gpd	6	*	-	-	YES	**
FREEBOARD IN TANK	Inches	6	*	-	-	YES	**

* - Monitoring requirement only

** - Parameter not previously established in previous state operating permit.

Basis for Limitations Codes:

- | | |
|--|-----------------------------------|
| 1. State or Federal Regulation/Law | 5. Water Quality Model |
| 2. Water Quality Standard (includes RPA) | 6. Best Professional Judgment |
| 3. Water Quality Based Effluent Limits | 7. TMDL or Permit in lieu of TMDL |
| 4. Antidegradation Review/Policy | 8. WET Test Policy |

OUTFALL #009 – DERIVATION AND DISCUSSION OF MONITORING REQUIREMENTS:

- **Volume Pumped.** Monitoring requirement. Monitoring for the volume pumped is included to determine if proper wastewater disposal is occurring.

Once per quarter, the permittee shall report to the department the following information:

- Date(s) the facility was pumped
 - Name, business address, and phone number of the contract hauler
 - Copy of the written contract between permittee and contract hauler
 - Documentation of approval from permitted facility receiving wastewater from contract hauler
 - Volume of effluent removed
 - Destination of the pumped effluent
 - Documentation that high-level alarms and telemetry system have been tested
- **Freeboard in Tank.** Monitoring requirement. Monitoring the freeboard is included to ensure that the tank will not overflow or release wastewater into the environment. The permittee should increase frequency of pumping depending on volumes of wastewater generated during operations.

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
VOLUME PUMPED	once/day	once/quarter
FREEBOARD IN TANK	once/month	once/quarter

Sampling Frequency Justification:

Sampling Frequency for volume pumped has been set to adequately monitor volume of wastewater being pumped each day to ensure the permittee is aware of volumes of wastewater generated during operations. This will assist in determining necessary frequency of pumping to prevent overflows or spills. Sampling Frequency for freeboard in tank has been set to also assist in determining necessary frequency of pumping and to prevent overflows or releases of wastewater. Reporting Frequency was established at the same frequency as the stormwater monitoring and effluent limitations reporting frequency. This is adequate for department oversight and will allow the permittee to submit one report each quarter for the conditions of the permit.

Sampling Type Justification

Sampling type will be set at total measured volumes pumped and total measured feet of freeboard in the tank.

Outfall #005 & #006 – Instream Monitoring Locations

These outfalls have been removed from the permit. Both of these outfalls are located downstream on the discharge outfalls discussed above. Thus, there is no determination of how the stream is being impacted by the discharges, as there is no comparison of upstream data to downstream data. In addition to the unrepresentative sampling locations, the parameters listed to be monitored at each location were inconsistent with the discharge parameters and between each instream monitoring locations. Furthermore, a land disturbance site has been identified downstream of the discharges, but still upstream from the instream monitoring locations. This site may have an impact on the stream and any runoff from this site could be influencing the sample results for this facility. Therefore, it is the permit writer’s best professional judgment to remove these instream monitoring locations from the permit. There will be no environmental benefit to conducting instream monitoring.

Part VI – 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:

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also 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 three years old, that 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.

PUBLIC NOTICE:

The Department shall give public notice that 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 and water quality 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 permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general 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 wanting to submit comments regarding this proposed operating permit, then 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.

- The Public Notice period for this operating permit is began on November 14, 2014 and ended on December 15, 2014. The permittee submitted comments during this Public Notice period. These comments and the Department's responses are summarized below.

1. The permittee stated that they no longer propose to discharge vehicle wash wastewater from the vehicle wash station on site. They now propose to collect the vehicle wash wastewater in a holding tank and periodically pump and haul that wastewater to a permitted wastewater treatment facility. The Department will remove all conditions associated with the discharge of the vehicle wash wastewater and will establish applicable provisions for monitoring the holding tank.
2. The permittee requested the opportunity to re-evaluate the benchmark values once sufficient laboratory data is available for review. The Department will accept a request for modification of a benchmark value and will review all data and justification provided by and/or requested from the permittee during the review process to determine appropriate benchmark values.

The second Public Notice period began on January 9, 2015 and ended on February 9, 2015. No comments were received during this Public Notice period.

DATE OF FACT SHEET: SEPTEMBER 22, 2014

FACT SHEET REVISION DATE: DECEMBER 18, 2014

COMPLETED BY:

**LOGAN COLE, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - INDUSTRIAL UNIT
(573) 751-5827
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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(a)(1);
 - 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 permittees 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.



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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.

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**PART III – SLUDGE AND BIOSOLIDS FROM DOMESTIC AND
INDUSTRIAL WASTEWATER TREATMENT FACILITIES**

SECTION A – GENERAL REQUIREMENTS

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation for domestic wastewater and industrial process wastewater. This permit also incorporates applicable federal sludge disposal requirements under 40 CFR 503 for domestic wastewater. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFR 503 for domestic wastewater. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address the federal requirements.
2. These Part III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW), privately owned facilities and sludge or biosolids generated at industrial facilities.
3. Sludge and Biosolids Use and Disposal Practices:
 - a. The permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
 - b. The permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
 - c. The permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.
4. Sludge Received from other Facilities:
 - a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
 - b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge
5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.
6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act under Chapter 644 RSMo.
8. In addition to STANDARD CONDITIONS, the Department may include sludge limitations in the special conditions portion or other sections of a site specific permit.
9. Alternate Limits in the Site Specific Permit.

Where deemed appropriate, the Department may require an individual site specific permit in order to authorize alternate limitations:

 - a. A site specific permit must be obtained for each operating location, including application sites.
 - b. To request a site specific permit, an individual permit application, permit fee, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.
10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the Department, as follows:
 - a. The Department will prepare a permit modification and follow permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owner of the property located adjacent to each land application site, where appropriate.
 - b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.

SECTION B – DEFINITIONS

1. Best Management Practices include agronomic loading rates, soil conservation practices and other site restrictions.
2. Biosolids means organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge.
3. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
4. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
5. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
6. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a (POTW) or a privately owned facility.
7. Industrial wastewater means any wastewater, also known as process water, not defined as domestic wastewater. Per 40 CFR Part 122, process water means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.
8. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including septic tanks, sand filters, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological discs, and other similar facilities. It does not include wastewater treatment lagoons and constructed wetlands for wastewater treatment.
9. Operating location as defined in 10 CSR 20-2.010 is all contiguous lands owned, operated or controlled by one (1) person or by two (2) or more persons jointly or as tenants in common.
10. Plant Available Nitrogen (PAN) is the nitrogen that will be available to plants during the growing seasons after biosolids application.
11. Public contact site is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
12. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks or equivalent facilities. Sludge does not include carbon coal byproducts (CCBs)
13. Sludge lagoon is part of a mechanical wastewater treatment facility. A sludge lagoon is an earthen basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
14. Septage is the material pumped from residential septic tanks and similar treatment works (with a design population of less than 150 people). The standard for biosolids from septage is different from other sludges.

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

1. Sludge shall be routinely removed from wastewater treatment facilities and handled according to the permit facility description and sludge conditions of this permit.
2. The permittee shall operate the facility so that there is no sludge discharged to waters of the state.
3. Mechanical treatment plants shall have separate sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove sludge from these storage compartments on the required design schedule is a violation of this permit.

SECTION D – SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR CONTRACT HAULER

1. This section applies to permittees that haul sludge to another treatment facility for disposal or use contract haulers to remove and dispose of sludge.
2. Permittees that use contract haulers are responsible for compliance with all the terms of this permit including final disposal, unless the hauler has a separate permit for sludge or biosolids disposal issued by the Department; or the hauler transports the sludge to another permitted treatment facility.
3. Haulers who land apply septage must obtain a state permit.
4. Testing of sludge, other than total solids content, is not required if sludge is hauled to a municipal wastewater treatment facility or other permitted wastewater treatment facility, unless it is required by the accepting facility.

SECTION E – INCINERATION OF SLUDGE

1. Sludge incineration facilities shall comply with the requirements of 40 CFR 503 Subpart E; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or if the ash is determined to be hazardous with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, quantity of sludge incinerated, quantity of ash generated, quantity of ash stored, and ash used or disposal method, quantity, and location. Permittee shall also provide the name of the disposal facility and the applicable permit number.

SECTION F – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS

1. Surface disposal sites of domestic facilities shall comply with the requirements in 40 CFR 503 Subpart C; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Sludge storage lagoons are temporary facilities and are not required to obtain a permit as a solid waste management facility under 10 CSR 80. In order to maintain sludge storage lagoons as storage facilities, accumulated sludge must be removed routinely, but not less than once every two years unless an alternate schedule is approved in the permit. The amount of sludge removed will be dependent on sludge generation and accumulation in the facility. Enough sludge must be removed to maintain adequate storage capacity in the facility.
 - a. In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of sludge on the bottom of the lagoon, upon prior approval of the Department; or
 - b. Permittee shall close the lagoon in accordance with Section H.

SECTION G – LAND APPLICATION

1. The permittee shall not land apply sludge or biosolids unless land application is authorized in the facility description or the special conditions of the issued NPDES permit.
2. Land application sites within a 20 miles radius of the wastewater treatment facility are authorized under this permit when biosolids are applied for beneficial use in accordance with these standard conditions unless otherwise specified in a site specific permit. If the permittee's land application site is greater than a 20 mile radius of the wastewater treatment facility, approval must be granted from the Department.
3. Land application shall not adversely affect a threatened or endangered species or its designated critical habitat.
4. Biosolids shall not be applied unless authorized in this permit or exempted under 10 CSR 20, Chapter 6.
 - a. This permit does not authorize the land application of domestic sludge except for when sludge meets the definition of biosolids.
 - b. This permit authorizes "Class A or B" biosolids derived from domestic wastewater and/or process water sludge to be land applied onto grass land, crop land, timber or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
5. Public Contact Sites:

Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the Department after two years of proper operation with acceptable testing documentation that shows the biosolids meet Class A criteria. A shorter length of testing will be allowed with prior approval from the Department. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site specific permit.

 - a. After Class B biosolids have been land applied, public access must be restricted for 12 months.
 - b. Class B biosolids are only land applied to root crops, home gardens or vegetable crops whose edible parts will not be for human consumption.

6. Agricultural and Silvicultural Sites:

Septage – Based on Water Quality guide 422(WQ422) published by the University of Missouri

- a. Haulers that land apply septage must obtain a state permit
- b. Do not apply more than 30,000 gallons of septage per acre per year.
- c. Septage tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to other mechanical type treatment facilities.
- d. To meet Class B sludge requirements, maintain septage at 12 pH for at least thirty (30) minutes before land application. 50 pounds of hydrated lime shall be added to each 1,000 gallons of septage in order to meet pathogen and vector stabilization for septage biosolids applied to crops, pastures or timberland.
- e. Lime is to be added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.

Biosolids - Based on Water Quality guide 423, 424, and 425 (WQ423, WQ424, WQ425) published by the University of Missouri;

- a. Biosolids shall be monitored to determine the quality for regulated pollutants
- b. The number of samples taken is directly related to the amount of sludge produced by the facility (See Section I of these Standard Conditions). Report as dry weight unless otherwise specified in the site specific permit. Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable Department approved material to reach the maximum concentration of pollutants allowed.
- c. Table 1 gives the maximum concentration allowable to protect water quality standards

TABLE 1

Biosolids Ceiling Concentration ¹	
Pollutant	Milligrams per kilogram dry weight
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

¹ Land application is not allowed if the sludge concentration exceeds the maximum limits for any of these pollutants

- d. The low metal concentration biosolids has reduced requirements because of its higher quality and can safely be applied for 100 years or longer at typical agronomic loading rates. (See Table 2)

TABLE 2

Biosolids Low Metal Concentration ¹	
Pollutant	Milligrams per kilogram dry weight
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	36
Zinc	2,800

¹ You may apply low metal biosolids without tracking cumulative metal limits, provided the cumulative application of biosolids does not exceed 500 dry tons per acre.

- e. Each pollutant in Table 3 has an annual and a total cumulative loading limit, based on the allowable pounds per acre for various soil categories.

TABLE 3

Pollutant	CEC 15+		CEC 5 to 15		CEC 0 to 5	
	Annual	Total ¹	Annual	Total ¹	Annual	Total ¹
Arsenic	1.8	36.0	1.8	36.0	1.8	36.0
Cadmium	1.7	35.0	0.9	9.0	0.4	4.5
Copper	66.0	1,335.0	25.0	250.0	12.0	125.0
Lead	13.0	267.0	13.0	267.0	13.0	133.0
Mercury	0.7	15.0	0.7	15.0	0.7	15.0
Nickel	19.0	347.0	19.0	250.0	12.0	125.0
Selenium	4.5	89.0	4.5	44.0	1.6	16.0
Zinc	124.0	2,492.0	50.0	500.0	25.0	250.0

¹ Total cumulative loading limits for soils with equal or greater than 6.0 pH (salt based test) or 6.5 pH (water based test)

TABLE 4 - Guidelines for land application of other trace substances ¹

Cumulative Loading	
Pollutant	Pounds per acre
Aluminum	4,000 ²
Beryllium	100
Cobalt	50
Fluoride	800
Manganese	500
Silver	200
Tin	1,000
Dioxin	(10 ppt in soil) ³
Other	⁴

¹ Design of land treatment systems for Industrial Waste, 1979. Michael Ray Overcash, North Carolina State University and Land Treatment of Municipal Wastewater, EPA 1981.)

² This applies for a soil with a pH between 6.0 and 7.0 (salt based test) or a pH between 6.5 to 7.5 (water based test). Case-by-case review is required for higher pH soils.

³ Total Dioxin Toxicity Equivalents (TEQ) in soils, based on a risk assessment under 40 CFR 744, May 1998.

⁴ Case by case review. Concentrations in sludge should not exceed the 95th percentile of the National Sewage Sludge Survey, EPA, January 2009.

Best Management Practices – Based on Water Quality guide 426 (WQ426) published by the University of Missouri

- a. Use best management practices when applying biosolids.
- b. Biosolids cannot discharge from the land application site
- c. Biosolid application is subject to the Missouri Department of Agriculture State Milk Board concerning grazing restrictions of lactating dairy cattle.
- d. Biosolid application must be in accordance with section 4 of the Endangered Species Act.
- e. Do not apply more than the agronomic rate of nitrogen needed.
- f. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil and crop removals unless the nitrogen content of the biosolids does not exceed 50,000 milligrams per kilogram of total nitrogen on a dry weight basis and biosolids application rate is less than two dry tons per acre per year.
 - i. PAN can be determined as follows and is in accordance with WQ426
 $(\text{Nitrate} + \text{nitrite nitrogen}) + (\text{organic nitrogen} \times 0.2) + (\text{ammonia nitrogen} \times \text{volatilization factor}^1)$.

¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application.

- g. Buffer zones are as follows:
 - i. 300 feet of a water supply well, sinkhole, lake, pond, water supply reservoir or water supply intake in a stream;
 - ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
 - iii. 150 feet if dwellings;
 - iv. 100 feet of wetlands or permanent flowing streams;
 - v. 50 feet of a property line or other waters of the state, including intermittent flowing streams.
- h. Slope limitation for application sites are as follows;
 - i. A slope 0 to 6 percent has no rate limitation
 - ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels
 - iii. Slopes > 12, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.
- i. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
- j. Do not apply biosolids to sites with soil that is snow covered, frozen or saturated with liquid without prior approval by the Department.
- k. Biosolids / sludge applicators must keep detailed records up to five years.

SECTION H – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical, industrial, and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain Department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids. Mechanical plants, sludge lagoons, ash ponds and other storage structures must obtain approval of a closure plan from the Department. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6. 010 and 10 CSR 20 – 6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:
 - a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
 - b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
 - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre.
 - i. PAN can be determined as follows:

$$(\text{Nitrate} + \text{nitrite nitrogen}) + (\text{organic nitrogen} \times 0.2) + (\text{ammonia nitrogen} \times \text{volatilization factor}^1).$$
¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application.
4. When closing a domestic wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered “septage” under the similar treatment works definition. See Section B of these standard conditions. Under the septage category, residuals may be left in place as follows:
 - a. Testing for metals or fecal coliform is not required
 - b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at a rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
 - c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If 100 dry tons/acre or more will be left in the lagoon, test for nitrogen and determine the PAN using the calculation above. Allowable PAN loading is 300 pounds/acre.

5. Residuals left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berm shall be demolished, and the site shall be graded and contain $\geq 70\%$ vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoons and/or earthen structure and/or ash pond closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed one acre in accordance with 10 CSR 20-6.200
7. When closing a mechanical wastewater and/or industrial process wastewater plant; all sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
 - a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain $\geq 70\%$ vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
 - b. Per 10 CSR 20-6.015(4)(B)6, Hazardous Waste shall not be land applied or disposed during industrial and mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations under 10 CSR 25.
 - c. After demolition of the mechanical plant / industrial plant, the site must only contain clean fill defined in RSMo 260.200 (5) as uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinderblocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the Department for fill or other beneficial use. Other solid wastes must be removed.
8. If sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or H, a landfill permit or solid waste disposal permit must be obtained if the permittee chooses to seek authorization for on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR 503, Subpart C.

SECTION I – MONITORING FREQUENCY

1. At a minimum, sludge or biosolids shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed. Please see the table below.

TABLE 5

Design Sludge Production (dry tons per year)	Monitoring Frequency (See Notes 1 and 2)			
	Metals, Pathogens and Vectors	Nitrogen TKN ¹	Nitrogen PAN ²	Priority Pollutants and TCLP ³
0 to 100	1 per year	1 per year	1 per month	1 per year
101 to 200	biannual	biannual	1 per month	1 per year
201 to 1,000	quarterly	quarterly	1 per month	1 per year
1,001 to 10,000	1 per month	1 per month	1 per week	-- ⁴
10,001 +	1 per week	1 per week	1 per day	-- ⁴

¹ Test total Kjeldahl nitrogen, if biosolids application is 2 dry tons per acre per year or less

² Calculate plant available nitrogen, if biosolids application is more than 2 dry tons per acre per year.

³ Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) and toxicity characteristic leaching procedure (40 CFR 261.24) is required only for permit holders that must have a pre-treatment program.

⁴ One sample for each 1,000 dry tons of sludge.

Note 1: Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids. This data shall be used to calculate the dry tons of sludge applied per acre.

Note 2: Total Phosphorus: Total phosphorus and total potassium shall be tested at the same monitoring frequency as metals.

2. If you own a wastewater treatment lagoon or sludge lagoon that is cleaned out once a year or less, you may choose to sample only when the sludge is removed or the lagoon is closed. Test one composite sample for each 100 dry tons of sludge or biosolids removed from the lagoon during the year within the lagoon at closing. Composite sample must represent various areas at one-foot depth.
3. Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the Department.
4. At this time, the Department recommends monitoring requirements shall be performed in accordance with, "POTW Sludge Sampling and Analysis Guidance Document," United States Environmental Protection Agency, August 1989, and the subsequent revisions.

SECTION J – RECORD KEEPING AND REPORTING REQUIREMENTS

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in these standard conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
2. Reporting period
 - a. By January 28th of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
 - b. Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
3. Report Forms. The annual report shall be submitted on report forms provided by the Department or equivalent forms approved by the Department.
4. Reports shall be submitted as follows:

Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the Department and EPA. Other facilities need to report only to the Department. Reports shall be submitted to the addresses listed as follows:

DNR regional office listed in your permit
(see cover letter of permit)
ATTN: Sludge Coordinator

EPA Region VII
Water Compliance Branch (WACM)
Sludge Coordinator
11201 Renner Blvd.
Lenexa, KS 66219

5. Annual Report Contents. The annual report shall include the following:
 - a. Sludge and biosolids testing performed. Include a copy or summary of all test results, even if not required by the permit.
 - b. Sludge or biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at the end of the year, and the quantity used or disposed.
 - c. Gallons and % solids data used to calculate the dry ton amounts.
 - d. Description of any unusual operating conditions.
 - e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
 - i. This must include the name, address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
 - ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.

f. Contract Hauler Activities

If contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge or biosolids use permit.

g. Land Application Sites:

- i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest $\frac{1}{4}$, $\frac{1}{4}$, Section, Township, Range, and county, or UTM coordinates. If biosolids application exceeds 2 dry tons/acre/year, reports biosolids nitrogen results, Plant Available Nitrogen (PAN) in pounds/acre, crop nitrogen requirement.
- ii. If the "Low Metals" criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
- iii. Report the method used for compliance with pathogen and vector attraction requirements.
- iv. Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.



March 26, 2014

Missouri Department of Natural Resources
Water Protection Program
P.O. Box 176
Jefferson City, MO 65102-0176

RECEIVED

MAR 27 2014

WATER PROTECTION PROGRAM

RE: Prairie Valley Landfill
NPDES Permit # MO-0122416 Renewal

To Whom It May Concern:

Enclosed is the renewal application for NPDES Permit # MO-0122416 for the Prairie Valley Landfill (PVL). This letter is being sent in response to your correspondence dated January 27, 2014, Form A and C are attached.

The renewal application has been completed by Midwest Environmental Consultants (MEC). Please see the enclosed letter from MEC concerning the details about the permit application renewal.

Thank you for your consideration and please call me at 573-885-6921 if you have any questions.

Sincerely,
PRAIRIE VALLEY LANDFILL


Elaine Turnbough
CEO

c: Anika Careaga, P.E., Midwest Environmental Consultants



March 26, 2014

Missouri Department of Natural Resources
Water Protection Program
P.O. Box 176
Jefferson City, MO 65102-0176

RE: Prairie Valley Landfill
NPDES Permit # MO-0122416 Renewal

2009 E. McCarty St.
Jefferson City, MO 65101
voice: 573.636.5454
fax: 573.761.4200

To Whom It May Concern:

On behalf of the Prairie Valley Landfill (PVL), Midwest Environmental Consultants has prepared the renewal application for NPDES Permit # MO-0122416. In response to your correspondence dated January 27, 2014, Form A and C were completed. Midwest Environmental Consultants was contracted by the Prairie Valley Landfill in November of 2013. There are a number of items that we have noted during our review of the current NPDES permit.

1350 E. Kingsley St.
Suite E
Springfield, MO 65804
voice: 417.886.9200
fax: 417.886.1076

1. The most recent NPDES permit was issued in February 1, 2013. Outfall 001 was eliminated in January 2013, Outfall 002 is currently inactive for the future borrow area, Outfall 003 and Outfall 004 were both eliminated prior to 2005. Therefore, no sample data was submitted for Outfalls 001, 002, 003 or 004. Additional information about the outfalls at the site is included in the Outfall Information attached to the application.
2. Sample results for the newly created Outfalls 005, 006, 007 and 009 since February of 2013 are included with this application. Outfall 008 is for a portion of the landfill that has not yet been developed. Therefore, no results for Outfall 008 were available for this application. The figure included within the application shows the location of the current Outfalls 005, 006, 007, 008 and 009.
3. PVL would like to request the removal of Outfalls 005 and 006, the in-stream monitoring points. According to the February 1, 2013 permit, the UTM locations of the in-stream outfalls are significantly downstream from the facility. Outfall 005 is one-half (1/2) mile downstream from the landfill (Outfall 007) within the unnamed tributary of Prairie Creek and is adjacent to the Voss Quarry. Outfall 006 is approximately three-quarter (3/4) mile downstream from the landfill and approximately one-quarter (1/4) mile downstream from the quarry. Therefore, it is impossible to determine what impacts are from the landfill versus the quarry. In addition, the current permit does not require the same constituents be sampled from Outfall 005 versus Outfall 006. Neither outfall is up-stream of the landfill. Therefore the current outfall locations and sampling requirements do not compare the up-stream versus down-stream quality of the stream to determine if the

2001 E. Guernsey Meadows Rd.
Suite H
Columbia, MO 65203
voice: 573.443.1100
fax: 573.443.4100

www.mec.com

landfill is having an effect on the stream. We feel these outfalls should be deleted from the permit.

4. Outfalls 007 and 009 are located at the discharge points of the primary spillways for two of the newly constructed sediment ponds. Since the outfalls were created within the NPDES permit issued February 1, 2013, Outfalls 007 and 009 only discharged in one of the designated sampling months. Outfall 007 had several constituents exceed during the May 2013 annual sampling event. However, the resample taken in July 2013 showed the facility to be back in compliance.
5. The current permit only allows for sampling during the months of February, May, August and November. The PVL requests more flexibility in the timeframe for collecting samples. We request that the sampling periods be revised to allow sampling throughout each quarterly period with the yearly sample being required during one designated quarter. This would allow the facility more chances to capture a runoff event and better tracking of the discharge quality.
6. PVL has been completing annual WET testing as required. It is to our understanding that the landfill has never failed a WET test. The Fact Sheet of the current permit states the reason WET testing was originally required was because the "Facility has Water Quality-Based Effluent Limitations (WQBELs) for toxic substances [Total Residual Chlorine (TRC)] (other than ammonia (NH₃)." However, sampling for Residual Chlorine is not required in the permit and the facility has no reason to suspect that Residual Chlorine will become an issue. The landfill does not discharge water from a chlorinated drinking water source. In addition, the landfill does not handle large quantities of toxic substances, or substances that are toxic in large substances, as stated in the fact sheet. Therefore, PVL would like to request WET testing be removed from the renewed permit.

Thank you for your consideration and please call me at 573-636-9454 if you have any questions.

Sincerely,

MIDWEST ENVIRONMENTAL CONSULTANTS

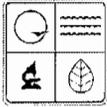


Anika Careaga, PE
Project Manager

c: Elaine Turnbough, Prairie Valley Landfill

RECEIVED

APR 18 2014



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH
**FORM A - APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT
UNDER MISSOURI CLEAN WATER LAW**

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
3/31/14	200

Note ▶ PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:

An operating permit and antidegradation review public notice

A construction permit following an appropriate operating permit and antidegradation review public notice

A construction permit and concurrent operating permit and antidegradation review public notice

A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)

An operating permit for a new or unpermitted facility Construction Permit # _____

An operating permit renewal: permit # MO- 0122416 Expiration Date 9/30/2014

An operating permit modification: permit # MO- _____ Reason: _____

1.1 Is the appropriate fee included with the application? (See instructions for appropriate fee) YES NO

2. FACILITY

NAME		TELEPHONE WITH AREA CODE	
Prairie Valley Landfill		(573) 885-7596	
ADDRESS (PHYSICAL)		FAX (573) 885-0561	
3975 Highway 19 North	CITY	STATE	ZIP CODE
	Cuba	MO	65453

3. OWNER

NAME		E-MAIL ADDRESS	TELEPHONE WITH AREA CODE	
Prairie Valley Disposal, Inc.			(573) 885-7596	
ADDRESS (MAILING)		FAX (573) 885-0561		
P.O. Box 10	CITY	STATE	ZIP CODE	
	Cuba	MO	65453	

3.1 Request review of draft permit prior to public notice? YES NO

4. CONTINUING AUTHORITY

NAME		TELEPHONE WITH AREA CODE	
Same as above			
ADDRESS (MAILING)		FAX	
	CITY	STATE	ZIP CODE

5. OPERATOR

NAME		CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE	
Same as above				
ADDRESS (MAILING)		FAX		
	CITY	STATE	ZIP CODE	

6. FACILITY CONTACT

NAME		TITLE	TELEPHONE WITH AREA CODE	
Ronnie Voight		General Manager	(573) 885-6921	
			FAX (573) 885-0561	

7. ADDITIONAL FACILITY INFORMATION

7.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)

001 _____ 1/4 _____ 1/4 _____ Sec _____ T _____ R _____ County _____
 UTM Coordinates Easting (X): ATTACHED _____ Northing (Y): _____
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

002 _____ 1/4 _____ 1/4 _____ Sec _____ T _____ R _____ County _____
 UTM Coordinates Easting (X): _____ Northing (Y): _____

003 _____ 1/4 _____ 1/4 _____ Sec _____ T _____ R _____ County _____
 UTM Coordinates Easting (X): _____ Northing (Y): _____

004 _____ 1/4 _____ 1/4 _____ Sec _____ T _____ R _____ County _____
 UTM Coordinates Easting (X): _____ Northing (Y): _____

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

001 - SIC ATTACHED and NAICS _____ 002 - SIC _____ and NAICS _____
 003 - SIC _____ and NAICS _____ 004 - SIC _____ and NAICS _____

Handwritten signature or initials at the bottom of the page.

8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION (Complete all forms that are applicable.)			
A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below).	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
B.	Is your facility considered a "Primary Industry" under EPA guidelines? If yes, complete Forms C and D.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
C.	Is application for storm water discharges only? If yes, complete EPA Form 2F.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
D.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.		
E.	Is wastewater land applied? If yes, complete Form I.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
F.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>

9. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instructions.
(PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE).

NAME See Attached			
ADDRESS	CITY	STATE	ZIP CODE

10. I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law to the Missouri Clean Water Commission.

NAME AND OFFICIAL TITLE (TYPE OR PRINT) Elaine Turnbough, CEO	TELEPHONE WITH AREA CODE (573) 885-6921
SIGNATURE 	DATE SIGNED 3/26/14

MO-780-1479 (01-09)

BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.

Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

- Appropriate Fees?
- Map at 1" = 2000' scale?
- Signature?
- Form C, if applicable?
- Form D, if applicable?
- Form 2F, if applicable?
- Form I (Irrigation), if applicable?
- Form R (Sludge), if applicable?

FIGURE 1 T39N, R5W, Sec. 1 & 12
Cuba & Oak Hill USGS Quadrangles

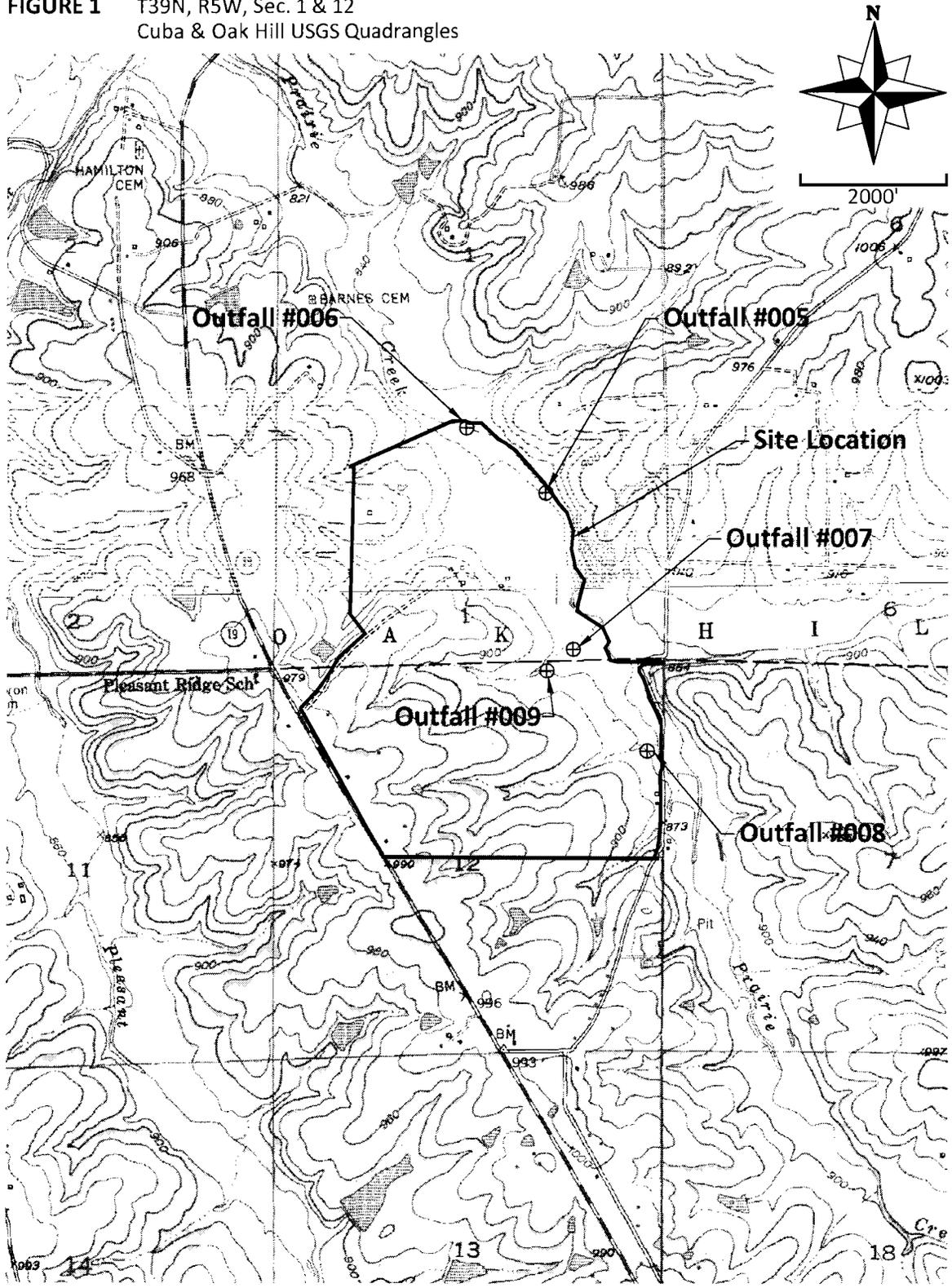
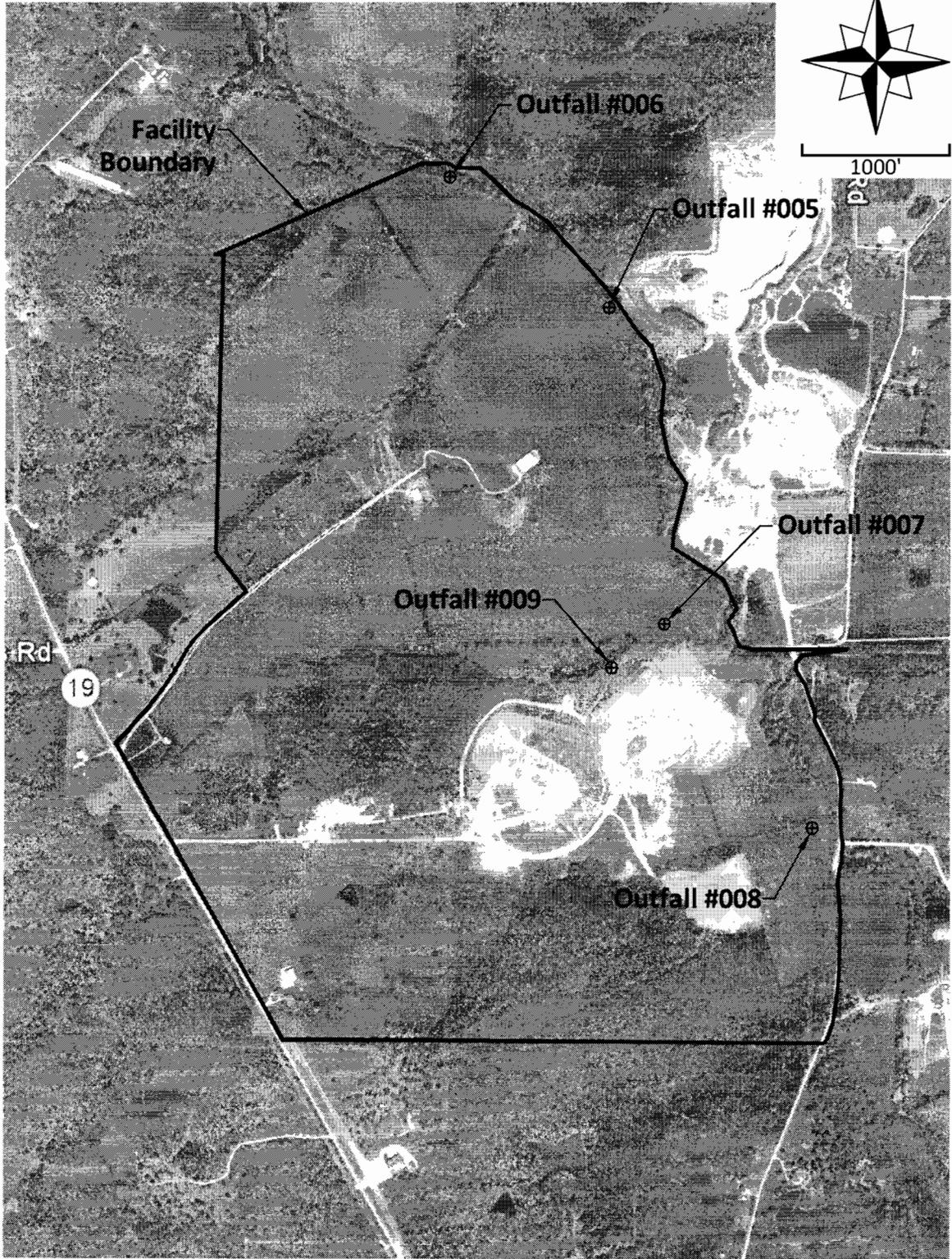


FIGURE 2



Prairie Valley Landfill Outfall Information

Outfall # 001 – **Eliminated** January 11, 2013.

Outfall # 002 – **Inactive** – Open Sanitary Waste Landfill – Standard Industrial Classification (SIC) Code(s): # 4953 (Refuse Systems)

The use or operation of this facility does not require a Certified Wastewater Operator
Future stormwater runoff/sedimentation basin (reserved for future use North Borrow Area).

Outfall # 003 – **Eliminated** (effective date prior to November 10, 2005)

Outfall # 004 – **Eliminated** (effective date prior to November 10, 2005; former in-stream monitoring point)

Outfall # 005 – In-stream Monitoring

(Downstream from Outfall # 007 (North Detention Pond) within Unnamed tributary prior to the confluence with Prairie Creek. If no flow, monitor within area of unnamed tributary to Prairie Creek where a pool is present).

Legal Description: NW ¼, SE ¼, Sec. 1, T39N, R5W, Crawford County
UTM Coordinates: X = 0638740, Y = 4221267
Receiving Stream: Unnamed tributary to Prairie Creek (U)
First Classified Stream and ID: Prairie Creek (C) (02059)
USGS Basin and Sub-watershed No.: 07140103–0205

Outfall # 006 – In-stream Monitoring Point

(100 downstream feet from confluence with Prairie Creek or if no flow, monitor within area of Prairie Creek where a pool is present).

Legal Description: NE ¼, SW ¼, Sec. 1, T39N, R5W, Crawford County
UTM Coordinates: X = 0638381, Y = 4221539
Receiving Stream: Prairie Creek (C) (02059)
First Classified Stream and ID: Prairie Creek (C) (02059)
USGS Basin and Sub-watershed No.: 07140103–0205

Outfall # 007 – Open Sanitary Waste Landfill – SIC Code(s): # 4953 (Refuse Systems)

North Detention Pond

The use or operation of this facility does not require a Certified Wastewater Operator
Stormwater runoff/sedimentation basin

Legal Description: SE ¼, SE ¼, Sec. 1, T39N, R5W, Crawford County
UTM Coordinates: X = 0638840, Y = 4220642
Receiving Stream: Unnamed tributary to Prairie Creek (U)
First Classified Stream and ID: Prairie Creek (C) (02059)
USGS Basin and Sub-watershed No.: 07140103–0205

Outfall # 008 – Open Sanitary Waste Landfill – SIC Code(s): # 4953 (Refuse Systems).

South Detention Pond – Construction will be completed in the future.

The use or operation of this facility does not require a Certified Wastewater Operator Stormwater runoff/sedimentation basin

Legal Description:	NE ¼, NE ¼, Sec. 12, T39N, R5W, Crawford County
UTM Coordinates:	X = 0639163, Y = 4220225
Receiving Stream:	Unnamed tributary to Prairie Creek (U)
First Classified Stream and ID:	Prairie Creek (C) (02059)
USGS Basin and Sub-watershed No.:	07140103–0205

Outfall # 009 (former Outfall # 001) – Open Sanitary Waste Landfill – SIC Code(s): # 4953 (Refuse Systems)

Small North Detention Pond

The use or operation of this facility does not require a Certified Wastewater Operator Stormwater runoff/sedimentation basin

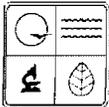
Legal Description:	NW ¼, NE ¼, Sec. 12, T39N, R5W, Crawford County
UTM Coordinates:	X = 0638729, Y = 4220542
Receiving Stream:	Unnamed tributary to Prairie Creek (U)
First Classified Stream and ID:	Prairie Creek (C) (02059)
USGS Basin and Sub-watershed No.:	07140103–0205

**Prairie Valley Landfill
Downstream Landowners**

**Crawford Lime & Materials, Co.
63 Weber Road
Cuba, MO 65453**

**Massey, Raymond D. & Tammy C.
1443 Oak Hill Road
Cuba, MO 65453**

**United Bank of Unich
P.O. Box 500
Union, MO 63084**



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

FOR AGENCY USE ONLY	
CHECK NO	
DATE RECEIVED	FEE SUBMITTED

NOTE: DO NOT ATTEMPT TO COMPLETE THIS FORM BEFORE READING THE ACCOMPANYING INSTRUCTIONS

1.00 NAME OF FACILITY

Prairie Valley Landfill

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER

MO-0122416

1.20 THIS IS A NEW FACILITY AND WAS CONSTRUCTED UNDER MISSOURI CONSTRUCTION PERMIT NUMBER (COMPLETE ONLY IF THIS FACILITY DOES NOT HAVE AN OPERATING PERMIT).

2.00 LIST THE STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES APPLICABLE TO YOUR FACILITY (FOUR DIGIT CODE)

A. FIRST 4953 B. SECOND _____
 C. THIRD _____ D. FOURTH _____

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) _____ 1/4 _____ 1/4 SEC _____ T _____ R _____ See Attached COUNTY _____

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST)	RECEIVING WATER
See Attached	

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

Sanitary Landfill and Borrow Area

Sample results for Outfall 005, 006, 007 and 009 are included with this application.

Outfall 008 is for a portion of the landfill that has not yet been developed and therefore has never discharged. Therefore, no results for Outfall 008 are available for this application.

See attached correspondence for additional information about the outfalls.

Prairie Valley Landfill Outfall Information

Outfall # 001 – **Eliminated** January 11, 2013.

Outfall # 002 – **Inactive** – Open Sanitary Waste Landfill – Standard Industrial Classification (SIC) Code(s): # 4953 (Refuse Systems)

The use or operation of this facility does not require a Certified Wastewater Operator
Future stormwater runoff/sedimentation basin (reserved for future use North Borrow Area).

Outfall # 003 – **Eliminated** (effective date prior to November 10, 2005)

Outfall # 004 – **Eliminated** (effective date prior to November 10, 2005; former in-stream monitoring point)

Outfall # 005 – In-stream Monitoring

(Downstream from Outfall # 007 (North Detention Pond) within Unnamed tributary prior to the confluence with Prairie Creek. If no flow, monitor within area of unnamed tributary to Prairie Creek where a pool is present).

Legal Description: NW ¼, SE ¼, Sec. 1, T39N, R5W, Crawford County
UTM Coordinates: X = 0638740, Y = 4221267
Receiving Stream: Unnamed tributary to Prairie Creek (U)
First Classified Stream and ID: Prairie Creek (C) (02059)
USGS Basin and Sub-watershed No.: 07140103–0205

Outfall # 006 – In-stream Monitoring Point

(100 downstream feet from confluence with Prairie Creek or if no flow, monitor within area of Prairie Creek where a pool is present).

Legal Description: NE ¼, SW ¼, Sec. 1, T39N, R5W, Crawford County
UTM Coordinates: X = 0638381, Y = 4221539
Receiving Stream: Prairie Creek (C) (02059)
First Classified Stream and ID: Prairie Creek (C) (02059)
USGS Basin and Sub-watershed No.: 07140103–0205

Outfall # 007 – Open Sanitary Waste Landfill – SIC Code(s): # 4953 (Refuse Systems)

North Detention Pond

The use or operation of this facility does not require a Certified Wastewater Operator
Stormwater runoff/sedimentation basin

Legal Description: SE ¼, SE ¼, Sec. 1, T39N, R5W, Crawford County
UTM Coordinates: X = 0638840, Y = 4220642
Receiving Stream: Unnamed tributary to Prairie Creek (U)
First Classified Stream and ID: Prairie Creek (C) (02059)
USGS Basin and Sub-watershed No.: 07140103–0205

Outfall # 008 – Open Sanitary Waste Landfill – SIC Code(s): # 4953 (Refuse Systems).

South Detention Pond – Construction will be completed in the future.

The use or operation of this facility does not require a Certified Wastewater Operator
Stormwater runoff/sedimentation basin

Legal Description: NE ¼, NE ¼, Sec. 12, T39N, R5W, Crawford County
UTM Coordinates: X = 0639163, Y = 4220225
Receiving Stream: Unnamed tributary to Prairie Creek (U)
First Classified Stream and ID: Prairie Creek (C) (02059)
USGS Basin and Sub-watershed No.: 07140103–0205

Outfall # 009 (former Outfall # 001) – Open Sanitary Waste Landfill – SIC Code(s): # 4953 (Refuse Systems)

Small North Detention Pond

The use or operation of this facility does not require a Certified Wastewater Operator
Stormwater runoff/sedimentation basin

Legal Description: NW ¼, NE ¼, Sec. 12, T39N, R5W, Crawford County
UTM Coordinates: X = 0638729, Y = 4220542
Receiving Stream: Unnamed tributary to Prairie Creek (U)
First Classified Stream and ID: Prairie Creek (C) (02059)
USGS Basin and Sub-watershed No.: 07140103–0205

2.40 CONTINUED

C. EXCEPT FOR STORM RUNOFF, LEAKS OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL?

YES (COMPLETE THE FOLLOWING TABLE) NO (GO TO SECTION 2.50)

1. OUTFALL NUMBER <i>(list)</i>	2. OPERATION(S) CONTRIBUTING FLOW <i>(list)</i>	3. FREQUENCY		4. FLOW				C. DURATION <i>(in days)</i>
				A. FLOW RATE <i>(in mgd)</i>		B. TOTAL VOLUME <i>(specify with units)</i>		
		A. DAYS PER WEEK <i>(specify average)</i>	B. MONTHS PER YEAR <i>(specify average)</i>	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	4. LONG TERM DAILY	3. MAXIMUM AVERAGE	

2.50 MAXIMUM PRODUCTION

A. DOES AN EFFLUENT GUIDELINE LIMITATION PROMULGATED BY EPA UNDER SECTION 304 OF THE CLEAN WATER ACT APPLY TO YOUR FACILITY?

YES (COMPLETE B.) NO (GO TO SECTION 2.60)

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINES EXPRESSED IN TERMS OF PRODUCTION (OF OTHER MEASURE OF OPERATION)?

YES (COMPLETE C.) NO (GO TO SECTION 2.60)

C. IF YOU ANSWERED "YES" TO B. LIST THE QUANTITY THAT REPRESENTS 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.

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS
A. QUANTITY PER DAY	B. UNITS OF MEASURE	C. OPERATION, PRODUCT, MATERIAL, ETC. <i>(specify)</i>	<i>(list outfall numbers)</i>

2.60 IMPROVEMENTS

A. ARE YOU NOW 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 THAT 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 3.00)

1. IDENTIFICATION OF CONDITION AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
				A. REQUIRED	B. PROJECTED

B. OPTIONAL: YOU MAY ATTACH ADDITIONAL SHEETS DESCRIBING ANY ADDITIONAL WATER POLLUTION CONTROL PROGRAMS (OR OTHER ENVIRONMENTAL PROJECTS WHICH MAY AFFECT YOUR DISCHARGES) YOU NOW HAVE UNDER WAY OR WHICH YOU PLAN. INDICATE WHETHER EACH PROGRAM IS NOW UNDER WAY OR PLANNED, AND INDICATE YOUR ACTUAL OR PLANNED SCHEDULES FOR CONSTRUCTION.

MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED.

3.00 INTAKE AND EFFLUENT CHARACTERISTICS

A & B SEE INSTRUCTIONS BEFORE PROCEEDING – COMPLETE ONE TABLE FOR EACH OUTFALL – ANNOTATE THE OUTFALL NUMBER IN THE SPACE PROVIDED
NOTE. TABLE 1 IS INCLUDED ON SEPARATE SHEETS NUMBERED FROM PAGE 6 TO PAGE 7.

C. USE THE SPACE BELOW TO LIST ANY OF THE POLLUTANTS LISTED IN PART B OF THE INSTRUCTIONS, WHICH YOU KNOW OR HAVE REASON TO BELIEVE IS DISCHARGED OR MAY BE DISCHARGED FROM ANY OUTFALL. FOR EVERY POLLUTANT YOU LIST, BRIEFLY DESCRIBE THE REASONS YOU BELIEVE IT TO BE PRESENT AND REPORT ANY ANALYTICAL DATA IN YOUR POSSESSION.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
Chemical Oxygen Demand	Outfall 006, 007, 009 - SW		
Total Suspended Solids	Outfall 005, 007, 009 - SW		
Ammonia	Outfall 005, 006, 009 - SW		
pH	Outfall 005, 007, 009 - SW		
Fluoride	Outfall 007, 009 - Stormwater		
Sulfate	Outfall 007, 009 - Stormwater		
Boron	Outfall 007, 009 - Stormwater		
Iron	Outfall 006, 007, 009 - SW		
Magnesium	Outfall 006 - Stormwater		
Manganese	Outfall 007, 009 - Stormwater		
Arsenic	Outfall 006 - Stormwater		
Selenium	Outfall 009 - Stormwater		
Zinc	Outfall 009 - Stormwater		
Nitrate/Nitrite	Outfall 007, 009 - Stormwater		
Barium	Outfall 007, 009 - Stormwater		
Phosphorus	Outfall 007, 009 - Stormwater		
BOD	Outfall 009 - Stormwater		
Cobalt	Outfall 009 - Stormwater		
Nickel	Outfall 009 - Stormwater		

3.10 BIOLOGICAL TOXICITY TESTING DATA

DO YOU HAVE ANY KNOWLEDGE OR REASON TO BELIEVE THAT ANY BIOLOGICAL TEST FOR ACUTE OR CHRONIC TOXICITY HAS BEEN MADE ON ANY OF YOUR DISCHARGES OR ON RECEIVING WATER IN RELATION TO YOUR DISCHARGE WITHIN THE LAST THREE YEARS?

YES (IDENTIFY THE TEST(S) AND DESCRIBE THEIR PURPOSES BELOW.) NO (GO TO 3.20)

3.20 CONTRACT ANALYSIS INFORMATION

WERE ANY OF THE ANALYSES REPORTED PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM?

YES (LIST THE NAME, ADDRESS AND TELEPHONE NUMBER OF AND POLLUTANTS ANALYZED BY EACH SUCH LABORATORY OR FIRM BELOW.) NO (GO TO 3.30)

A. NAME	B. ADDRESS	C. TELEPHONE (area code and number)	D. POLLUTANTS ANALYZED (list)
PDC Laboratories, Inc.	2231 W Altorfer Drive Peoria, IL 61615	309-683-1716	All Analysis Listed

3.30 CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS APPLICATION AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

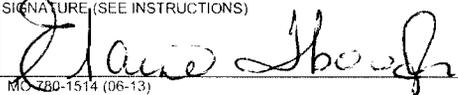
NAME AND OFFICIAL TITLE (TYPE OR PRINT)

Elaine Turnbough, CEO

TELEPHONE NUMBER WITH AREA CODE

(573) 885-6921

SIGNATURE (SEE INSTRUCTIONS)



DATE SIGNED

3/26/14

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet
(Use the same format) instead of completing these pages.
SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO.
005

INTAKE AND EFFLUENT CHARACTERISTICS

PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT				3. UNITS (Specify, if blank)				4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS						
A. Biochemical Oxygen Demand (BOD)	NT				NT		NT	mg/L				
B. Chemical Oxygen Demand (COD)	NT				NT		NT	mg/L				
C. Total organic Carbon (TOC)	NT				NT		NT	mg/L				
D. Total Suspended Solids (TSS)	63				18		6	mg/L				
E. Ammonia (as N)	0.56				0.16		6	mg/L				
F. Flow	VALUE NT				VALUE NT		NT	MGD				
G. Temperature (winter)	VALUE 1.2				VALUE 1.2		1	°C				
H. Temperature (summer)	VALUE NT				VALUE NT		NT	°C				
I. pH	MINIMUM 6.7	MAXIMUM 6.7			MINIMUM MAXIMUM		1	STANDARD UNITS				

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 that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS						
A. Bromide (24959-67-9)		X												
B. Chlorine, Total Residual		X												
C. Color		X												
D. Fecal Coliform		X												
E. Fluoride (16984-48-8)		X												
F. Nitrate - Nitrate (as N)		X												

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS			5. INTAKE (optional)		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen, Total Organic (as N)		X										
H. Oil and Grease		X										
I. Phosphorus (as P), Total (7723-14-0)		X	<0.05					ug/L				
J. Sulfate (as SO ₄ ²⁻) (14808-79-8)		X					<0.05					
K. Sulfide (as S)		X										
L. Sulfite (as SO ₃ ²⁻) (14255-45-3)		X										
M. Surfactants		X										
N. Aluminum, Total (7429-90-5)		X										
O. Barium, Total (7440-39-3)		X										
P. Boron, Total (7440-42-8)		X										
Q. Cobalt, Total (7440-48-4)		X										
R. Iron, Total (7439-89-6)		X										
S. Magnesium, Total (7439-95-4)		X										
T. Molybdenum, Total (7439-98-7)		X										
U. Manganese, Total (7439-96-5)		X										
V. Tin, Total (7440-31-5)		X										
W. Titanium, Total (7440-32-6)		X										

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS												
1M. Antimony, Total (7440-36-9)		X										
2M. Arsenic, Total (7440-38-2)		X										
3M. Beryllium, Total (7440-41-7)		X										
4M. Cadmium, Total (7440-43-9)		X										
5M. Chromium III (16065-83-1)		X										
6M. Chromium VI (18540-29-9)		X										
7M. Copper, Total (7440-50-8)		X										
8M. Lead, Total (7439-92-1)		X										
9M. Mercury, Total (7439-97-6)		X										
10M. Nickel, Total (7440-02-0)		X										
11M. Selenium, Total (7782-49-2)		X										
12M. Silver, Total (7440-22-4)		X										
13M. Thallium, Total (7440-28-0)		X										
14M. Zinc, Total (7440-66-6)		X										
15M. Cyanide, Amenable to Chlorination		X										
16M. Phenols, Total		X										
RADIOACTIVITY												
(1) Alpha Total		X										
(2) Beta Total		X										
(3) Radium Total		X										
(4) Radium 226 Total		X										

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages.
SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO.
006

INTAKE AND EFFLUENT CHARACTERISTICS

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify if blank)				4. INTAKE (optional)	
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	NT		NT		NT	mg/L				
B. Chemical Oxygen Demand (COD)	41		10		10	mg/L				
C. Total organic Carbon (TOC)	NT		NT		NT	mg/L				
D. Total Suspended Solids (TSS)	NT		NT		NT	mg/L				
E. Ammonia (as N)	0.42		0.06		10	mg/L				
F. Flow	VALUE NT		VALUE NT		NT	MGD		VALUE		
G. Temperature (winter)	VALUE NT		VALUE NT		NT	°C		VALUE		
H. Temperature (summer)	VALUE NT		VALUE NT		NT	°C		VALUE		
I. pH	MINIMUM NT	MAXIMUM	MINIMUM	MAXIMUM	NT	STANDARD UNITS				

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 that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE (optional)	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	B. MAXIMUM 30 DAY VALUE (if available) (2) MASS CONCENTRATION	C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	B. NO. OF ANALYSES
			(2) MASS CONCENTRATION	(1) CONCENTRATION	(2) MASS CONCENTRATION				(2) MASS CONCENTRATION	
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS										
A. Bromide (24959-67-9)	X									
B. Chlorine, Total Residual	X									
C. Color	X									
D. Fecal Coliform	X									
E. Fluoride (16984-48-8)	X									
F. Nitrate - Nitrate (as N)	X									

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					
G. Nitrogen, Total Organic (as N)		X											
H. Oil and Grease		X											
I. Phosphorus (as P), Total (7723-14-0)		X											
J. Sulfate (as SO ₄) (14808-79-8)		X											
K. Sulfide (as S)		X											
L. Sulfite (as SO ₃) (14265-45-3)		X											
M. Surfactants		X											
N. Aluminum, Total (7429-90-5)		X											
O. Barium, Total (7440-39-3)		X											
P. Boron, Total (7440-42-8)		X											
Q. Cobalt, Total (7440-48-4)		X											
R. Iron, Total (7439-89-6)	X		0.29					0.10	10	mg/L			
S. Magnesium, Total (7439-95-4)	X		43					20	10	mg/L			
T. Molybdenum, Total (7439-98-7)		X											
U. Manganese, Total (7439-96-5)		X											
V. Tin, Total (7440-31-5)		X											
W. Titanium, Total (7440-32-6)		X											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (opt/comp)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X												
2M. Arsenic, Total (7440-38-2)	X		0.015			0.002			10	mg/L				
3M. Beryllium, Total (7440-41-7)		X												
4M. Cadmium, Total (7440-43-9)		X												
5M. Chromium III (15065-83-1)		X												
6M. Chromium VI (18540-29-9)		X												
7M. Copper, Total (7440-50-8)		X												
8M. Lead, Total (7439-92-1)		X	<0.010			<0.010			10	mg/L				
9M. Mercury, Total (7439-97-6)		X												
10M. Nickel, Total (7440-02-0)		X												
11M. Selenium, Total (7782-49-2)		X												
12M. Silver, Total (7440-22-4)		X												
13M. Thallium, Total (7440-28-0)		X												
14M. Zinc, Total (7440-66-6)		X												
15M. Cyanide, Amenable to Chlorination		X												
16M. Phenols, Total		X												
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages.
SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO.
007

INTAKE AND EFFLUENT CHARACTERISTICS

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify if blank)				4. INTAKE (optional)		
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE	B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					
A. Biochemical Oxygen Demand (BOD)	<4				<4		1	mg/L			
B. Chemical Oxygen Demand (COD)	16				16		1	mg/L			
C. Total organic Carbon (TOC)	NT				NT		NT	mg/L			
D. Total Suspended Solids (TSS)	12				12		1	mg/L			
E. Ammonia (as N)	<0.01				<0.01		1	mg/L			
F. Flow	VALUE 0.0491				VALUE 0.0491		1	MGD		VALUE	
G. Temperature (winter)	VALUE NT				VALUE NT		NT	°C		VALUE	
H. Temperature (summer)	VALUE NT				VALUE NT		NT	°C		VALUE	
I. pH	MINIMUM 6.7	MAXIMUM 6.7			MINIMUM MAXIMUM		1	STANDARD UNITS			

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 that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT				4. UNITS				5. INTAKE (optional)	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE	B. MAXIMUM 30 DAY VALUE	C. LONG TERM AVRG. VALUE	D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE	B. NO. OF ANALYSES		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
A. Bromide (24959-67-9)		X										
B. Chlorine, Total Residual		X										
C. Color		X										
D. Fecal Coliform		X										
E. Fluoride (16984-48-8)	X		0.472		0.472	1	mg/L					
F. Nitrate - Nitrate (as N)	X		0.066		0.066	1	mg/L					

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS			5. INTAKE <i>(optional)</i>		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen, Total Organic <i>(as N)</i>		X												
H. Oil and Grease		X	<5.1			<5.1			1	mg/L				
I. Phosphorus <i>(as P)</i> , Total (7723-14-0)	X		0.15			0.15			1	mg/L				
J. Sulfate <i>(as SO₄⁻²)</i> (14808-79-8)	X		130			130			1	mg/L				
K. Sulfide <i>(as S)</i>		X												
L. Sulfite <i>(as SO₃⁻²)</i> (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum, Total (7429-90-5)		X												
O. Barium, Total (7440-39-3)	X		0.056			0.056			1	mg/L				
P. Boron, Total (7440-42-8)	X		0.16			0.16			1	mg/L				
Q. Cobalt, Total (7440-48-4)		X	<0.0050			<0.0050			1	mg/L				
R. Iron, Total (7439-89-6)	X		0.12			0.12			1	mg/L				
S. Magnesium, Total (7439-95-4)		X												
T. Molybdenum, Total (7439-98-7)		X												
U. Manganese, Total (7439-96-5)	X		0.062			0.062			1	mg/L				
V. Tin, Total (7440-31-5)		X												
W. Titanium, Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS			5. INTAKE (optional)				
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	B. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	B. NO. OF ANALYSES
METALS AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)	X		<0.020				<0.020		1	mg/L				
2M. Arsenic, Total (7440-38-2)	X		<0.020				<0.020		1	mg/L				
3M. Beryllium, Total (7440-41-7)	X		<0.0050				<0.0050		1	mg/L				
4M. Cadmium, Total (7440-43-9)	X		<0.0020				<0.0020		1	mg/L				
5M. Chromium III (16065-83-1)	X		<0.0090				<0.0090		1	mg/L				
6M. Chromium VI (18540-29-9)	X		<0.0050				<0.0050		1	mg/L				
7M. Copper, Total (7440-50-8)	X		<0.030				<0.030		1	mg/L				
8M. Lead, Total (7439-92-1)	X		<0.10				<0.10		1	mg/L				
9M. Mercury, Total (7439-97-6)	X		<0.0002				<0.0002		1	mg/L				
10M. Nickel, Total (7440-02-0)	X		<0.010				<0.010		1	mg/L				
11M. Selenium, Total (7782-49-2)	X		<0.010				<0.010		1	mg/L				
12M. Silver, Total (7440-22-4)	X		<0.010				<0.010		1	mg/L				
13M. Thallium, Total (7440-28-0)	X		<0.010				<0.010		1	mg/L				
14M. Zinc, Total (7440-66-6)	X		<0.010				<0.010		1	mg/L				
15M. Cyanide, Amenable to Chlorination	X													
16M. Phenols, Total	X													
RADIOACTIVITY														
(1) Alpha Total	X													
(2) Beta Total	X													
(3) Radium Total	X													
(4) Radium 226 Total	X													

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages.
SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO.
009

INTAKE AND EFFLUENT CHARACTERISTICS

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT		3. UNITS (specify if blank)		4. INTAKE (optional)		B. NO. OF ANALYSES
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	480		240		mg/L		2
B. Chemical Oxygen Demand (COD)	780		399		mg/L		2
C. Total organic Carbon (TOC)	NT		NT		mg/L		NT
D. Total Suspended Solids (TSS)	42		32		mg/L		2
E. Ammonia (as N)	10		10		mg/L		1
F. Flow	VALUE 0.3149		VALUE 0.3149		MGD		1
G. Temperature (winter)	VALUE NT		VALUE NT		°C		NT
H. Temperature (summer)	VALUE NT		VALUE NT		°C		NT
I. pH	MINIMUM 6.9	MAXIMUM 6.9	MINIMUM	MAXIMUM	STANDARD UNITS		1

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 that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT		4. UNITS		5. INTAKE (optional)	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	B. MAXIMUM 30 DAY VALUE (2) MASS	C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	D. NO. OF ANALYSES	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	B. MASS
A. Bromide (24959-67-9)	X							
B. Chlorine, Total Residual	X							
C. Color	X							
D. Fecal Coliform	X							
E. Fluoride (16984-48-8)	X		18.8		18.8	1	mg/L	
F. Nitrate - Nitrate (as N)	X		0.091		0.091	1	mg/L	

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)		B. NO. OF ANALYSES	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE			
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS		
G. Nitrogen, Total Organic (as N)		X												
H. Oil and Grease		X	<5.1				<5.1		mg/L					
I. Phosphorus (as P), Total (7723-14-0)	X		0.19				0.19		mg/L					
J. Sulfate (as SO ₄) (14808-79-8)	X		150				150		mg/L					
K. Sulfide (as S)		X												
L. Sulfite (as SO ₃) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum, Total (7429-90-5)		X												
O. Barium, Total (7440-39-3)	X		0.015				0.015		mg/L					
P. Boron, Total (7440-42-8)	X		0.66				0.66		mg/L					
Q. Cobalt, Total (7440-48-4)	X		0.012				0.012		mg/L					
R. Iron, Total (7439-89-6)	X		1.4				1.4		mg/L					
S. Magnesium, Total (7439-95-4)		X												
T. Molybdenum, Total (7439-98-7)		X												
U. Manganese, Total (7439-96-5)	X		2				2		mg/L					
V. Tin, Total (7440-31-5)		X												
W. Titanium, Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS												
1M. Antimony, Total (7440-36-9)	X		<0.020				1	mg/L				
2M. Arsenic, Total (7440-38-2)	X		<0.020				1	mg/L				
3M. Beryllium, Total (7440-41-7)	X		<0.0050				1	mg/L				
4M. Cadmium, Total (7440-43-9)	X		<0.0020				1	mg/L				
5M. Chromium III (16065-83-1)	X		<0.0090				1	mg/L				
6M. Chromium VI (18540-29-9)	X		<0.0050				1	mg/L				
7M. Copper, Total (7440-50-8)	X		<0.030				1	mg/L				
8M. Lead, Total (7439-92-1)	X		<0.10				1	mg/L				
9M. Mercury, Total (7439-97-6)	X		<0.0002				1	mg/L				
10M. Nickel, Total (7440-02-0)	X		0.017				1	mg/L				
11M. Selenium, Total (7782-49-2)	X		0.021				1	mg/L				
12M. Silver, Total (7440-22-4)	X		<0.010				1	mg/L				
13M. Thallium, Total (7440-28-0)	X		<0.010				1	mg/L				
14M. Zinc, Total (7440-66-6)	X		0.029				1	mg/L				
15M. Cyanide, Amenable to Chlorination		X										
16M. Phenols, Total		X										
RADIOACTIVITY												
(1) Alpha Total		X										
(2) Beta Total		X										
(3) Radium Total		X										
(4) Radium 226 Total		X										