

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-0117790

Owner: Courtney Ridge Landfill, LLC
Address: 2001 North M-291 Highway, Sugar Creek, MO 64058

Continuing Authority: Republic Services, Inc.
Address: 5605 Moreau River Access Road, Jefferson City, MO 65101

Facility Name: Courtney Ridge Landfill
Facility Address: 2001 North M-291 Highway, Sugar Creek, MO 64058

Legal Description: See page 2
UTM Coordinates: See page 2

Receiving Stream: See page 2
First Classified Stream and ID: See page 2
USGS Basin & Sub-watershed No.: See page 2

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

FACILITY DESCRIPTION

See page 2

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

This permit authorizes only stormwater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Sections 640.013, 621.250, and 644.051.6 of the Law.

September 1, 2016
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

September 30, 2018
Expiration Date

John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (CONTINUED)

OUTFALL #001 – Stormwater from landfill; SIC # 4953

Receives stormwater from 56 acres of active and closed landfill areas after primary sedimentation treatment.

Legal Description: SW¼, SE¼, Sec.13, T50N, R32W, Jackson County
UTM Coordinates: X = 380012, Y = 4333709
Receiving Stream: Tributary to Mill Creek
First Classified Stream and ID: 8-20-13 MUDD V 1.0 (C) 3960
USGS Basin & Sub-watershed No.: Rush Creek-Missouri River (10300101-0306)
Est. Flow in a 10 yr 24 hr event: 5 MGD
Actual Flow: Dependent on precipitation

OUTFALL # 002 – Stormwater – SIC # 4953

Receives stormwater from areas of active landfill and a previous rock quarry

Legal Description: NW¼, NW¼, Sec.19, T50N, R31W, Jackson County
UTM Coordinates: X = 380710, Y = 4333375
Receiving Stream: Tributary to Mill Creek
First Classified Stream and ID: 8-20-13 MUDD V 1.0 (C) 3960
USGS Basin & Sub-watershed No.: Rush Creek-Missouri River (10300101-0306)
Est. Flow in a 10 yr 24 hr event: 17.4MGD
Actual flow: Dependent upon precipitation

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL #001 <i>Stormwater Only</i>	TABLE A-1 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on September 1, 2016 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:					
EFFLUENT PARAMETERS	UNITS	DAILY MAXIMUM LIMITS	BENCHMARKS	MONITORING REQUIREMENTS [∞]	
				MEASUREMENT FREQUENCY [∅]	SAMPLE TYPE
PHYSICAL					
Flow	MGD	*	-	once/quarter	24 hr. est
Precipitation	inches	*	-	once/quarter	measured
CONVENTIONAL					
Biological Oxygen Demand	mg/L	**	45	once/quarter	grab
Chemical Oxygen Demand	mg/L	**	90	once/quarter	grab
Oil & Grease	mg/L	10	-	once/quarter	grab
pH ^Ω	SU	6.5 to 9.0	-	once/quarter	grab
Settleable Solids	mL/L/hr	**	1.5	once/quarter	grab
Total Dissolved Solids	mg/L	*	-	once/quarter	grab
Total Suspended Solids	mg/L	**	80	once/quarter	grab
METALS					
Beryllium, Total Recoverable	µg/L	*	-	once/quarter	grab
Cadmium, 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	**	4000	once/quarter	grab
Selenium, Total Recoverable	µg/L	**	8.2	once/quarter	grab
Silver, Total Recoverable	µg/L	*	-	once/quarter	grab
NUTRIENTS					
Ammonia, Total as Nitrogen	mg/L	*	-	once/quarter	grab
INORGANICS					
Chloride	mg/L	*	-	once/quarter	grab
Chloride + sulfate	mg/L	1000	-	once/quarter	grab
Fluoride	mg/L	*	-	once/quarter	grab
Sulfate	mg/L	*	-	once/quarter	grab
VOLATILE ORGANICS					
Benzene	µg/L	*	-	once/quarter	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2017</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.					
EFFLUENT PARAMETERS	UNITS	DAILY MAXIMUM LIMITS	BENCHMARKS	MONITORING REQUIREMENTS [∞]	
				MEASUREMENT FREQUENCY	SAMPLE TYPE
METALS					
Arsenic, Total Recoverable	µg/L	*	-	once/year	grab
Boron, Total Recoverable	µg/L	*	-	once/year	grab
Chromium (III), Total Recoverable	µg/L	*	-	once/year	grab
Lead, Total Recoverable	µg/L	*	-	once/year	grab
Nickel, Total Recoverable	µg/L	*	-	once/year	grab
Zinc, Total Recoverable	µg/L	*	-	once/year	grab
VOLATILE ORGANICS					
Ethylbenzene	µg/L	*	-	once/year	grab
Toluene	µg/L	*	-	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2017</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.					

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS, CONTINUED

OUTFALL #002 <i>Stormwater Only</i>	TABLE A-1 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on September 1, 2016 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:					
EFFLUENT PARAMETERS	UNITS	DAILY MAXIMUM LIMITS	BENCHMARKS	MONITORING REQUIREMENTS [∞]	
				MEASUREMENT FREQUENCY [∅]	SAMPLE TYPE
PHYSICAL					
Flow	MGD	*	-	once/quarter	24 hr. est
Precipitation	inches	*	-	once/quarter	measured
CONVENTIONAL					
Biological Oxygen Demand	mg/L	**	45	once/quarter	grab
Chemical Oxygen Demand	mg/L	**	90	once/quarter	grab
Oil & Grease	mg/L	10	-	once/quarter	grab
pH ^Ω	SU	6.5 to 9.0	-	once/quarter	grab
Settleable Solids	mL/L/hr	**	1.5	once/quarter	grab
Total Dissolved Solids	mg/L	*	-	once/quarter	grab
Total Suspended Solids	mg/L	**	80	once/quarter	grab
METALS					
Arsenic, Total Recoverable	µg/L	*	-	once/quarter	grab
Boron, 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	**	4000	once/quarter	grab
Lead, Total Recoverable	µg/L	*	-	once/quarter	grab
Nickel, Total Recoverable	µg/L	*	-	once/quarter	grab
Selenium, Total Recoverable	µg/L	**	8.2	once/quarter	grab
Silver, Total Recoverable	µg/L	*	-	once/quarter	grab
Zinc, Total Recoverable	µg/L	*	-	once/quarter	grab
NUTRIENTS					
Ammonia, Total as Nitrogen	mg/L	*	-	once/quarter	grab
INORGANICS					
Chloride	mg/L	*	-	once/quarter	grab
Chloride + sulfate	mg/L	1000	-	once/quarter	grab
Fluoride	mg/L	*	-	once/quarter	grab
Sulfate	mg/L	*	-	once/quarter	grab
VOLATILE ORGANICS					
Benzene	µg/L	*	-	once/quarter	grab
Ethylbenzene	µg/L	*	-	once/quarter	grab
Toluene	µg/L	*	-	once/quarter	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2017</u> .					
THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.					

See notes on page 5

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

- * Monitoring requirement only.
- ** Monitoring requirement with associated benchmark. See Special Conditions #9 through #11
- ∞ All samples shall be collected from a 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 discharge does not occur within the reporting period, report as no discharge. The total amount of precipitation should be noted from the event from which the samples were collected.
- Ω The facility will report the minimum and maximum values. pH is not to be averaged.
- ◇ Quarterly sampling

MINIMUM QUARTERLY 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

B. STANDARD CONDITIONS

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

C. SPECIAL CONDITIONS

1. 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.
2. All outfalls must be clearly marked in the field.
3. 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;

C. SPECIAL CONDITIONS, CONTINUED

- (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.

4. Changes in Discharges of Toxic Pollutant

In addition to the reporting requirements under §122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

- (a) That an activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
- (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
 - (3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
 - (4) One milligram per liter (1 mg/L) for antimony;
 - (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (6) The notification level established by the department in accordance with 40 CFR 122.44(f).
- (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
- (1) Five hundred micrograms per liter (500 µg/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with §122.21(g)(7).
 - (4) The level established by the Director in accordance with §122.44(f).

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

6. 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 report the "Non-Detect" 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.
- (f) When calculating monthly averages, one-half of the minimum detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the "<MDL" shall be reported as indicated in item (C).

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

8. 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.

9. The purpose of the SWPPP and the Best Management Practices (BMPs) listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was 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.

10. Facility SIC codes found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2) shall implement a SWPPP and must be prepared and implemented upon 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 every five (5) years or as site conditions change (see Rationale and Derivation: antidegradation analysis and SWPPP in the fact sheet). 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: *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in February 2009 (www.epa.gov/npdes/pubs/industrial_swppp_guide.pdf). The SWPPP must include:
- (a) A listing of specific contaminants and their control measures (or BMPs) and a narrative explaining how BMPs are implemented to control and minimize the amount of contaminants potentially entering stormwater. The BMPs should be designed to treat the stormwater up to the 10 year, 24 hour rain event.

C. SPECIAL CONDITIONS, CONTINUED

- (b) For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. Failure to implement and maintain the chosen BMP is a permit violation. For further guidance, consult the antidegradation implementation procedure at <http://dnr.mo.gov/env/wpp/docs/ATP050212.pdf>.
 - (c) The SWPPP must include a schedule for once per month site inspections and brief written reports. The inspection report must include precipitation information for the entire period since last inspection, as well as observations and evaluations of BMP effectiveness. Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
 - i. Operational deficiencies must be corrected within seven (7) calendar days.
 - ii. Minor structural deficiencies must be corrected within fourteen (14) calendar days.
 - iii. Major structural deficiencies must be reported to the regional office within seven (7) days of discovery. The initial report shall consist of the deficiency noted, the proposed remedies, the interim or temporary remedies (including the general timing of the placement of the interim measures), and an estimate of the timeframe needed to wholly complete the repairs or construction. The permittee will work with the regional office to determine the best course of action, including but not limited to temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
 - iv. All actions taken to correct the deficiencies shall be included with the written report, including photographs.
 - v. 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 and EPA personnel upon request.
 - (d) A provision for designating an individual to be responsible for environmental matters.
 - (e) 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.
11. 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).
- 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 measureable progress towards achieving the benchmarks is a permit violation.
12. 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 stormwater 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 stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
 - (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 or benchmarks.
 - (f) Ensure that adequate provisions are provided to prevent surface water intrusion into the storage basin, to divert stormwater runoff around the storage basin, and to protect embankments from erosion.

C. SPECIAL CONDITIONS, CONTINUED

13. To protect the general criteria found at 10 CSR 20-7.031(4), before releasing water accumulated in secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen. If the presence of odor or sheen is indicated, the water shall be treated using an appropriate method or disposed of in accordance with legally approved methods, such as being sent to a wastewater treatment facility. Following treatment, the water shall be tested for oil and grease, benzene, toluene, ethylbenzene, and xylene using 40 CFR part 136 methods. All pollutant levels must be below the most protective, applicable standards for the receiving stream, found in 10 CSR 20-7.031 Table A. Records of all testing and treatment of water accumulated in secondary containment shall be stored in the SWPPP to be available on demand to MDNR and EPA personnel.
14. 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.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0117790
COURTNEY RIDGE LANDFILL**

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" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified for less.

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

Part I. FACILITY INFORMATION

Facility Type: Categorical Industrial
 Facility SIC Code(s): 4953
 Application Date: 01/27/2014
 Expiration Date: 07/23/2014
 Last Inspection: 11/21/2014 Not in Compliance

Landfills 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:

Courtney Ridge is an active sanitary landfill. They have two outfalls which discharge from sedimentation basins. There is a rock quarry on site that is not currently active and will be used for active landfill as the need arises for more landfill space. There are no-discharge leachate holding cells onsite which are under the management of MDNR Solid Waste Division.

Leachate must be handled in a manner where discharge is not allowed and in accordance with Hazardous Waste Program (if applicable) and Solid Waste Management Program requirements.

PERMITTED FEATURES TABLE:

OUTFALL	AVERAGE FLOW (MGD)	FLOW IN A 10 YR 24 HR RAIN EVENT (MGD)	TREATMENT LEVEL	EFFLUENT TYPE
#001	Dependent on precipitation	5	BMPs, Primary Sedimentation	Industrial Stormwater
#002	Dependent on precipitation	17.4	BMPs, Primary Sedimentation	Industrial Stormwater

FACILITY PERFORMANCE HISTORY & COMMENTS:

The discharge monitoring reports were reviewed for the last five years. There were two exceedances noted in the last five years of assigned permit limits, one for iron and one for TSS. Previous records of this facility indicate a leachate spill in 2010. The facility received multiple WPP violations in relation to this spill, but returned to compliance after remediation. The facility was found to be out of compliance at their last WPP inspection on 11/21/2014. The inspector noted waste collection containers exposed to the elements. The facility said the waste collection containers were stored outside only temporarily, and they do not routinely store them outdoors. The facility is considered to be in compliance at this time.

In the interim of time since the renewal application, APAC has vacated the landfill site. APAC previously operated a rock and gravel quarry out of the landfill. They had one outfall covered under general permit MOG490697. This outfall is now transferred to Courtney Ridge and is designated Outfall #002. It was noted by Patrick Peltz of the MDNR that the landfill was lining the quarry for use in their landfill operations in his closure inspection of the APAC site. This was confirmed by phone call with Michele Clark of Weaver Boos Consultants on 01/28/2016. In the same phone call, Michele clarified that outfall #002 would be discharging landfill stormwater, similar to that discharged by outfall #001. Due to the similarity of these outfalls and the comprehensive nature of the required monitoring on outfall #001, it is in the best professional judgment of the permit writer to use identical parameters for this permit renewal, although with different sampling frequencies. In future renewals, it will be possible to determine if outfall #002 has markedly different effluent and make reasonable potential determinations at that time. It should also be noted that the permittee reported “believed absent” for all metals on their application form C. Five years of DMR data support that multiple metals are found in the facility’s effluent. It is also noted that the facility may have mistakenly reported a value for chlorine, believing it was chloride. 60 mg/L of chlorine was reported, this value is unreasonably high for chlorine, but is similar to other chloride values reported in the past by this facility.

FACILITY MAPS:



FACILITY MAPS, CONTINUED:



Part II. RECEIVING STREAM INFORMATION

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

✓ As per Missouri's Effluent Regulations [10 CSR 20-7.015(1)(B)], the waters of the state are divided into the following seven categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

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

✓ As per Missouri's stormwater regulations [10 CSR 20.6.200(6)(B)2.] and federal regulations [40 CFR 122.26(b)(14)], the department shall establish limits necessary to protect waters of the state. Effluent limitations or benchmarks for stormwater are established using best professional judgment based on the category, impairments, technology available, and designated uses of the receiving stream.

RECEIVING WATER BODY'S WATER QUALITY:

The receiving streams, both named Tributary to 8-20-13 MUDD V 1.0 have no concurrent water quality data available. Neither receiving stream is on the 303d list nor do they have a TMDL associated with them. The Missouri River watershed has a 2006 TMDL for PCBs and Chlordane, but this facility is not considered a contributor to this TMDL as PCBs and Chlordane are banned. Downstream monitoring by this facility has shown chlorides to be within acceptable limits for aquatic life, and sulfates to be elevated above safe levels for aquatic life. Mill Creek (8-20-13 MUDD V 1.0) (C) (3960) and outfall 002's receiving stream, 8-20-13 MUDD V 1.0, is now classified whereas it was not classified in the previous permit, as EPA has approved the Department's new stream classifications.

303(D) LIST:

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. <http://dnr.mo.gov/env/wpp/waterquality/303d/303d.htm>

✓ Not applicable; this facility does not discharge to an impaired segment of a 303(d) listed stream.

TOTAL MAXIMUM DAILY LOAD (TMDL):

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; hence, the purpose of a TMDL is to determine the pollutant loading a specific waterbody can assimilate without exceeding water quality standards. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation. <http://dnr.mo.gov/env/wpp/tmdl/>

✓ Applicable; The Missouri River (356) is associated with the 2006 EPA Approved TMDL for PCBs and Chlordane.

✓ This facility is not considered to be a source of the above listed pollutants or considered to contribute to the impairment of the Missouri River watershed.

RECEIVING STREAMS TABLE:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	DISTANCE TO SEGMENT	12-DIGIT HUC
#001	Tributary to Mill Creek	n/a	n/a	GEN	0.2 mi	10300101-0306 Rush Creek- Missouri River
	Mill Creek (8-20-13 MUDD V 1.0)	C	3960	AQL, IRR, LWW, SCR, WBC-B, HHP		
#002	Tributary to Mill Creek	n/a	n/a	GEN	0.4 mi	
	8-20-13 MUDD V 1.0	C	3960	AQL, IRR, LWW, SCR, WBC-B, HHP		

n/a = not applicable WBID = Waterbody ID: Missouri Use Designation Dataset 8-20-13 MUDD V1.0 data can be found as an ArcGIS shapefile on MSDIS at ftp://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_shp.zip

* As per 10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission's water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and 1st classified receiving stream's beneficial water uses to be maintained are in the receiving stream table in accordance with [10 CSR 20-7.031(1)(C)].

Uses which may be found in the receiving streams table, above:

10 CSR 20-7.031(1)(C)1.:

AQL = Protection of aquatic life (Current narrative use(s) are defined to ensure the protection and propagation of fish shellfish and wildlife, which is further subcategorized as: WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat. This permit uses AQL effluent limitations in 10 CSR 20-7.031 Table A for all habitat designations unless otherwise specified.)

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

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

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

WBC-B = Whole body contact recreation supporting swimming;

SCR = Secondary Contact Recreation (like fishing, wading, and boating).

10 CSR 20-7.031(1)(C)3. to 7.:

HHP (formerly HHP) = Human Health Protection as it relates to the consumption of fish;

IRR = Irrigation for use on crops utilized for human or livestock consumption;

LWW = Livestock and wildlife watering (Current narrative use is defined as LWP = Livestock and Wildlife Protection);

DWS = Drinking Water Supply;

IND = Industrial water supply

10 CSR 20-7.031(1)(C)8-11.: Wetlands (10 CSR 20-7.031 Table A currently does not have corresponding habitat use criteria for these defined uses)

WSA = Storm- and flood-water storage and attenuation; WHP = Habitat for resident and migratory wildlife species;

WRC = Recreational, cultural, educational, scientific, and natural aesthetic values and uses; WHC = Hydrologic cycle maintenance.

10 CSR 20-7.031(6): GRW = Groundwater

MIXING CONSIDERATIONS:

Mixing zone: not allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)].

Zone of initial dilution: not allowed [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements are recommended at this time. Courtney Ridge previously had a downstream monitoring point for chlorides and sulfates. This downstream monitoring did not show elevated levels of chlorides; however, sulfates were elevated. It is in the best professional judgment of the permit writer to remove this downstream monitoring point from the permit after conferring with Trish Rielly of the Watershed Protection Section. This facility was not previously monitoring for sulfates in their discharge, but monitoring will be included in this permit. See Part IV, Effluent Limit Determinations, Sulfate for further information.

Part III. RATIONALE AND DERIVATION OF EFFLUENT LIMITATIONS & PERMIT CONDITIONS

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

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

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

ANTI-BACKSLIDING:

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

- ✓ New facility, backsliding does not apply.
- ✓ All limits in this operating permit are at least as protective as those previously established; therefore, backsliding does not apply.
- ✓ 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.
 - ✓ 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. Five years of DMR data were made available to the permit writer. Several parameters will be removed from this permit. Total dissolved solids, conductivity, sodium, calcium, total organic carbon, and magnesium will be removed because there are no water quality standards for these parameters, and other additional reasons as documented in the fact sheet. Barium, boron, and manganese will be removed from this permit because there are no aquatic life protections on these pollutants, and drinking water and groundwater uses have not been assigned as uses for the receiving streams, as well as additional reasons as documented in the fact sheet.
 - ✓ The previous permit limits for outfall #001 were established in error, based on limits for process wastewater, however, this is a stormwater outfall. This renewal establishes limits and benchmarks appropriate for stormwater discharges. There will be no changes to industrial activities onsite or the composition of the stormwater discharge as a result of this renewal. The benchmark concentrations and required corrective actions are protective of the receiving stream's uses to be maintained.

ANTIDegradation REVIEW:

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

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

For stormwater discharges with new, altered, or expanding discharges, the stormwater BMP chosen for the facility, through the antidegradation analysis performed by the facility, must be implemented and maintained at the facility. Failure to implement and maintain the chosen BMP alternative is a permit violation; see SWPPP.

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

BENCHMARKS:

When a permitted feature or outfall consists of only stormwater, a benchmark may be implemented at the discretion of the permit writer. Benchmarks require the facility to monitor, and if necessary, replace and update stormwater control measures. Benchmark concentrations are not effluent limitations. A benchmark exceedance, therefore, is not a permit violation; however, failure to take corrective action is a violation of the permit. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the permittee in knowing when additional corrective actions may be necessary to comply with the technology based effluent limitations (TBEL).

Because of the fleeting nature of stormwater discharges, the department, under the direction of EPA guidance, has determined monthly averages are capricious measures of stormwater discharges. The *Technical Support Document for Water Quality Based Toxics Control* (EPA/505/2-90-001; 1991) Section 3.1 indicates most procedures within the document apply only to water quality based approaches, not end-of-pipe technology-based controls. Hence, stormwater outfalls will only contain a maximum daily limit (MDL), benchmark, or monitoring requirement determined by the site specific conditions including the receiving water's current quality. While inspection of the stormwater BMPs occur monthly, facilities with no compliance issues are usually expected to sample stormwater quarterly.

Numeric benchmark values are based on other stormwater permits including the Environmental Protection Agency's (EPA's) *Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity* (MSGP) or water quality standards. Because precipitation events are sudden and momentary, benchmarks based on state or federal standards or recommendations use the Criteria Maximum Concentration (CMC) value, or acute standard. The CMC is the estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed briefly without resulting in an unacceptable effect. The CMC for aquatic life is intended to be protective of the vast majority of the aquatic communities in the United States.

- ✓ Applicable; this facility has stormwater-only outfalls with benchmark constraints. The benchmarks listed are consistently achieved in stormwater discharges by a variety of other industries with SWPPs and is deemed protective of instream water quality and aquatic life.

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.

GROUNDWATER MONITORING:

Groundwater is a water of the state according to 10 CSR 20-7.015(7) and 10 CSR 20-7.031(6) and must be protected accordingly.

- ✓ The department's Solid Waste Division is overseeing the groundwater monitoring at the site. At this time, the Water Protection Program is not requiring reporting of the data to this branch.

INDUSTRIAL SLUDGE:

Industrial sludge is solids, semi-solids, or liquid residue generated during the treatment of industrial process wastewater in a treatment works; including but not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment process; scum and solids filtered from water supplies and backwashed; and a material derived from industrial sludge.

- ✓ Permittee is not authorized to land apply industrial sludge from sedimentation basins, it must be stored in the basin or hauled to an authorized waste treatment facility. Leachate sludge management is under authority of the MDNR Solid Waste Division.

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 standards. In accordance with [40 CFR Part 122.44(d)(1)(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. RPAs are not conducted on stormwater effluent.

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, effluent limits, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. SOC's are allowed under 40 CFR 122.47 providing certain conditions are met.

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

STORMWATER 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.

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. <http://dnr.mo.gov/env/esp/spillbill.htm>

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k), Best Management Practices (BMPs) must be used to control or abate the discharge of pollutants when: 1) Authorized under 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) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to 1) identify sources of pollution or contamination, and 2) select and carry out actions which prevent or control the pollution of storm water discharges.

A SWPPP must be prepared by the permittee if the SIC code is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2). A SWPPP may be required of other facilities where stormwater has been identified as necessitating better management. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream pollution from stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures determined to be adequate to achieve the benchmark values

discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.

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

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

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

✓ Applicable; a SWPPP shall be developed and implemented for this facility.

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.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the WLA is the amount of pollutant each discharger is allowed to release into a given stream after the department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

✓ Not applicable; wasteload allocations were not calculated.

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(4)], 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; at this time, the permittee is not required to conduct WET test for this facility.

Part IV. EFFLUENT LIMITS DETERMINATION

OUTFALL #001- STORMWATER OUTFALL

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.

PARAMETERS OUTFALL 001	UNIT	BASIS	DAILY MAXIMUM LIMIT	BENCHMARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL								
FLOW	MGD	1	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	24 HR. EST.
PRECIPITATION	INCHES	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	24 HR. TOT
CONVENTIONAL								
BOD ₅	MG/L	6	**	45	45/30	ONCE/QUARTER	ONCE/QUARTER	GRAB
COD	MG/L	6	**	90	90/60	ONCE/QUARTER	ONCE/QUARTER	GRAB
CONDUCTIVITY	µS/CM @ 25 °C	REMOVED FROM THIS PERMIT						
OIL & GREASE	MG/L	1,9	10	-	15/10	ONCE/QUARTER	ONCE/QUARTER	GRAB
pH ‡	SU	1, 3	6.5 TO 9.0	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
SETTLABLE SOLIDS	M/L/L/HR	6	**	1.5	1.5/1.0	ONCE/QUARTER	ONCE/QUARTER	GRAB
TOTAL DISSOLVED SOLIDS	MG/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
TOTAL ORGANIC CARBON	MG/L	REMOVED FROM THIS PERMIT						
TSS	MG/L	6	**	80	80/60	ONCE/QUARTER	ONCE/QUARTER	GRAB
METALS								
HARDNESS AS CaCO ₃	mg/L	REMOVED FROM THIS PERMIT						
ARSENIC, TOTAL RECOVER.	µg/L	6	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
BARIUM, TOTAL RECOVER.	µg/L	REMOVED FROM THIS PERMIT						
BERYLLIUM, TOTAL RECOV.	µg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
BORON, TOTAL RECOVER.	µg/L	6	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
CADMIUM, TOTAL RECOV.	µg/L	6,9	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
CHROMIUM (III), TOT. REC.	µg/L	6	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
CHROMIUM (VI), TOT. REC.	µg/L	6,9	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
COPPER, TOTAL RECOVER.	µg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
IRON, TOTAL RECOVERABLE	µg/L	6	**	4000	1643/816	ONCE/QUARTER	ONCE/QUARTER	GRAB
LEAD, TOTAL RECOVER.	µg/L	6	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
MAGNESIUM, TOTAL RECOV	µg/L	REMOVED FROM THIS PERMIT						
MANGANESE, TOTAL RECOV	µg/L	REMOVED FROM THIS PERMIT						
NICKEL, TOTAL RECOVER..	µg/L	6	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
SELENIUM, TOTAL RECOV.	µg/L	6,9	**	8.2	*/*	ONCE/QUARTER	ONCE/QUARTER	GRAB
SILVER, TOTAL RECOVER.	µg/L	6,9	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
SODIUM								
ZINC, TOTAL RECOVERABLE	µg/L	6	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
NUTRIENTS								
AMMONIA	mg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
INORGANICS								
CALCIUM	mg/L	REMOVED FROM THIS PERMIT						
CHLORIDE	mg/L	6	*	-	858.7/428	ONCE/QUARTER	ONCE/QUARTER	GRAB
CHLORIDE + SULFATE	mg/L	6	1000	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
FLUORIDE	mg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
SULFATE	mg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB

Continued on Page 10, notes on page 11

(Table for outfall #001 below, continued from previous page)

PARAMETERS OUTFALLS #001	UNIT	BASIS	DAILY MAXIMUM LIMIT	BENCHMARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
VOLATILE ORGANICS								
BENZENE	µg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
ETHYLBENZENE	µg/L	6	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
TOLUENE	µg/L	6	*	-	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
XYLENE	µg/L	REMOVED FROM THIS PERMIT						

OUTFALL #002- NEW STORMWATER OUTFALL

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.

PARAMETERS OUTFALL 002	UNIT	BASIS	DAILY MAXIMUM LIMIT	BENCHMARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL								
FLOW	MGD	1	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	24 HR. EST.
PRECIPITATION	INCHES	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	24 HR. TOT
CONVENTIONAL								
BOD ₅	MG/L	6	**	45	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
COD	MG/L	6	**	90	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
OIL & GREASE	MG/L	1,9	10	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
PH †	SU	1, 3	6.5 TO 9.0	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
SETTLABLE SOLIDS	ML/L/HR	6	**	1.5	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
TOTAL DISSOLVED SOLIDS	MG/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
TSS	MG/L	6	**	80	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
METALS								
ARSENIC, TOTAL RECOVER.	µg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
BERYLLIUM, TOTAL RECOV.	µg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
BORON, TOTAL RECOVER.	µg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
CADMIUM, TOTAL RECOVER.	µg/L	6,9	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
CHROMIUM (III), TOT. REC.	µg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
CHROMIUM (VI), TOT. REC.	µg/L	6,9	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
COPPER, TOTAL RECOVER.	µg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
IRON, TOTAL RECOVERABLE	µg/L	6	**	4000	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
LEAD, TOTAL RECOVERABLE	µg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
NICKEL, TOTAL RECOVER..	µg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
SELENIUM, TOTAL RECOVER.	µg/L	6,9	**	8.2	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
SILVER, TOTAL RECOVER.	µg/L	6,9	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
ZINC, TOTAL RECOVERABLE	µg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
NUTRIENTS								
AMMONIA	mg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
INORGANICS								
CHLORIDE	mg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
CHLORIDE + SULFATE	mg/L	6	1000	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
FLUORIDE	mg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
SULFATE	mg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
VOLATILE ORGANICS								
BENZENE	µg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
ETHYLBENZENE	µg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
TOLUENE	µg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB

See notes on page 11

Notes:

* - Monitoring requirement only ** - Monitoring with associated benchmark
‡ The facility will report the minimum and maximum pH values; pH is not to be averaged
NEW = Parameter not established in previous operating permit

Basis for Limitations Codes:

- | | | |
|--|-----------------------------------|--|
| 1. State or Federal Regulation/Law | 5. Water Quality Model | 9. Benchmark based on Missouri Water Quality Standards |
| 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. ELG based Limits | 8. Benchmark based on MSGP | |

DERIVATION AND DISCUSSION OF LIMITS:

Outfall #001 was the only regulated outfall in the previous permit. The permittee indicated that the expected effluent at outfall #003 was very similar to outfall #001; therefore Outfall #001 and #002 have identical limits and benchmarks. The only difference between the two outfalls is monitoring requirements. Parameters with differing monitoring requirements are noted below. Quarterly monitoring is required for all parameters on outfall #002 so reasonable potential can be determined at renewal.

PHYSICAL:

Flow

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. The facility will report the total flow in millions of gallons per day (MGD).

Precipitation

Monitoring only requirement; measuring the amount of precipitation [(10 CSR 20-6.200(2)(C)1.E(VI)] during an event is necessary to ensure adequate stormwater management exists at the site. Knowing the amount of potential stormwater runoff can provide the permittee a better understanding of specific control measure that should be employed to ensure protection of water quality. The facility will provide the 24 hour accumulation value of precipitation from the day of sampling the other parameters. It is not necessary to report all days of precipitation during the quarter because of the readily available on-line data.

CONVENTIONAL:

Biochemical Oxygen Demand (BOD₅)

Monitoring with a 45 mg/L benchmark. The previous permit had daily maximum limits of 45 mg/L and monthly average limits of 30 mg/L. After reviewing five years of DMR data, it is in the best professional judgment of the permit writer to require monitoring only with a benchmark on this parameter. The facility had no exceedances of this parameter in the previous permit cycle, and all reported values were well below the permit limit, with the highest being 7.7 mg/L on 9/30/2014. BOD is a pollutant of concern at landfills as identified in the ELG for this industry. High BOD₅ indicates a reduced amount of oxygen available for aquatic life use. A benchmark is technology based, and will allow the facility to monitor the effectiveness of their BMP measures.

Chemical Oxygen Demand (COD)

Monitoring with a benchmark set at 90 mg/L. The previous permit required a daily maximum limit of 90 mg/L and a monthly average limit of 60 mg/L. There were no exceedances of this parameter in the previous permit cycle. It is in the best professional judgment of the permit writer to continue monitoring this parameter and place a benchmark rather than a limit to monitor BMP effectiveness. COD is a pollutant of concern associated with landfills as identified in the Federal MSGP, 8.K.5, Table 8.K-1, Subsector K1. COD is the measurement of water's capacity to consume oxygen during decomposition of organic matter and the oxidation of inorganic chemicals. There is no water quality standard for COD; however, increased oxygen demand may impact instream water quality. COD is also a valuable indicator parameter. COD monitoring allows the permittee to identify increases in COD that may indicate materials/chemicals coming into contact with stormwater that cause an increase in oxygen demand. Increases in COD may indicate a need for maintenance or improvement of BMPs.

Conductivity

This parameter will be removed from this permit. The previous permit required monitoring for this parameter. This parameter will be removed from this permit because no state water quality standards are associated with it. Conductivity is an indicator parameter; other parameters are used as indicators in this permit. In addition, many constituents that contribute to conductivity are individually monitored for in this permit, such as metals.

Oil & Grease

Daily maximum limit of 10 mg/L. Previous permit limits were 15 mg/L daily maximum, and 10 mg/L monthly average. There were no exceedances of this parameter in the previous permit cycle. Oil and grease is a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or toluene, but these constituents are often lost during testing due to their boiling points. It is recommended to perform separate testing for these constituents if they are a known pollutant of concern at the site, i.e. aquatic life toxicity or human health is a concern. Results do not allow for separation of specific pollutants within the test, they are reported, totaled, as "oil and grease". Per 10 CSR 20-7.031 Table A: *Criteria for Designated Uses*; 10 mg/L is the chronic standard for this parameter. This chronic standard will be used as a limit to protect the general criteria found at 10 CSR 20: 7.031 (4). 10 mg/L is the estimated level at which sheen is expected to form on receiving waters. Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at levels which vary from 10 mg/L. To protect the general criteria, it is the responsibility of the permittee to visually observe the discharge and receiving waters for sheen or bottom deposits. It is in the professional judgment of the permit writer that a schedule of compliance is not required for this new limit, as the facility is capable of meeting it.

pH

6.5 to 9.0 SU. The Water Quality Standard at 10 CSR 20-7.031(5)(E) states water contaminants shall not cause pH to be outside the range of 6.5 to 9.0 standard pH units.

Total Organic Carbon (TOC)

This parameter will be removed from this permit. The previous permit required monitoring for this parameter. Total Organic Carbon will be removed because there are no state water quality standards for this pollutant. TOC is mainly a water quality indicator parameter, and other parameters are being used in this permit as indicators of water quality and BMP effectiveness.

Settleable Solids (SS)

Monitoring, with a daily maximum benchmark set at 1.5 mL/L/hr. Previous permit required a daily maximum limit of 1.5 mL/L/hr and a monthly average of 1.0 mL/L/hr. There were no exceedances of this parameter in the previous permit cycle. There is no water quality standard for SS; however, sediment discharges can negatively impact aquatic life. Increased settleable solids are known to interfere with multiple stages of the life cycle in many benthic organisms. For example, they can smother eggs and young or clog the crevasses that benthic organisms use for habitat. Settleable solids are also a valuable indicator parameter. Solids monitoring allows the permittee to identify increases in sediment and solids that may indicate uncontrolled materials leaving the site.

Total Dissolved Solids

Monitoring only, continued from the previous permit. There are no water quality standards for this parameter; however, it is an important indicator for leachate in stormwater discharges. High TDS can be caused by the alkalinity of leachate dissolving metal fractions in the waste stored in landfills. Similar to TSS, high concentrations of TDS may also reduce water clarity, contribute to a decrease in photosynthesis, combine with toxic compounds and heavy metals, and lead to an increase in water temperature.

Total Suspended Solids (TSS)

Monitoring, with a daily maximum benchmark set at 80 mg/L. The previous permit required 80 mg/L as a daily maximum limit, and 50 mg/L as a monthly average limit. There was one exceedance of this parameter in the previous permit cycle. There is no water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the permittee to identify increases in TSS that may indicate uncontrolled materials leaving the site. A benchmark is placed at 80 mg/L to allow for assessment of BMP effectiveness.

METALS:

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.

Total Hardness

This parameter will be removed from this permit. The previous permit required monitoring for this parameter. The Department uses a default hardness for stormwater of 193 mg/L for industrial facilities to calculate daily maximum limits and benchmarks for metals with hardness based toxicity. It is no longer necessary to sample for this parameter.

Arsenic, Total Recoverable

Monitoring only, continued from the previous permit. Arsenic was used as a preservative for treating wood, and was used in numerous agricultural insecticides and poisons. There have been no exceedances of this parameter at this outfall; however, there are not enough available data points to determine the reasonable potential for exceedance of this parameter at this outfall. Annual sampling will continue for this parameter due to it being a pollutant of concern at landfills. Quarterly monitoring will be required at outfall #002 to determine reasonable potential.

Barium, Total Recoverable

This parameter will be removed from this permit. The previous permit required monitoring only for this parameter. It is in the best professional judgment of the permit writer to remove this parameter from the permit because there are no regulations associated with any of the use designations on the receiving streams. In addition, the levels of barium discharging from outfall #001 are well below the DWS and GRW standards found at 10 CSR 20-7.031 Table A, suggesting the discharge is within a non-toxic range, and thus not a water quality issue. In addition, treatment mechanisms for barium are cation exchange, reverse osmosis, and distillation. These methods are not typically utilized in stormwater treatment.

Beryllium, Total Recoverable

Monitoring only, continued from the last permit. Beryllium has numerous industrial uses due to its light weight and particular chemical properties, especially as an alloy. There is a high potential for wastes from these uses to be found at a landfill site. After reviewing five years of DMR data it is noted there have been no exceedances of the aquatic life standards at this outfall; however, there are not enough available data points to determine the reasonable potential for exceedance. In 2013, this facility reported 4 µg/L on their DMRs. Monitoring will be increased to quarterly for this parameter due to it being a frequent pollutant of concern at landfill sites with a low water quality standard of 5 µg/L. Quarterly monitoring will give more data to determine reasonable potential for exceedance of this pollutant.

Boron, Total Recoverable

Monitoring only, continued from the previous permit. Boron has numerous industrial uses, including as an abrasive, or in metal coatings, detergents, insecticides, and adhesives. Additionally, it is used in soaps and detergents, flame retardants, antiseptics, cosmetics, and pharmaceuticals. There is a high potential for wastes from these uses to be found at a landfill site. There are no aquatic life, drinking water, or human health protections for boron; however, it has a 2000 µg/L limit for protection of irrigation uses, and the receiving stream is protected by the general criteria which are applicable to all waters of the state per 10 CSR 20-7.031 (4). There have been no exceedances of the IRR WQS at this outfall; however, there are not enough available data points to determine the reasonable potential for exceedance of this parameter. Annual sampling will continue for this parameter due to it being a pollutant of concern at landfills. Quarterly monitoring will be required at outfall #002 to determine reasonable potential.

Cadmium, Total Recoverable

Monitoring only, continued from the previous permit. Cadmium has numerous industrial uses, including electroplating, paint, batteries, and metal polish, among others. There is a high potential for wastes from these uses to be found at a landfill site. After reviewing five years of DMR data it is noted there have been no exceedances of water quality standards at this outfall; however, there are not enough available data points to determine the reasonable potential for exceedance of this parameter at this outfall. A value of 5 µg/L was repeatedly reported in the last permit cycle. This value is nearing the aquatic life protection criteria found at 10 CSR 20-7.031 Table A. For this reason it is in the professional judgment of the permit writer to increase monitoring to quarterly for this parameter. It is possible that the permittee is not using sufficiently sensitive methods to determine actual levels of cadmium in the effluent at this outfall (see Part V, Sufficiently sensitive analytical methods, for more information).

Chromium (III), Total Recoverable

Monitoring only, continued from the previous permit after re-assessment. Chromium III has several industrial uses, including chrome plating, the manufacture of dye and pigments, leather and wood preservation, and as an alloy with other metals. There is a high potential for wastes from these uses to be found at a landfill site. There have been no exceedances of the aquatic life standard at this outfall; however, there are not enough available data points to determine the reasonable potential for exceedance of this parameter at this outfall. Annual sampling will continue for this parameter due to it being a pollutant of concern at landfills. Quarterly monitoring will be required at outfall #002 to determine reasonable potential.

Chromium (VI), Dissolved

Monitoring only, continued from the previous permit after re-evaluation. Chromium VI has several industrial uses, including chrome plating, the manufacture of dye and pigments, leather and wood preservation, and as an alloy with other metals. There is a potential for wastes from these uses to be found at a landfill site. There have been no exceedances of this benchmark at this outfall; however, after reviewing five years of DMRs for this site, it is noted the value reported for chromium (VI) was consistently 10 µg/L. This value is close to the acute aquatic life protection criteria found at 10 CSR 20-7.031 Table A, which is 15 µg/L. For this reason it is in the professional judgment of the permit writer to increase monitoring to quarterly for this parameter. It is possible that the permittee is not using sufficiently sensitive methods to determine actual levels of chromium VI (see Part V, Sufficiently sensitive analytical methods, for more information).

Copper, Total Recoverable

Monitoring only, continued from the previous permit after re-assessment. Copper has numerous industrial uses, from alloys and antimicrobial applications, to wires, cables and paints. It is used as a stabilizing agent in chemical products. There is a high potential for wastes from these varying uses to be found at a landfill site. There have been no exceedances of the aquatic life standards at this outfall; however, there are not enough available data points to determine the reasonable potential for exceedance of this parameter. Copper is highly toxic to aquatic life, and is a pollutant which is frequently a water quality issue for landfill sites. The aquatic life standard is 26 µg/L. It is important to monitor for known pollutants of concern on a quarterly basis to determine reasonable potential; therefore monitoring for this parameter will be increased to quarterly.

Iron, Total Recoverable

Monitoring with a benchmark set at 4000 µg/L. The previous permit required a daily maximum limit of 1643 µg/L and an average monthly limit of 816 µg/L. This facility met these limits in the previous five years with no exceedances at outfall #001. It is in the best professional judgment of the permit writer there is no reasonable potential for exceedances of chronic water quality standards at this outfall, therefore monitoring with a technology based benchmark is appropriate. Due to the sporadic nature of stormwater discharges, the Department, under the direction of EPA guidance, has determined chronic standards are capricious measures of stormwater discharges. Chronic effluent limitations are based on the organism's ability to survive within the designated concentration for four days. Stormwater is rarely discharged continuously for four days. Conversely, acute water quality standards are applicable, but are non-existent for iron. After reviewing other sources of data and studies, it is in the permit writer's best professional judgment to apply 4000 µg/L as a benchmark for this facility. In accordance with the department's current stormwater permitting, it is the permit writer's best professional judgment that an iron benchmark of 4000 µg/L is protective of chronic water quality in the receiving stream.

Lead, Total Recoverable

Monitoring only, continued from the previous permit. Lead has numerous industrial uses, including batteries, as an alloy with other metals, solder, a coolant, and others. There is a high potential for wastes from these uses to be found at a landfill site. There have been no exceedances of this parameter at this outfall; however, there are not enough available data points to determine the reasonable potential for exceedance of this parameter. Annual sampling will continue for this parameter due to it being a pollutant of concern at landfills. Quarterly monitoring will be required at outfall #002 to determine reasonable potential.

Magnesium, Total Recoverable

This parameter will be removed from this permit. The previous permit required monitoring only. It is in the best professional judgment of the permit writer to remove this parameter from the permit because this pollutant is not regulated by the state of Missouri. Magnesium is largely a concern in connection with water hardness, or in drinking water can contribute to a "salty" taste. Increased levels of magnesium indicate increased water hardness. Water hardness is also not a regulated water quality parameter in the state of Missouri. Magnesium is found in high concentrations in streams in Missouri, and the magnesium discharged by this facility is not expected to contribute to a water quality issue. In addition, water softening is the method of treatment for high magnesium in effluent. This is not a treatment mechanism used often in stormwater. Treatment of stormwater for magnesium at landfills would likely be cost prohibitive.

Manganese, Total Recoverable

This parameter will be removed from this permit. The previous permit required monitoring only. It is in the best professional judgment of the permit writer to remove this parameter from the permit because it is only regulated by the state for drinking water standards. The receiving streams do not have drinking water as a use designation. The highest value reported for manganese in the previous permit cycle was 44 µg/L, which is below the DWS and GRW standards found in 10 CSR 20-7.031 Table A, suggesting the discharge from this outfall is within non-toxic ranges for human consumption. Manganese can be toxic to aquatic organisms in large amounts; however, levels of 800-3800 µg/L have been shown to be non-toxic to sensitive organisms in a water hardness of 25-300 mg/L, with non-toxic levels increasing as hardness increases. DMR data show levels of manganese to be 44 µg/L and lower at this outfall. It is in the professional judgment of the permit writer to remove this parameter due to lack of water quality standards and low chance of toxicity to aquatic life or human health which would violate the general criteria found at 10 CSR 20-7.031(4). Additionally, treatment mechanisms for manganese are limited, and require oxidation and filtration of water, techniques not often performed on stormwater. Treatment of stormwater at landfills for manganese would likely be cost prohibitive.

Source and further information:

Environmental and Lands HQ Division, British Columbia. "Ambient Water Quality Guidelines for manganese". <http://www.env.gov.bc.ca/wat/wq/BCguidelines/manganese/manganese.html>, Last accessed 4/27/2016

World Health Organization. "Manganese in Drinking Water". http://www.who.int/water_sanitation_health/dwq/chemicals/manganese.pdf, last accessed 4/27/2016.

Nickel, Total Recoverable

Monitoring only, continued from the previous permit. Nickel is primarily used as an alloy with other metals. It can be found in magnets, rechargeable batteries, and as an anti-corrosive coating. There is a high potential for wastes from these uses to be found at a landfill site. There have been no exceedances of this parameter at this outfall; however, there are not enough available data points to determine the reasonable potential for exceedance of this parameter. Annual sampling will continue for this parameter due to it being a pollutant of concern at landfills. Quarterly monitoring will be required at outfall #002 to determine reasonable potential.

Selenium, Total Recoverable

Monitoring with a benchmark of 8.2 µg/L. Selenium is primarily used in the production of glass and electronics. It can also be found as an alloy with other metals. It is a known pollutant of concern at this site. After reviewing five years of DMR data, it was noted that all reported values of selenium are higher than the chronic aquatic life protection standard per 10 CSR 20 7.031 Table A. It is probable the permittee is not utilizing sufficiently sensitive analytical methods for measurement of this pollutant. See Part V, Sufficiently Sensitive Analytical Methods. It is in the best professional judgment of the permit writer that there is little probability of exceeding the chronic AQL standard of 5 µg/L in stream at this outfall, which is based on in-stream levels of selenium over 4 days. Additionally, the permittee commits to requiring sufficiently sensitive analytical methods in the future permit cycle. It is in the professional judgment of the permit writer to place a benchmark on this parameter to ensure levels of this pollutant are detected using a sufficiently sensitive method in the future. Testing will be increased to quarterly to aid in determinations for reasonable potential at renewal.

Silver, Total Recoverable

Monitoring only, continued from the previous permit. Silver is primarily used industrially in electronics. After reviewing DMR data for this outfall, it was noted it is possible that the permittee is not using sufficiently sensitive methods to determine actual levels of silver in the effluent at this outfall (see Part V, Sufficiently sensitive analytical methods, for more information). There were no exceedances of this parameter in the previous permit cycle. On the 03/31/2013 DMRs, this facility reported 10 µg/L of silver. This is very close to the acute aquatic life water quality standard of 11.7 µg/L. It is in the professional judgment of the permit writer to increase sampling for this parameter to quarterly to aid in reasonable potential determinations in future permit cycles.

Sodium, Total Recoverable

This parameter will be removed from this permit. The previous permit required monitoring only. It is in the best professional judgment of the permit writer to remove this parameter from the permit because this pollutant does not have numeric water quality criteria. However, all surface water is also protected by general criteria found at 10 CSR 20-7.031(4). The amount of sodium discharging from this outfall is unlikely to be harmful to aquatic life. Additionally, the amount of sodium discharged from this outfall is well below a level of concern for human health. The maximum discharge from this outfall in the last permit cycle was a concentration of 190 mg/L. A cup of milk has approximately 160 mg/L of sodium, and other food and drinks contain much higher levels of sodium. Drinking water is not a use for this water body, but sodium levels in this stream are within levels for safe consumption. Sodium binds with chloride to form salts, which can be toxic to aquatic life; however, it is generally accepted that NaCl concentrations become toxic at levels much higher than that found in this facility's effluent.

Sources and for more information:

Adelman, I.R., L.L.J. Smith, and G.D. Siesennop, "Acute Toxicity of Sodium Chloride, Pentachlorophenol, Guthion, and Hexavalent Chromium to Fathead Minnows (*Pimephales promelas*) and Goldfish (*Carassius auratus*)". *Journal of the Fisheries Research Board of Canada*, Volume 33, 1976.

Blasius, B.J. and R.W. Merritt, "Field and Laboratory Investigations on the Effects of Road Salt (NaCl) on Stream Macroinvertebrate Communities," *Environmental Pollution*, Volume 120, 2002.

World Health Organization. "Sodium in Drinking Water". http://www.who.int/water_sanitation_health/dwq/chemicals/sodium.pdf, last accessed 04/27/2016

Zinc, Total Recoverable

Monitoring only, continued from the previous permit. Zinc has numerous industrial applications, the most prevalent of which are batteries and anti-corrosion agents. It is also commonly used as an alloy and in industrial chemical compounds such as flame retardants and wood preservatives. It can also be found in agricultural fungicides. There is a high potential for wastes from these uses to be found at a landfill site. There have been no exceedances of the aquatic life standards at this outfall; however, there are not enough available data points to determine the reasonable potential for exceedance of this parameter at this outfall. Annual sampling will continue for this parameter due to it being a pollutant of concern at landfills. Quarterly monitoring will be required at outfall #002 to determine reasonable potential.

NUTRIENTS:

Ammonia, Total as Nitrogen

Monitoring only, continued from the previous permit. Ammonia is a pollutant of concern for landfills, as identified in the federal ELG. After reviewing the available data, it is noted that the level of ammonia discharging from this outfall is below water quality standards. However; ammonia toxicity is dependent on temperature and pH, and as such, Missouri has two seasons to determine whether a facility has reasonable potential to exceed water quality standards. This facility has not collected enough data to determine reasonable potential at this outfall at this time for both seasons. If the facility wishes to test more often than quarterly for ammonia to ensure adequate data at permit renewal, they may do so.

INORGANICS:

Calcium

This parameter will be removed from this permit. The previous permit required monitoring of this parameter. It is in the best professional judgment of the permit writer to remove this parameter from the permit. Calcium is a required nutrient for human and aquatic health, and is the most common cation found in fresh surface water. It is found at varying levels in typical surface water, and is a contributor to "total dissolved solids" (TDS). Water is generally considered "brackish" when above 1000 mg/L of TDS. Calcium is a direct contributor to water hardness, which is usually measured using calcium carbonate. A default hardness of 193 mg/L will be used for this permit. Previous DMR levels reported did not exceed 94 mg/L. It is in the best professional judgment of the permit writer that the levels of calcium discharged from this facility will not adversely impact aquatic life in the receiving stream, and are therefore not a water quality concern. Treatment mechanisms for calcium in landfill stormwater would likely be cost prohibitive.

Chloride

Monitoring only. The previous permit required a maximum daily limit of 858.7 mg/L and an average monthly limit of 428 mg/L. After reviewing five years of DMR data, it is in the permit writer's best professional judgment to require monitoring only for this parameter. There were no exceedances of this parameter in the previous permit cycle, and all reported levels were well below the limit, with the highest being 174 mg/L on 6/30/2015.

Chloride + Sulfate

1000 mg/L daily maximum limit. This limit is retained from the previous permit after re-evaluation. After reviewing five years of DMR data, it was noted there were no exceedances of this parameter in the previous permit cycle. It is in the best professional judgment of the permit writer there is reasonable potential to exceed the water quality standards for this parameter, therefore the limit will be continued from the previous permit.

Fluoride

Monitoring only. This is continued from the previous permit after re-evaluation. There have been no exceedances of the LWW WQS at this outfall; however, there are not enough available data points to determine the reasonable potential for exceedance. Testing will be increased to quarterly to aid in determinations for reasonable potential at renewal.

Sulfate

Monitoring only. This is a new parameter for this permit, and will be included per the permit writer's best professional judgment. DMR data shows that the discharge of chloride makes up a small proportion of the "chloride + sulfate" parameter in this permit. It is in the best professional judgment of the permit writer to require monitoring of sulfate and chloride as separate parameters to determine the levels of each being discharged.

VOLATILE ORGANICS:

Benzene

Monitoring only, continued from previous permit. Benzene is a volatile organic compound and a common component of gasoline. It is used as an intermediate in the production of numerous other chemicals, especially phenols and acetones. There have been no exceedances of the human health standards at this outfall; however, there are not enough available data points to determine the reasonable potential for exceedance of this parameter at this outfall. Testing will be increased to quarterly as this parameter is an indicator parameter for other BTEX constituents in this permit.

Toluene

Monitoring only, continued from the previous permit after re-evaluation. Toluene is an aromatic hydrocarbon and a benzene derivative. It is widely used as a solvent. There have been no exceedances of the human health standards at this outfall; however, there are not enough available data points to determine the reasonable potential for exceedance of this parameter at this outfall. Annual sampling will continue for this parameter due to it being a pollutant of concern at landfills. Quarterly monitoring will be required at outfall #002 to determine reasonable potential.

Ethylbenzene

Monitoring only, continued from the previous permit after re-evaluation. Ethylbenzene is a volatile organic compound used as an intermediate in the production of other chemicals, especially styrene. There have been no exceedances of the aquatic life standards at this outfall; however, there are not enough available data points to determine the reasonable potential for exceedance of this parameter at this outfall. Annual sampling will continue for this parameter due to it being a pollutant of concern at landfills. Quarterly monitoring will be required at outfall #002 to determine reasonable potential.

Xylene

This parameter will be removed from this permit. The previous permit required monitoring for this parameter. There are no applicable regulations found in state law that apply to use designations of the receiving streams. It is in the best professional judgment of the permit writer to remove this parameter for this reason. Additionally, the maximum xylene level reported was 5µg/L, which is the detection limit for the test method. 5 µg/L is also well below the DWS or GRW standards for this pollutant, indicating this pollutant is being discharged in non-toxic amounts, if it is being discharged at all. Benzene will be tested for quarterly, and used as an indicator for xylene. Benzene and xylene are often found in conjunction with one another in cases of discharge. As they are often found in the same source, it is appropriate to use benzene to indicate the possible discharge of xylene. If levels of benzene are found in this site's effluent which are of water quality concern, limits for xylene may be issued to protect the general criteria found at 10 CSR 20-7.031(4).

Part V. SAMPLING AND REPORTING REQUIREMENTS:

ELECTRONIC DISCHARGE MONITORING REPORTING:

Due to upcoming federal regulations, all facilities will need to begin submitting their discharge monitoring reports electronically, called the eDMR system. To begin the process, please visit <http://dnr.mo.gov/env/wpp/edmr.htm>. This process is expected to save time, lessen paperwork, and reduce operating costs for both the facilities and the water protection program. Additional information may also be found at <http://dnr.mo.gov/pubs/pub2474.pdf>.

SAMPLING FREQUENCY JUSTIFICATION:

Sampling and reporting frequency was changed from the previous permit. Many parameters that were annual monitoring only were increased to quarterly monitoring. It is not possible to make a scientific determination of reasonable potential to exceed water quality standards with annual sampling. Quarterly sampling will allow for a larger number of data points to consider at permit renewal. Sampling frequency for stormwater-only outfalls is typically quarterly. BMP inspection occurs monthly; the facility may sample more frequently if they need additional data to determine if their best management technology is performing as expected.

SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:

Please review Standard Conditions Part 1, Section A, number 4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternatives 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. 40 CFR 136 lists the approved methods accepted by the department.

SAMPLING TYPE JUSTIFICATION:

Sampling type was continued from the previous permit. The sampling types are representative of the discharges, and are protective of water quality. Grab samples are appropriate for stormwater. Parameters which must have grab sampling are: pH, ammonia, *E. coli*, total residual chlorine, free available chlorine, hexavalent chromium, dissolved oxygen, total phosphorus, and volatile organic samples.

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. <http://dnr.mo.gov/env/wpp/cpp/docs/watershed-based-management.pdf>. 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. *This permit will become synchronized by expiring the end of the 3rd quarter, 2018.*

PUBLIC NOTICE:

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. <http://dnr.mo.gov/env/wpp/permits/pn/index.html> 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 was from 05/27/2016 to 06/27/2016. No responses were received.

DATE OF FACT SHEET: 04/28/2016

COMPLETED BY:

AMBERLY SCHULZ, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - INDUSTRIAL UNIT
(573)751-8049
Amberly.schulz@dnr.mo.gov



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ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
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These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

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

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

Section B – Reporting Requirements

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



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

Section C – Bypass/Upset Requirements

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

Section D – Administrative Requirements

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



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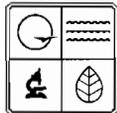
- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A 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.

AP17527



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

WATER PROTECTION PROGRAM

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED

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- 0117790 Expiration Date July 23, 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	
Courtney Ridge Landfill			
ADDRESS (PHYSICAL)		CITY	FAX
2001 North M-291 Highway		Sugar Creek	
		STATE	ZIP CODE
		MO	64058

3. OWNER

NAME		E-MAIL ADDRESS	TELEPHONE WITH AREA CODE	
Courtney Ridge Landfill, LLC				
ADDRESS (MAILING)		CITY	STATE	ZIP CODE
2001 North M-291 Highway		Sugar Creek	MO	64058

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

4. CONTINUING AUTHORITY

NAME		TELEPHONE WITH AREA CODE		
Republic Services, Inc.		(573) 636-1144		
		FAX (480) 718-4265		
ADDRESS (MAILING)		CITY	STATE	ZIP CODE
5605 Moreau River Access Road		Jefferson City	MO	65101

5. OPERATOR

NAME		CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE	
N/A				
ADDRESS (MAILING)		CITY	STATE	ZIP CODE

6. FACILITY CONTACT

NAME		TITLE	TELEPHONE WITH AREA CODE	
Brad Zimmerman		Area Environmental Manager	(573) 636-1144	
			FAX (573) 635-6159	

7. ADDITIONAL FACILITY INFORMATION

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

001 SW 1/4 SE 1/4 Sec 13 T 50N R 32W _____ County
 UTM Coordinates Easting (X): 2820335 Northing (Y): 1084238
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

002 SW 1/4 SW 1/4 Sec 13 T 50N R 32R _____ County
 UTM Coordinates Easting (X): 2822164 Northing (Y): 1086700

003 _____ 1/4 _____ 1/4 Sec 4 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 4953 _____ and NAICS _____ 002 - SIC 4953 _____ and NAICS _____
 003 - SIC _____ and NAICS _____ 004 - SIC _____ and NAICS _____

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 type="checkbox"/>
C.	Is application for storm water discharges only? If yes, complete EPA Form 2F.	YES <input checked="" type="checkbox"/>	NO <input 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 Eagle Materials, Inc.			
ADDRESS 2201 N. Courtney Road	CITY Sugar Creek	STATE MO	ZIP CODE 64058

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) Brad Zimmerman, Area Environmental Manager	TELEPHONE WITH AREA CODE (573) 636-1144
SIGNATURE 	DATE SIGNED 01/23/2014

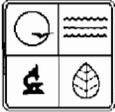
MO 780-1479 (01-09)

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?



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
 Courtney Ridge Landfill

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER
 MO-0117790

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 4212

C. THIRD _____ D. FOURTH _____

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION

OUTFALL NUMBER (LIST) SW 1/4 SE 1/4 SEC 13 T 50N R 32W Jackson COUNTY

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST)	RECEIVING WATER
001, 002	Mill Creek (U), to Missouri River (P) (00356)

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

Municipal Solid Waste Landfill with collection and transportation of refuse, including a bulk storage area and fueling station.

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. DAYS PER WEEK <i>(specify average)</i>	B. MONTHS PER YEAR <i>(specify average)</i>	A. FLOW RATE <i>(in mgd)</i>		B. TOTAL VOLUME <i>(specify with units)</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
(list outfall numbers)

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

3.10 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)
Pace Analytical Services, LLC	7901 W. Morris St. Indianapolis, IN 46231	(317) 243-8304	Ammonia, BOD, COD, hexane oil and grease, specific conductance, settleable solids, TDS, TSS, chloride, sulfate, FAA/ICP acid digestion, iron, and pH.

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)	TELEPHONE NUMBER WITH AREA CODE
Brad Zimmerman, Area Environmental Manager	(573) 634-3307
SIGNATURE (SEE INSTRUCTIONS)	DATE SIGNED
	01/23/2014

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.
001

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				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	< 2	< 0.38						mg/L	lbs			
B. Chemical Oxygen Demand (COD)	15	2.85						mg/L	lbs			
C. Total organic Carbon (TOC)	N/A	N/A										
D. Total Suspended Solids (TSS)	6	1.14						mg/L	lbs			
E. Ammonia (as N)	0.15	0.03						mg/L	lbs			
F. Flow	VALUE N/A				VALUE					VALUE		
G. Temperature (winter)	VALUE -15				VALUE					VALUE		
H. Temperature (summer)	VALUE 38.8				VALUE					VALUE		
I. pH	MINIMUM 6.5	MAXIMUM 9.0			MINIMUM	MAXIMUM				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 (if available)		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				(1) CONCENTRATION	(2) MASS	
A. Bromide (24959-67-9)		X												
B. Chlorine, Total Residual	X		60	11.4						mg/L	lbs			
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 (if available)		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						
G. Nitrogen, Total Organic (as N)		X												
H. Oil and Grease	X		N/A	N/A						mg/L	lbs			
I. Phosphorus (as P), Total (7723-14-0)		X												
J. Sulfate (as SO ₄) (14808-79-8)	X		410	78.02						mg/L	lbs			
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		0.26	0.05						mg/L	lbs			
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		C. LONG TERM AVRG. 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	(if available)	(1) CONCENTRATION				(2) MASS	(1) CONCENTRATION	
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

INTAKE AND EFFLUENT CHARACTERISTICS										OUTFALL NO. 002
-------------------------------------	--	--	--	--	--	--	--	--	--	--------------------

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				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	N/A	N/A										
B. Chemical Oxygen Demand (COD)	N/A	N/A										
C. Total organic Carbon (TOC)	N/A	N/A										
D. Total Suspended Solids (TSS)	N/A	N/A										
E. Ammonia (as N)	N/A	N/A										
F. Flow	VALUE N/A		VALUE		VALUE					VALUE		
G. Temperature (winter)	VALUE -15		VALUE		VALUE				°C	VALUE		
H. Temperature (summer)	VALUE 38.8		VALUE		VALUE				°C	VALUE		
I. pH	MINIMUM 6.5	MAXIMUM 9.0	MINIMUM	MAXIMUM					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				(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 GAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>		B. NO. OF ANALYSES	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE <i>(if available)</i>		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		
			(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												
I. Phosphorus <i>(as P)</i> , Total <i>(7723-14-0)</i>		X												
J. Sulfate <i>(as SO₄⁻)</i> <i>(14808-79-8)</i>		X												
K. Sulfide <i>(as S)</i>		X												
L. Sulfite <i>(as SO₃⁻)</i> <i>(14265-45-3)</i>		X												
M. Surfactants		X												
N. Aluminum, Total <i>(7429-90-5)</i>		X												
O. Barium, Total <i>(7440-39-3)</i>		X												
P. Boron, Total <i>(7440-42-8)</i>		X												
Q. Cobalt, Total <i>(7440-48-4)</i>		X												
R. Iron, Total <i>(7439-89-6)</i>	X													
S. Magnesium, Total <i>(7439-95-4)</i>		X												
T. Molybdenum, Total <i>(7439-98-7)</i>		X												
U. Manganese, Total <i>(7439-96-5)</i>		X												
V. Tin, Total <i>(7440-31-5)</i>		X												
W. Titanium, Total <i>(7440-32-6)</i>		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 (if available)		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				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-38-9)		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												



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
**FORM D – APPLICATION FOR DISCHARGE PERMIT –
PRIMARY INDUSTRIES**

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

Courtney Ridge Landfill

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

MO - 0117790

This form is to be filled out in addition to forms A and C "Application for Discharge Permit" for the Industries listed below:

INDUSTRY CATEGORY

Adhesives and sealants	Ore mining
Aluminum forming	Organic chemicals manufacturing
Auto and other laundries	Paint and ink formulation
Battery manufacturing	Pesticides
Coal mining	Petroleum refining
Coil coating	Pharmaceutical preparations
Copper forming	Photographic equipment and supplies
Electric and electronic compounds	Plastic and synthetic materials manufacturing
Electroplating	Plastic processing
Explosives manufacturing	Porcelain enameling
Foundries	Printing and publishing
Gum and wood chemicals	Pulp and paperboard mills
Inorganic chemicals manufacturing	Rubber processing
Iron and steel manufacturing	Soap and detergent manufacturing
Leather tanning and finishing	Steam electric power plants
Landfill	Textile mills
Mechanical products manufacturing	Timber products processing
Nonferrous metals manufacturing	

**APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES**

TABLE II

NPDES # (IF ASSIGNED)	OUTFALL NUMBER
	Outfall 001

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-A for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-B for each pollutant you know or have reason to believe is present. Mark "X" in column 2-C for each pollutant you believe to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"	3. EFFLUENT				4. UNITS		5. 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					
METALS, AND TOTAL PHENOLS									
1M. Antimony, Total (7440-36-9)									
2M. Arsenic, Total (7440-38-2)									
3M. Beryllium, Total (7440-41-7)									
4M. Cadmium, Total (7440-43-9)									
5M. Chromium III (16065-83-1)									
6M. Chromium VI (18540-29-9)									
7M. Copper, Total (7440-50-8)									
8M. Lead, Total (7439-92-1)									
9M. Magnesium Total (7439-95-4)									
10M. Mercury, Total (7439-97-6)									
11M. Molybdenum Total (7439-98-7)									
12M. Nickel, Total (7440-02-0)									
13M. Selenium, Total (7782-49-2)									
14M. Silver, Total (7440-22-4)									
15M. Thallium, Total (7440-28-0)									
16M. Tin Total (7440-31-5)									
17M. Titanium Total (7440-32-6)									
18M. Zinc, Total (7440-66-6)									

CONTINUED FROM PAGE 3

19M. Cyanide, Amenable to Chlorination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																	
20M. Phenols, Total	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																	

DIOXIN

2.3,7,8 – Tetra – chlorodibenzo-P-Dioxin (1764-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>																	
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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. 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 CONCENTRATION (1)	B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					

GC/MS FRACTION – VOLATILE COMPOUNDS														
1V. Acrolein (107-02-8)			<input checked="" type="checkbox"/>											
2V. Acrylonitrile (107-13-1)			<input checked="" type="checkbox"/>											
3V. Benzene (71-43-2)			<input checked="" type="checkbox"/>											
4V. Bis (Chloromethyl) Ether (542-88-1)			<input checked="" type="checkbox"/>											
5V. Bromoform (75-25-2)			<input checked="" type="checkbox"/>											
6V. Carbon Tetrachloride (56-23-5)			<input checked="" type="checkbox"/>											
7V. Chlorobenzene (108-90-7)			<input checked="" type="checkbox"/>											
8V. Chlorodibromomethane (124-48-1)			<input checked="" type="checkbox"/>											
9V. Chloroethane (75-00-3)			<input checked="" type="checkbox"/>											
10V. 2-Chloroethylvinyl Ether (110-75-8)			<input checked="" type="checkbox"/>											
11V. Chloroform (67-66-3)			<input checked="" type="checkbox"/>											
12V. Dichlorobromomethane (75-27-4)			<input checked="" type="checkbox"/>											
13V. Dichlorodifluoromethane (75-71-8)			<input checked="" type="checkbox"/>											
14V. 1,1 – Dichloroethane (75-34-3)			<input checked="" type="checkbox"/>											
15V. 1,2 – Dichloroethane (107-06-2)			<input checked="" type="checkbox"/>											
16V. 1,1 – Dichloroethylene (75-35-4)			<input checked="" type="checkbox"/>											
17V. 1,3 – Dichloropropane (78-87-5)			<input checked="" type="checkbox"/>											
18V. 1,2 – Dichloropropylene (542-75-6)			<input checked="" type="checkbox"/>											
19V. Ethylbenzene (100-41-4)			<input checked="" type="checkbox"/>											
20V. Methyl Bromide (74-83-9)			<input checked="" type="checkbox"/>											
21V. Methyl Chloride (74-87-3)			<input checked="" type="checkbox"/>											

1. POLLUTANT AND CAS NUMBER (if available)	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	3. EFFLUENT				D. NO. OF ANALYSES	4. UNITS		5. INTAKE (optional)			
				A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)			C. LONG TERM AVRG. VALUE (if available)		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				
GC/MS FRACTION – VOLATILE COMPOUNDS (continued)														
22V. Methylene Chloride (75-09-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
23V. 1,1,2,2 – Tetra- chloroethane (79-34-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
24V. Tetrachloroethylene (127-18-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
25V. Toluene (108-88-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
26V. 1,2 – Trans Dichloroethylene (156-60-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
27V. 1,1,1 – Tri – chloroethane (71-55-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
28V. 1,1,2 – Tri- chloroethane (79-00-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
29V. Trichloro – ethylene (79-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
30V. Trichloro – fluoromethane (75-69-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
31V. Vinyl Chloride (75-01-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
GC/MS FRACTION – ACID COMPOUNDS														
1A. 2 – Chlorophenol (95-57-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
2A. 2,4 – Dichloro – phenol (120-83-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
3A. 2,4 – Dimethyl – phenol (105-67-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
4A. 4,6 – Dinitro - O- Cresol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
5A. 2,4 – Dinitro – phenol (51-28-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
6A. 2-Nitrophenol (88-75-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
7A. 4-Nitrophenol (100-02-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
8A. P – Chloro – M Cresol (59-50-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
9A. Pentachloro – phenol (87-86-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
10A. Phenol (108-952)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
11A. 2,4,6 – Trichloro- phenol (88-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											
12A. 2 - methyl – 4,6 dinitrophenol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>											

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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT				4. UNITS			5. INTAKE (Optional)				
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. 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. 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	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
2B. Acenaphthylene (208-96-8)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
3B. Anthracene (120-12-7)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
4B. Benzidine (92-87-5)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
5B. Benzo (a) Anthracene (56-55-3)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
6B. Benzo (a) Pyrene (50-32-8)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
7B. 3,4 - Benzofluoranthene (205-99-2)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
8B. Benzo (ghi) Perylene (191-24-2)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
9B. Benzo (k) Fluoranthene (207-08-9)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
10B. Bis (2-Chloroethoxy) Methane (111-91-1)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
11B. Bis (2-Chloroethyl) Ether (111-44-4)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
12B. Bis (2-Chloroisopropyl) Ether (39638-32-9)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
14B. 4-Bromophenyl Phenyl Ether (101-55-3)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
15B. Butyl Benzyl Phthalate (85-68-7)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
16B. 2-Chloronaphthalene (91-58-7)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
18B. Chrysene (218-01-9)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
19B. Dibenzo (a,h) Anthracene (53-70-3)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
20B. 1,2 - Dichlorobenzene (95-50-1)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												
21B. 1,3 - Dichlorobenzene (541-73-1)		<input type="checkbox"/>	<input checked="" type="checkbox"/>												

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				D. NO. OF ANALYSES	4. UNITS		5. INTAKE (optional)			
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION					(2) MASS	(1) CONCENTRATION	(2) MASS
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)													
22B. 1, 4-Dichlorobenzene (106-46-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
23B. 3, 3'-Dichlorobenzidine (91-94-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
24B. Diethyl Phthalate (84-66-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
25B. Dimethyl Phthalate (131-11-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
26B. Di-N-butyl Phthalate (84-74-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
27B. 2,4-Dinitrotoluene (121-14-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
28B. 2,6-Dinitrotoluene (606-20-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
29B. Di-N-Octylphthalate (117-84-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
31B. Fluoranthene (206-44-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
32B. Fluorene (86-73-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
33B. Hexachlorobenzene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
34B. Hexachlorobutadiene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
35B. Hexachloro-cyclopentadiene (77-47-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
36B. Hexachloroethane (97-72-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
37B. Indeno (1,2,3-c-d) Pyrene (193-39-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
38B. Isophorone (78-59-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
39B. Naphthalene (91-20-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
40B. Nitrobenzene (98-95-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
41B. N-Nitro-sodimethylamine (62-75-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT				4. UNITS		5. INTAKE (optional)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. 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. LONG TERM AVRG. VALUE	B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)												
42B. N-Nitroso N-Propylamine (621-64-7)			✓									
43B. N-Nitrosodiphenylamine (86-30-6)			✓									
44B. Phenanthrene (85-01-8)			✓									
45B. Pyrene (129-00-0)			✓									
46B. 1,2,4-Tri chlorobenzene (120-82-1)			✓									
GC/MS FRACTION - PESTICIDES												
1P. Aldrin (309-00-2)			✓									
2P. α-BHC (319-84-6)			✓									
3P. β-BHC (319-84-6)			✓									
4P. γ-BHC (58-89-9)			✓									
5P. δ-BHC (319-86-8)			✓									
6P. Chlordane (57-74-9)			✓									
7P. 4,4'-DDT (50-29-3)			✓									
8P. 4,4'-DDE (72-55-9)			✓									
9P. 4,4'-DDD (72-54-8)			✓									
10P. Dieldrin (60-57-1)			✓									
11P. α-Endosulfan (115-29-7)			✓									
12P. β-Endosulfan (115-29-7)			✓									
13P. Endosulfan Sulfate (1031-07-8)			✓									
14P. Endrin (72-20-8)			✓									
15P. Endrin Aldehyde (7421-93-4)			✓									
16P. Heptachlor (76-44-8)			✓									

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE (optional)			
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. 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. LONG TERM AVRG. VALUE	B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			
GC/MS FRACTION - PESTICIDES (continued)												
17P. Heptachlor Epoxide (1024-57-3)			✓									
18P. PCB-1242 (53469-21-9)			✓									
19P. PBC-1254 (11097-69-1)			✓									
20P. PCB-1221 (11104-28-2)			✓									
21P. PCB-1232 (11141-16-5)			✓									
22P. PCB-1248 (12672-29-6)			✓									
23P. PCB-1260 (11096-82-5)			✓									
24P. PCB-1016 (12674-11-2)			✓									
25P. Toxaphene (8001-35-2)			✓									
J. RADIOACTIVITY												
(1) Alpha Total			✓									
(2) Beta Total			✓									
(3) Radium Total			✓									
(4) Radium 226 Total			✓									

2.00 POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. IS ANY POLLUTANT LISTED IN ITEM 1.30 A SUBSTANCE OR A COMPONENT OF A SUBSTANCE WHICH YOU DO OR EXPECT THAT YOU WILL OVER THE NEXT FIVE YEARS USE OR MANUFACTURE AS AN INTERMEDIATE OR FINAL PRODUCT OR BYPRODUCT?

YES (LIST ALL SUCH POLLUTANTS BELOW) NO (GO TO B)

B. ARE YOUR OPERATIONS SUCH THAT YOUR RAW MATERIALS, PROCESSES OR PRODUCTS CAN REASONABLE BE EXPECTED TO VARY SO THAT YOUR DISCHARGES OF POLLUTANTS MAY DURING THE NEXT FIVE YEARS EXCEED TWO TIMES THE MAXIMUM VALUES REPORTED IN ITEM 1.30?

YES (COMPLETE C BELOW) NO (GO TO SECTION 3.00)

C. IF YOU ANSWERED "YES" TO ITEM B, EXPLAIN BELOW AND DESCRIBE IN DETAIL THE SOURCES AND EXPECTED LEVELS OF SUCH POLLUTANTS THAT YOU ANTICIPATE WILL BE DISCHARGED FROM EACH OUTFALL OVER THE NEXT FIVE YEARS, TO THE BEST OF YOUR ABILITY AT THIS TIME. CONTINUE ON ADDITIONAL SHEETS IF YOU NEED MORE SPACE.

3.00 CONTRACT ANALYSIS INFORMATION

WERE ANY OF THE ANALYSES REPORTED IN 1.30 PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM?

YES (LIST THE NAME, ADDRESS, AND TELEPHONE NUMBER OF, AND ANALYZED BY, EACH SUCH LABORATORY OR FIRM BELOW)
 NO (GO TO SECTION 4.00)

A. NAME	B. ADDRESS	C. TELEPHONE (area code and number)	D. POLLUTANTS ANALYZED (list)
Pace Analytical Services, LLC	7901 W. Morris St. Indianapolis, IN 46231	(317) 243-8304	Ammonia, BOD, COD, hexane, oil and grease, specific conductance, settleable solids, TDS, TSS, chloride, sulfate, FAA/ICP acid digestion, iron, pH

4.00 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)	PHONE NUMBER (AREA CODE AND NUMBER)
Brad Zimmerman, Area Environmental Manager	(573) 634-3307
SIGNATURE	DATE SIGNED
	01/23/2014