

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, 92<sup>nd</sup> Congress) as amended,

Permit No. MO-0123790

Owner: Hamilton Hauling Inc.  
Address: 700 Mulberry Street, Pleasant Hill, MO 64080

Continuing Authority: Same as above  
Address: Same as above

Facility Name: Centropolis Sanitary Landfill  
Facility Address: 7700 East 40 HWY, Kansas City, MO 64129

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.

February 1, 2017  
\_\_\_\_\_  
Effective Date

  
\_\_\_\_\_  
Todd Sampsell, Acting Director, Department of Natural Resources

March 31, 2019  
\_\_\_\_\_  
Expiration Date

  
\_\_\_\_\_  
David J. Lamb, Acting Director, Water Protection Program

## **FACILITY DESCRIPTION (CONTINUED)**

OUTFALL #001 – Inactive Landfill Stormwater; SIC # 4953, 2875; NAICS # 562212, 325314

Receives stormwater from yard waste composting operations, grading activities, and an inactive sanitary landfill.

Legal Description: NE¼, SW¼, Sec.18, T49N, R32W, Jackson County

UTM Coordinates: X = 370951, Y = 4325098

Receiving Stream: Tributary to Blue River

First Classified Stream and ID: Blue River (P) 418 303(d)

USGS Basin & Sub-watershed No.: Outlet Blue River (10300101-0106)

Flow in a 10 yr 24 hr rain event: 2.94 MGD

Average Flow: Dependent on Precipitation

OUTFALL #002 – Inactive Landfill Stormwater; SIC # 4953, 2875; NAICS # 562212, 325314

Receives stormwater from composting operations, grading activities, and an inactive sanitary landfill.

Legal Description: SW¼, NW¼, Sec.18, T49N, R32W, Jackson County

UTM Coordinates: X = 370617, Y = 4325531

Receiving Stream: Tributary to Blue River

First Classified Stream and ID: Blue River (P) 418 303(d)

USGS Basin & Sub-watershed No.: Outlet Blue River (10300101-0106)

Flow in a 10 yr 24 hr rain event: 0.33 MGD

Average Flow: Dependent on Precipitation

OUTFALL #003 – Inactive Landfill Stormwater; SIC # 4953, 2875; NAICS # 562212, 325314

Receives stormwater from composting operations, grading activities, and an inactive sanitary landfill.

Legal Description: NE¼, SW¼, Sec.18, T49N, R32W, Jackson County

UTM Coordinates: X = 370950, Y = 4325298

Receiving Stream: Tributary to Blue River

First Classified Stream and ID: Blue River (P) 418 303(d)

USGS Basin & Sub-watershed No.: Outlet Blue River (10300101-0106)

Flow in a 10 yr 24 hr rain event: 0.59 MGD

Average Flow: Dependent on Precipitation

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

<b>OUTFALL #001-003</b> <i>Stormwater Only</i>		<b>TABLE A-1</b> <b>INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>				
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective on <b>February 1, 2017</b> and remain in effect through <b>January 31, 2020</b> . Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	INTERIM LIMITATIONS		BENCHMARKS	MONITORING REQUIREMENTS <sup>∞</sup>	
		DAILY MAXIMUM	MONTHLY AVERAGE		MEASUREMENT FREQUENCY <sup>∇</sup>	SAMPLE TYPE
<b>PHYSICAL</b>						
Flow	MGD	*		-	once/quarter	24 hr. est.
Precipitation	inches	*		-	once/quarter	measured
<b>CONVENTIONAL</b>						
Biochemical Oxygen Demand	mg/L	45		-	once/quarter	grab
Chemical Oxygen Demand	mg/L	90		-	once/quarter	grab
Oil & Grease	mg/L	15		-	once/quarter	grab
pH <sup>Ω</sup>	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
<b>METALS</b>						
Aluminum, Total Recoverable***	µg/L	**		750	once/quarter	grab
Antimony, Total Recoverable	µg/L	*		-	once/quarter	grab
Arsenic, Total Recoverable***	µg/L	**		33	once/quarter	grab
Beryllium, Total Recoverable	µg/L	*		-	once/quarter	grab
Boron, 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	**		15	once/quarter	grab
Cobalt, Total Recoverable	µg/L	*		-	once/quarter	grab
Copper, Total Recoverable	µg/L	26		-	once/quarter	grab
Iron, Total Recoverable	µg/L	4000		-	once/quarter	grab
Lead, Total Recoverable	µg/L	*		-	once/quarter	grab
Mercury, Total Recoverable	µg/L	*		-	once/quarter	grab
Nickel, Total Recoverable	µg/L	*		-	once/quarter	grab
Selenium, Total Recoverable***	µg/L	**		8.2	once/quarter	grab
Silver, Total Recoverable***	µg/L	**		8.7	once/quarter	grab
Thallium, Total Recoverable***	µg/L	**		10.3	once/quarter	grab
Zinc, Total Recoverable	µg/L	*		-	once/quarter	grab
<b>NUTRIENTS</b>						
Ammonia as N	mg/L	*		-	once/quarter	grab
Nitrogen, Total	mg/L	*		-	once/quarter	grab
Phosphorus, Total	mg/L	*		-	once/quarter	grab
<b>HYDROCARBONS</b>						
Benzene	µg/L	*		-	once/quarter	grab
Ethylbenzene	µg/L	*		-	once/quarter	grab
Toluene	µg/L	*		-	once/quarter	grab
Xylene	µg/L	*		-	once/quarter	grab
<b>OTHER</b>						
Chloride	mg/L	*		-	once/quarter	grab
Chloride + Sulfate	mg/L	1000		-	once/quarter	grab
Fluoride	mg/L	*		-	once/quarter	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE APRIL 28, 2017. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)**

<b>OUTFALL #001-003</b> <i>Stormwater Only</i>		<b>TABLE A-2</b> <b>FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>				
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 <b>February 1, 2020</b> . Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL LIMITATIONS		BENCHMARKS	MONITORING REQUIREMENTS <sup>∞</sup>	
		DAILY MAXIMUM	MONTHLY AVERAGE		MEASUREMENT FREQUENCY <sup>∠</sup>	SAMPLE TYPE
<b>PHYSICAL</b>						
Flow	MGD	*		-	once/quarter	24 hr. est.
Precipitation	inches	*		-	once/quarter	measured
<b>CONVENTIONAL</b>						
Biochemical Oxygen Demand	mg/L	45		-	once/quarter	grab
Chemical Oxygen Demand	mg/L	90		-	once/quarter	grab
Oil & Grease	mg/L	15		-	once/quarter	grab
pH <sup>Ω</sup>	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
<b>METALS</b>						
Aluminum, Total Recoverable***	µg/L	**		750	once/quarter	grab
Antimony, Total Recoverable	µg/L	*		-	once/quarter	grab
Arsenic, Total Recoverable***	µg/L	**		33	once/quarter	grab
Beryllium, Total Recoverable	µg/L	8.2		-	once/quarter	grab
Boron, Total Recoverable	µg/L	*		-	once/quarter	grab
Cadmium, Total Recoverable	µg/L	8.2		-	once/quarter	grab
Chromium (III), Total Recoverable	µg/L	*		-	once/quarter	grab
Chromium (VI), Dissolved	µg/L	**		15	once/quarter	grab
Cobalt, Total Recoverable	µg/L	*		-	once/quarter	grab
Copper, Total Recoverable	µg/L	22		-	once/quarter	grab
Iron, Total Recoverable	µg/L	4000		-	once/quarter	grab
Lead, Total Recoverable	µg/L	*		-	once/quarter	grab
Mercury, Total Recoverable	µg/L	*		-	once/quarter	grab
Nickel, Total Recoverable	µg/L	*		-	once/quarter	grab
Selenium, Total Recoverable***	µg/L	**		8.2	once/quarter	grab
Silver, Total Recoverable***	µg/L	**		8.7	once/quarter	grab
Thallium, Total Recoverable***	µg/L	**		10.3	once/quarter	grab
Zinc, Total Recoverable	µg/L	181		-	once/quarter	grab
<b>NUTRIENTS</b>						
Ammonia as N	mg/L	*		-	once/quarter	grab
Nitrogen, Total	mg/L	*		-	once/quarter	grab
Phosphorus, Total	mg/L	*		-	once/quarter	grab
<b>HYDROCARBONS</b>						
Benzene	µg/L	*		-	once/quarter	grab
Ethylbenzene	µg/L	*		-	once/quarter	grab
Toluene	µg/L	*		-	once/quarter	grab
Xylene	µg/L	*		-	once/quarter	grab
<b>OTHER</b>						
Chloride	mg/L	*		-	once/quarter	grab
Chloride + Sulfate	mg/L	1000		-	once/quarter	grab
Fluoride	mg/L	*		-	once/quarter	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE <b>APRIL 28, 2020</b> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

REPORTING REQUIREMENT	CONTENTS OF REPORT	SUBMISSION FREQUENCY
Annual Composting Report	See Annual Report Section on page 8	once/year
REPORTS SHALL BE SUBMITTED <b>ANNUALLY</b> ; THE FIRST REPORT IS DUE <b>JANUARY 28, 2018</b>		

See notes on page 5

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

- \* Monitoring requirement only.
- \*\* This parameter is associated with a benchmark value. See special conditions #10-13 for more information.
- \*\*\* Permittee must utilize an approved CWA test method (Part 136) for all pollutants which has reportable results below the water quality standards. For these particular metals, EPA Method 200.8 is the recommended method which will achieve desired results.
- ∞ 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. Reporting no discharge in quarters where discharge has occurred is a violation of this permit.
- 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 <sup>th</sup>
Second	April, May, June	Sample at least once during any month of the quarter	July 28 <sup>th</sup>
Third	July, August, September	Sample at least once during any month of the quarter	October 28 <sup>th</sup>
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 <sup>th</sup>

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

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
3. All outfalls must be clearly marked in the field.
4. Water Quality Standards

C. SPECIAL CONDITIONS (CONTINUED)

- (a) To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
  - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
  - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
  - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
  - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
  - (5) There shall be no significant human health hazard from incidental contact with the water;
  - (6) There shall be no acute toxicity to livestock or wildlife watering;
  - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
  - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

5. 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).

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

7. Reporting of Non-Detects

- (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
- (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non-Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
- (c) The permittee shall 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).

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

C. SPECIAL CONDITIONS (CONTINUED)

9. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 *et. seq.*) and the use of such pesticides shall be in a manner consistent with its label.
10. The purpose of the Stormwater Pollution Prevention Plan (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 effectively 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.
11. 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](http://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.
  - (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/AIP050212.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.
12. 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 measurable progress towards achieving the benchmarks is a permit violation.
13. 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.

### C. SPECIAL CONDITIONS (CONTINUED)

- (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 to comply with general water quality criteria, effluent limits, or benchmarks. This could include the use of straw bales, silt fences, or sediment basins, if needed.
  - (f) Ensure 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.
14. 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.
15. Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the SWPPP and made available to the department upon request.
16. Dyes used in the composting facility shall not cause discoloration of the receiving stream to protect the general criteria found at 10 CSR 20-7.031 (4).
17. The permittee shall not stockpile raw materials other than yard waste for periods greater than 24 hours. The composting mix shall not include more than 5% by volume of animal manure, sludges, or similar materials. If included, these materials shall be mixed into the compost piles and shall not be stockpiled separately for more than 24 hours.
18. The permittee shall not add any non-biodegradable materials to be placed in the compost. Bags containing both non-biodegradable sealers and non-biodegradable plastics are considered to be non-biodegradable for purposes of this permit.
19. The composting area shall have an impervious base that prevents leakage to groundwater or to the landfill. The base may be of asphalt, concrete or compacted earth and shall comply with the permeability limitations under 10 CSR 20-8.020 (13)(A).
20. If "No Discharge" is reported on the DMR for the quarter, a daily precipitation log for the quarter must be attached to the "No Discharge" report verifying no qualifying rain events occurred. If there are qualifying rain events in a quarter, but no discharge was reported from the outfall, the permittee may attach photos or other explanation as to why a sample was not taken. It is the discretion of DNR to determine compliance with this special condition. It is a violation of this permit to report no discharge in a quarter when a discharge has occurred.

### D. ANNUAL REPORT

Permittee shall submit an annual report by January 28th of each year for the previous calendar year period. The report shall include information on quantities and types of all raw materials stockpiled or composted during the year; results of any testing performed; quantity of compost sold, disposed, or given away; and quantity on-site at the end of the year.

#### E. SCHEDULE OF COMPLIANCE

Schedules of compliance are allowed under 40 CFR 122.47. The facility shall attain compliance with final effluent limitations for beryllium, cadmium, copper, and zinc at outfalls #001-003 as soon as possible:

1. Within six months of the effective date of this permit, the permittee shall report interim progress made in attaining compliance with the final effluent limits.
2. The permittee shall submit an interim progress report detailing progress made in attaining compliance with the final effluent limits 12 months from effective date.
3. Within 3 years of the effective date of this permit, the permittee shall attain compliance with the final effluent limits for beryllium, cadmium, copper, and zinc.

Please submit interim progress reports to:

Missouri Department of Natural Resources:  
Kansas City Regional Office  
500 NE Colburn Road  
Lee's Summit, MO 64086-4710

**MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FACT SHEET  
FOR THE PURPOSE OF RENEWAL  
OF  
MO-0123790  
CENTROPOLIS SANITARY 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): 4953/2875  
 Application Date: 02/10/2014  
 Expiration Date: 08/13/2014  
 Last Inspection: 04/01/2014 Found to be Not in Compliance

**FACILITY DESCRIPTION:**

Centropolis is an inactive, pre-subtitle D, unlined sanitary landfill which began permitted operations in 1979. At the time of this permit renewal, the facility is undergoing extensive earthwork to comply with slope grade requirements for DNR Solid Waste closure. The facility has an operating commercial compost operation on the cap of the landfill, which was approved by the Department's Solid Waste Management Program (SWMP). The cap of the landfill does not have established vegetation due to slope regrading activities. The facility has three outfalls, which all receive stormwater from both the compost activities and the inactive landfill. This facility does not have a leachate collection structure, inspections by SWMP have not detected any surface discharge of leachate at the facility. Leachate has not been seen on the surface of the landfill in a number of years; however, according to Cecilia Campbell of SWMP, in the 1990s, the owner of the landfill placed approximately 40 feet of fill over the entire site, which greatly limits any surfacing of leachate. Leachate management at this site is under the jurisdiction of SWMP.

**PERMITTED FEATURES TABLE:**

OUTFALL	AVERAGE FLOW (MGD)	FLOW IN 10 YR 24 HR RAIN EVENT (MGD)	TREATMENT LEVEL	EFFLUENT TYPE
#001	dependent on precipitation	2.94	BMPs	Landfill and compost stormwater
#002	dependent on precipitation	0.33	BMPs	Landfill and compost stormwater
#003	dependent on precipitation	0.59	BMPs	Landfill and compost stormwater

**FACILITY PERFORMANCE HISTORY & COMMENTS:**

The electronic discharge monitoring reports were reviewed for the last five years. The permit writer noted that the permittee reported no discharge for nearly every parameter for the entire five years. The permittee reported no discharge on parameters which required sampling yearly. If "No Discharge" is reported on the DMR for the quarter, a daily precipitation log for the quarter must be attached to the "No Discharge" report verifying no discharge occurred. The reported amount must come from the nearest NOAA weather station, or other official gauge, not the permittee's personal rain gauge. If any rain events exceeded 0.1 inches, but no discharge is reported on the DMRs, the permittee may wish to attach photographs documenting no discharge or an explanation as to why no sample was obtained. It is a violation of this permit to report no discharge for quarters where discharge has occurred.

The small amount of available data showed exceedances at outfall #001 for COD, copper, settleable solids, and total suspended solids. Outfall #002 showed exceedances of COD, pH, settleable solids, and total suspended solids. Additionally, beryllium, zinc and thallium were reported to exceed water quality standards at outfall #002, although they were monitoring only in the last permit cycle. The permittee supplied additional laboratory data, received 09/14/2016, which showed thallium to be a non-detect at outfall #002. Iron appeared to be entered incorrectly in MoCWIS, and amounts reported, if truly in mg/L and not µg/L, greatly exceed the water quality standards. There were no exceedances reported for outfall #003. Application materials received by the Department on 04/22/2016 show exceedances at outfall #001 of COD, TSS, settleable solids, and iron. Application materials show exceedances at outfall #002 for COD, TSS, settleable solids, and iron. Additionally, detection limits were not adequate on the analyses for beryllium, selenium, and silver to determine compliance with the water quality standards. No exceedances were shown at outfall #003 in the application materials. The additional laboratory data received 09/14/2016 included sufficiently sensitive analyses for selenium and silver. It is required by Standard Conditions Part I that the permittee utilize sufficiently sensitive analysis for pollutants in this permit. This means the test methods used must have a reporting limit below the water quality standard. If questions remain about appropriate testing methods, the Kansas City Regional Office should be contacted to resolve the issue before analyses for DMRs are performed.

The facility was found to be out of compliance during their last WPP inspection, dated 04/01/2014. The inspector noted the outfalls were not marked and diesel fuel tanks were not in containment. No leachate seepage was detected at the time of the inspection.

The last documented solid waste site visit occurred on 04/19/2016. The inspector noted an area where dye had seeped out of the mulch piles and was pooling on the landfill surface. Photographs from that visit, and a visit by the permit writer to an adjacent facility, show much of the site to be un-vegetated bare soil and concrete rip-rap. Piles of woody debris are stored on the cap of the landfill by the composting company. The permit writer observed a small stream which appeared to qualify as a water of the state which ran between Centropolis Landfill and the neighboring site. Due to the hypsography of the area, discharge from Centropolis enters this water and eventually flows to Blue River. The north/east slope of the landfill was observed to be very steep by the permit writer; however, earthwork is in progress on site to lower the slope ratio. It is in the permit writer's professional opinion that the solids being released during these land disturbance activities are the primary pollutant of concern at this site. Reducing solids in the discharge would likely bring other exceedances into compliance. Additional BMP measures will address the heavy sediment load indicated in the DMRs.

**FACILITY MAP:**

The tree line seen in this aerial photograph to the north and east of the landfill were removed as part of the slope regrading activities.



**Part II. RECEIVING STREAM INFORMATION**

**RECEIVING WATER BODY'S WATER QUALITY:**

The receiving stream Tributary to Blue River has no concurrent water quality data available. The first classified receiving water body, Blue River (P) 418, is found on the 2006 303(d) list for *E. coli* contamination. The Blue River (P) 0418 is also under a TMDL promulgated in 2001 for chlordane. This facility is not expected to contribute to either of these impairments; the facility is not mentioned specifically in the TMDL and has no WLA associated with its discharge. No additional relevant stream surveys were found. The watershed of the Blue River is highly industrialized. The watershed is classified as Metropolitan No-Discharge per 10 CSR 20-7.015 Table F, and is subject to specific effluent limitations found at 10 CSR 20-7.015(5). These limitations state no discharge of wastewater is authorized within the watershed, with the exception of uncontaminated stormwater flows. Centropolis landfill is authorized to discharge only uncontaminated stormwater, and is thus not affected by the Metropolitan No-Discharge designation.

**303(D) LIST:**

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

- ✓ Applicable; Blue River is listed on the 2006 Missouri 303(d) list for *E. coli*.
- ✓ This facility is not considered a source of the above listed pollutant or considered to contribute to the impairment.

**TOTAL MAXIMUM DAILY LOAD (TMDL):**

A TMDL is a calculation of the maximum amount of a given pollutant 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 or TMDL may be developed. The TMDL shall include the WLA calculation. <http://dnr.mo.gov/env/wpp/tmdl/>.

- ✓ Applicable; Blue River is associated with the 2001 EPA approved TMDL for chlordane.
- ✓ This facility is not considered to be a source of the above listed pollutant or considered to contribute to the impairment. This facility is not mentioned in the TMDL document.

**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:

**RECEIVING STREAMS TABLE:**

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	DISTANCE TO SEGMENT (MILES)	12-DIGIT HUC
#001	Tributary to Blue River	n/a	n/a	GEN	0.0	10300101-0106 Outlet Blue River
	Blue River	P	418	AQL, IND, HHP, IRR, LWV, SCR, WBC-B	1.0	
#002	Tributary to Blue River	n/a	n/a	GEN	0.0	
	Blue River	P	418	AQL, IND, HHP, IRR, LWV, SCR, WBC-B	0.75	
#003	Tributary to Blue River	n/a	n/a	GEN	0.0	
	Blue River	P	418	AQL, IND, HHP, IRR, LWV, SCR, WBC-B	0.8	

n/a not applicable

WBID = Waterbody IDentification: 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](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 1<sup>st</sup> 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(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.

### **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)].

#### **ANTI-BACKSLIDING:**

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

- ✓ Limitations in this operating permit for the reissuance 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) which would have justified the application of a less stringent effluent limitation.
  - The limit on total recoverable iron was increased from 1639 µg/L maximum daily limit with an 817 µg/L monthly average limit to 4000 µg/L daily maximum limit. Previous limits for this parameter were based on the 1000 µg/L chronic water quality standard for protection of aquatic life. This permit utilizes acute limits on parameters where available. 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 review of newly available studies, it is in the best professional judgment of the permit writer that a discharge from this outfall at 4000 µg/L per storm event has no reasonable potential to cause an exceedance of the instream chronic water quality standard of 1000 µg/L over four days. 4000 µg/L as a maximum daily limit is therefore protective of the receiving stream's aquatic life.
  - The limit is removed from chloride (previous permit limits were 858.7 µg/L daily maximum and 428 µg/L monthly average. DMR data indicates no reasonable potential for exceedances of the water quality standard by this parameter.
- ✓ The Department determined technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
  - Monthly averages were not implemented for outfalls #001-#003 in this permit as the discharge consists of only stormwater which is not continuous pursuant to 40 CFR 122.45(d). Further, average monthly limitations are impracticable measures of non-continuous stormwater discharges because they vary widely in frequency, magnitude, and duration. This permit applies only acute short-term or daily maximum measures which represent stormwater discharges which are acute and sporadic in nature. Discharges of industrial stormwater rarely persist for long durations, making them impracticable to assess using measures with long term exposures or averaging periods. Last, the instream water quality target remains unchanged and the conditions of this permit are protective of both narrative and numeric water quality criteria.
- ✓ Several parameters that were monitoring only in the previous permit cycle were removed from this permit. The following parameters will no longer be monitored in this permit: barium, calcium, conductivity, sodium, total organic carbon, total hardness, magnesium, manganese, and vanadium. For more information on the removal of these parameters, see justifications in the fact sheet.

#### **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. The permittee has not currently proposed additional outfalls in this permit or changes in the flows to the currently permitted outfalls; however, the permittee is performing

considerable earthwork at this site, and should apply anti-degradation analyses to any new or expanded discharges expected to be a result of any construction, earthwork, composting, or vegetation removal activities. Discharges to new outfalls must be approved by the DNR Water Protection program through a modification to this operating permit. Discharge which occurs anywhere but from a permitted outfall is a violation of this permit.

#### **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 limitations of the permit.

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 only outfalls will generally 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 inspections of the stormwater BMPs occur monthly, facilities with no compliance issues are usually expected to sample stormwater quarterly.

Numeric benchmark values are based on water quality standards or other stormwater permits including guidance forming the basis of Environmental Protection Agency's (EPA's) *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* (MSGP). 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 SWPPPs and is deemed protective of instream water quality and aquatic life.

#### **BIOSOLIDS & SEWAGE SLUDGE:**

Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for beneficial use (i.e. fertilizer). Sewage sludge is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information: <http://extension.missouri.edu/main/DisplayCategory.aspx?C=74> (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.

- ✓ Not applicable; this facility is not currently required to monitor groundwater for the Water Protection Program

#### **INDUSTRIAL SLUDGE:**

Industrial sludge is solid, semi-solid, 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.

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

**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 causing or have the reasonable potential to cause (or contribute to) an in-stream excursion above narrative or numeric water quality standards. If the permit writer determines 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 [40 CFR Part 122.44(d)(1)(iii)].

- ✓ Not applicable; an RPA was not conducted for this facility. This permit establishes permit limits for stormwater. The department has determined stormwater is not a continuous discharge and is therefore not subject to mathematical RPAs. However, the permit writer completed an RPD, a reasonable potential determination, using best professional judgment for all of the appropriate parameters in this permit. An RPD consists of reviewing application data and/or the discharge monitoring data for the last five years and comparing those data to the water quality standard, along with other site specific assessments.

**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.

- ✓ Applicable; the time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(12)]. The facility has been given a three year schedule of compliance to meet final effluent limits for beryllium, cadmium, copper, and zinc at outfalls #001-003. The facility is undergoing substantial regrading. It is anticipated that vegetation will be established on the cap, which could have positive effects on DMRs. The site is sizeable, and therefore could take a substantial amount of time to improve BMPs. Three years allows time for construction and re-vegetation to be completed and updating of BMPs to meet the final limits in this permit.

**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 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 climatic conditions, size of watershed, amount of surfaces with reduced permeability (houses, parking lots, and the like) in the watershed, hydrogeology, topography, etc. Decreased permeability increases the flash of the stream.

It is likely 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 a 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(4) and (5)(4)4.B.]. 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 staff drafting this fact sheet are unable to perform statistical Reasonable Potential Analysis (RPA) and calculate Wasteload Allocations (WLA) via a site-specific mass-balance equation for effluent limit determination. However, staff will use their best professional judgment in determining if a facility has a potential to violate Missouri's Water Quality Standards.

**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; the operating permit is not drafted under premise 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 discharge into the receiving stream without endangering water quality. Two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs) are reviewed. If one limit does provide adequate protection for the receiving waters, then the other must be used.

- ✓ Applicable; wasteload allocations were calculated where relevant using water quality criteria or water quality model results and by applying the dilution equation below:

$$C = \frac{(C_s \times Q_s) + (C_e \times Q_e)}{(Q_e + Q_s)} \quad \text{(EPA/505/2-90-001, Section 4.5.5)}$$

Where C = downstream concentration      C<sub>s</sub> = upstream concentration  
           Q<sub>s</sub> = upstream flow                      C<sub>e</sub> = effluent concentration              Q<sub>e</sub> = effluent flow

- Acute wasteload allocations (daily maximum limits; MDL) were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).
- Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA’s *Technical Support Document For Water Quality-based Toxics Control* or TSD EPA/505/2-90-001; March 1991.
- Number of Samples “n”: In accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance which should be, at a minimum, targeted to comply with the values dictated by the WLA. Therefore, it is recommended the actual planned frequency of monitoring normally be used to determine the value of “n” for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for “n” must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is “n = 4” at a minimum. For total ammonia as nitrogen, “n = 30” is used.

**WLA MODELING:**

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

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

**WATER QUALITY 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. Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures the provisions in 10 CSR 20-6 and the Water Quality Standards in 10 CSR 20-7 are being met. Under 10 CSR 20-6.010(8)(A)4, the department may require other terms and conditions it deems necessary to assure compliance with the CWA and related regulations of the Missouri Clean Water Commission. The following Missouri Clean Water Laws (MCWL) apply: §644.051.3. requires the department to set permit conditions complying with the MCWL and CWA; §644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits); and §644.051.5. is the basic authority to require testing conditions.

- ✓ Not applicable; at this time, the permittee is not required to conduct WET testing for this facility. This facility discharges stormwater only. Additionally, the pollutants of concern are well characterized in the landfill industry, and are limited for in this permit.

**Part IV. 2013 WATER QUALITY CRITERIA FOR AMMONIA**

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

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

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

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

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

Ammonia toxicity varies by temperature and by pH of the water. Assuming a stable pH value, but taking into account winter and summer temperatures, Missouri includes two seasons of ammonia effluent limitations. The current permit requires year-round quarterly monitoring.

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

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

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

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

Operating permits for facilities in Missouri must be written based on current statutes and regulations. Therefore permits will be written with the existing effluent limitations until the new standards are adopted. To aid permittees in decision making, an advisory will be added to permit Fact Sheets notifying permittees of the expected effluent limitations for ammonia. When setting schedules of compliance for ammonia effluent limitations, consideration will be given to facilities that have recently constructed upgraded facilities to meet the current ammonia limitations. For more information on this topic feel free to contact the Missouri Department of Natural Resources, Water Protection Program, Water Pollution Control Branch, Operating Permits Section at (573) 751-1300.

**Part V. EFFLUENT LIMITS DETERMINATION**

**EFFLUENT LIMITATION GUIDELINE 40 CFR PART 445 LANDFILL POINT SOURCE CATEGORY**

The EPA has developed effluent limitation guidelines for wastewater discharges associated with the operation and maintenance of landfills regulated under RCRA Subtitle D, non-hazardous waste landfills. The wastewater flows which are covered by the rule include leachate, gas collection condensate, drained free liquids, laboratory-derived wastewater, contaminated stormwater and contact wash water from truck exteriors and surface areas which have come into direct contact with solid waste at the landfill facility. Contaminated groundwater that is treated and discharged is excluded from this guideline. All landfills in the State of Missouri are required under Solid Waste law [10 CSR 80-3.010(8)] to prevent stormwater flow onto the active portion of the sanitary landfill during peak discharge from at least a twenty-five year storm, and should therefore not release contaminated stormwater due to contact with the working face. Centropolis is considered an “inactive” landfill per DNR Solid Waste. The facility no longer accepts waste and does not have exposed working faces of landfill at any time. Although the facility has not received official closure from Solid Waste, the landfill is capped, and all stormwater flows from the cap are considered exempt from ELG limitations. This site does not intend, nor is it engineered, to discharge treated leachate. Stormwater impacted by leachate is considered wastewater under 40 CFR 445.2, and must be treated in a no-discharge manner. Discharge of leachate contaminated stormwater, or any other landfill wastewater, is a violation of this permit. The ELG limitations are provided in this fact sheet for informational purposes only, and do not apply to this facility.

<b>ELG Limitations</b>		
<b>Regulated Parameter</b>	<b>Daily Maximum (mg/L)</b>	<b>Monthly Average (mg/L)</b>
BOD <sub>5</sub>	140	37
TSS	88	27
Ammonia as N	10	4.9
$\alpha$ – Terpeneol	0.033	0.016
Benzoic Acid	0.12	0.071
p-Cresol	0.025	0.014
Phenol	0.026	0.015
Zinc	0.20	0.11
pH	6.0-9.0 SU	-

**OUTFALL #001-#003 – STORMWATER OUTFALLS**

Effluent limitations derived and established in the below effluent limitations table are based on current operations of the facility. Effluent means both process water and stormwater. Any flow through the outfall is considered a discharge and must be sampled and reported as provided below. 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 OUTFALLS #001-003	UNIT	BASIS	DAILY MAXIMUM LIMIT	BENCH- MARK	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 <sub>5</sub>	MG/L	6	60	-	60/45	ONCE/QUARTER	ONCE/QUARTER	GRAB
COD	MG/L	6	90	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
CONDUCTIVITY								
REMOVED FROM THIS PERMIT								
OIL & GREASE	MG/L	1, 3	15	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
pH †	SU	1, 3	6.5 TO 9.0	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
SETTLABLE SOLIDS	ML/L/HR	6	1.5	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
TOTAL DISSOLVED SOLIDS	MG/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
TOTAL ORGANIC CARBON								
REMOVED FROM THIS PERMIT								
TSS	MG/L	6	80	-	80/50	ONCE/QUARTER	ONCE/QUARTER	GRAB
METALS								
REMOVED FROM THIS PERMIT								
TOTAL HARDNESS								
REMOVED FROM THIS PERMIT								
ALUMINUM, TOTAL RECOV.	µg/L	6	**	750	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
ANTIMONY, TOTAL RECOV.	µg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
ARSENIC, TOTAL RECOVER.	µg/L	6	**	33	*/*	ONCE/QUARTER	ONCE/QUARTER	GRAB
BARIUM, TOTAL RECOVER.								
REMOVED FROM THIS PERMIT								
BERYLLIUM, TOTAL RECOV.	µg/L	6	8.2	-	*/*	ONCE/QUARTER	ONCE/QUARTER	GRAB
BORON, TOTAL RECOV.	µg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
CADMIUM, TOTAL RECOV	µg/L	6	8.2	-	*/*	ONCE/QUARTER	ONCE/QUARTER	GRAB
CHROMIUM (III), TOT. REC.	µg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
CHROMIUM (VI), DISS.	µg/L	3,6	**	15	*/*	ONCE/QUARTER	ONCE/QUARTER	GRAB
COPPER, TOTAL RECOVER.	µg/L	3,6	22	-	26/13	ONCE/QUARTER	ONCE/QUARTER	GRAB
IRON, TOTAL RECOVERABLE	µg/L	3, 8	4000	-	1643/816	ONCE/QUARTER	ONCE/QUARTER	GRAB
LEAD, TOTAL RECOVERABLE	µg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
MAGNESIUM, TOTAL REC.								
REMOVED FROM THIS PERMIT								
MANGANESE, TOT. RECOV.								
REMOVED FROM THIS PERMIT								
MERCURY, TOTAL RECOV.	µg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
NICKEL, TOTAL RECOV.	µg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
SELENIUM, TOTAL RECOV.	µg/L	3, 6	**	8.2	*/*	ONCE/QUARTER	ONCE/QUARTER	GRAB
SILVER, TOTAL RECOVER.	µg/L	3, 6	**	8.7	*/*	ONCE/QUARTER	ONCE/QUARTER	GRAB
THALLIUM, TOTAL RECOV.	µg/L	3, 6	**	10.3	*/*	ONCE/QUARTER	ONCE/QUARTER	GRAB
VANADIUM, TOTAL RECOV.								
REMOVED FROM THIS PERMIT								
ZINC, TOTAL RECOVERABLE	µg/L	6	181	-	*/*	ONCE/QUARTER	ONCE/QUARTER	GRAB
NUTRIENTS								
AMMONIA AS N	mg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
NITROGEN, TOTAL	mg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
PHOSPHORUS, TOTAL	mg/L	6	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
HYDROCARBONS								
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 additional parameters and notes on page 12

PARAMETERS OUTFALLS #001-003, CONTINUED	UNIT	BASIS	DAILY MAXIMUM LIMIT	BENCH- MARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
TOTAL XYLENE	µg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
OTHER								
CALCIUM	REMOVED FROM THIS PERMIT							
CHLORIDE	mg/L	6	*	*	858.7/428	ONCE/QUARTER	ONCE/QUARTER	GRAB
CHLORIDE + SULFATE	mg/L	1,6	1000	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
FLUORIDE	mg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
SODIUM, TOTAL RECOVER.	REMOVED FROM THIS PERMIT							

\* - Monitoring requirement only ‡ 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            |
| 2. Water Quality Standard (includes RPA) | 6. Best Professional Judgment     |
| 3. Water Quality Based Effluent Limits   | 7. TMDL or Permit in lieu of TMDL |
| 4. Antidegradation Review/Policy         |                                   |

**DERIVATION AND DISCUSSION OF LIMITS:**

**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. If no discharge is reported in a quarter, a log demonstrating no qualifying precipitation events of greater than 0.1 inches occurred in the quarter must be attached to the no-discharge report and submitted to the SLRO. Additional documentation of no-discharge of the outfall may be attached by the permittee, such as a clarifying report or photograph, if the permittee determines the qualifying rain event did not cause discharge.

**CONVENTIONAL:**

**Biochemical Oxygen Demand (BOD<sub>5</sub>)**

Daily maximum limit of 45 mg/L. There were no reported exceedances of this parameter in the previous permit cycle. BOD is a pollutant of concern for the landfill industry, as identified in the ELG found at 40 CFR 445 subpart B. Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's water quality. Effluent limitations have been retained from previous state operating permit; please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information**.

**Chemical Oxygen Demand (COD)**

90 mg/L daily maximum limit. This is continued from the previous permit. COD is a pollutant of concern at this site, as demonstrated by DMRs from the last five years. There were 3 exceedances in the previous permit cycle of these limits; additionally, application materials received 04/22/2014 indicate exceedances of this limit at outfall #001 and #002. No exceedances were reported for outfall #003. 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. The maximum value reported was 715 mg/L, this reflects an amount that could cause harm to aquatic life in the receiving stream. A limit continues to be necessary to protect the general criteria found at 10 CSR 20-7.031(4).

**Conductivity**

This parameter will be used from this permit. Conductivity is used as an indicator parameter to indicate increased non-organic pollutants in the water, such as metals. This permit has other indicator parameters which convey the same information, therefore this parameter is duplicative in purpose, and will be removed.

**Oil & Grease**

15 mg/L daily maximum limit. The previous permit required a 15 mg/L daily maximum limit, and a 10 mg/L monthly average limit. In the last permit cycle there was only one reported analysis for this parameter at any of the three outfalls, which was 10 mg/L. The application materials received 04/22/2014 reported "believed absent" for outfall #001, a non-detect at outfall #002, and "believed absent" at outfall #003. The permit writer uses best professional judgment to retain this parameter in the permit, as it is a pollutant of concern at landfill facilities. This site, in particular, has heavy truck traffic, and additionally has a compost facility with processing machinery onsite. These factors lead to an increased chance of oil or grease being released. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or toluene, but these constituents are often lost during testing due to their boiling points. It is recommended to perform separate testing for these constituents if they are a known pollutant of concern at the site, i.e. aquatic life toxicity or human health is a concern. Results do not allow for separation of specific pollutants within the test, they are reported, totaled, as "Oil and grease". Per 10 CSR 20-7.031 Table A: *Criteria for Designated Uses*, 10 mg/L is the standard for the protection of aquatic life. 10 mg/L is also the level at which sheen is estimated 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. The daily maximum was calculated using the *Technical Support Document for Water Quality-Based Toxics Control* (EPA/505/2-90-001). Section 5.4.2 indicates the waste load allocation can be set to the chronic standard. When the chronic standard is multiplied by 1.5, the daily maximum can be calculated. Hence,  $10 * 1.5 = 15$  mg/L for the daily maximum.

**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. This limit is retained from the previous permit.

**Settleable Solids (SS)**

Daily maximum limit of 1.5 mL/L/hr. This limit is retained from the previous permit. There were two exceedances of these limits in the previous permit cycle. There is no water quality standard for SS; however, sediment discharges can negatively impact aquatic life habitat. 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. This facility is doing extensive grading activities in order to meet closure requirements from DNR Solid Waste. Settleable solids can be a significant issue for facilities underground land disturbance. In addition, this facility has a composting operation on the cap. Composting operations with poor BMPs can contribute a heavy sediment load to a discharge. It is the responsibility of the permittee to ensure migration of solids is prevented as much as reasonably possible from this site.

**Total Dissolved Solids (TDS)**

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 Organic Carbon**

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, therefore this parameter will be removed.

**Total Suspended Solids (TSS)**

80 mg/L as a Daily Maximum Limit. This daily maximum is retained from the previous permit; the previous permit also required a 50 mg/L monthly average limit. There were 3 exceedances of this parameter in the last permit cycle; however, this value has been found to be achievable at other similar sites, and the permit writer finds no justification to raise this limit under anti-backsliding regulations. Additionally, TSS exceeding the permitted limits was reported at outfall #001 and outfall #002 in the application materials dated 04/22/2014. There are no water quality standards for TSS; however, sediment discharges can negatively impact aquatic life habitat. For this reason, the general criteria found at 10 CSR 20-7.031 (4)(D) will apply. This criteria states, "Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal, or

aquatic life.” The TSS reported at these outfalls ranged from 15 mg/L to 220 mg/L. Increased suspended solids in runoff can lead to decreased available oxygen for aquatic life and an increase of surface water temperatures in a receiving stream, as well as clogging the gills of fish and invertebrates. Using best professional judgment and data from other industrial sites, 80 mg/L is protective of the general criteria.

In addition to the above, TSS is a valuable indicator parameter. Suspended solids may attach to other pollutant particulates. TSS monitoring allows the permittee to identify increases in TSS that may indicate uncontrolled materials leaving the site. High levels of TSS such as those reported by this facility indicate the possibility that substantial amounts of pollutants are leaving the site adsorbed to suspended solids. Composting operations with poor BMP measures have the potential to contribute heavy loads of sediment to the discharge. It is important that BMPs used by the composting operation are well maintained to prevent damage to the receiving stream.

**METALS:**

Acute effluent limitations and benchmarks for total recoverable metals with only chronic water quality criteria were developed using methods and procedures outlined in the *Technical Support Document For Water Quality-based Toxic Controls* (EPA/505/2-90-001) and *The Metals Translator: Guidance For Calculating a Total Recoverable Permit Limit From a Dissolved Criterion* (EPA 823-B-96-007). Limits and benchmarks for metals with acute water quality standards were developed from the acute criteria with no mixing. General warm-water habitat criteria apply (WWH) designated as AQL in 10 CSR 20-7.031 Table A. Additional use criterion (HHP, DWS, GRW, IRR, or LWW) may also be used as applicable to determine the most protective effluent limit for the stream class and uses.

When ambient site specific hardness data is not available, standard water hardness of 162 mg/L is used in the conversion below. Additionally, when there are no site specific translator studies, partitioning between the dissolved and absorbed phases is assumed 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, the department may integrate those findings into derivation of the water quality limits. Conversion factors for Cd and Pb are hardness dependent. N/A means not applicable.

METAL	CONVERSION FACTORS USING HARDNESS OF 162 MG/L	
	ACUTE	CHRONIC
Aluminum	N/A	N/A
Antimony	N/A	N/A
Arsenic	1	1
Beryllium	N/A	N/A
Cadmium	0.924	0.889
Chromium III	0.316	0.860
Chromium VI	N/A	N/A
Copper	0.960	0.960
Iron	N/A	N/A
Lead	0.721	0.721
Mercury	0.85	N/A
Nickel	0.998	0.997
Selenium	N/A	N/A
Silver	0.850	N/A
Thallium	N/A	N/A
Zinc	0.978	0.986

**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 162 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.

**Aluminum, Total Recoverable**

Monitoring, with a 750 µg/L daily maximum benchmark. This is a new parameter for this permit, and is added per the permit writer’s best professional judgment. Aluminum is a common pollutant of concern at landfills, and quarterly monitoring will be added to assess this facility’s potential to discharge this pollutant. A benchmark is added based on technology. A benchmark gives the facility a guideline for assessing whether their BMP technology is performing as designed.

**Antimony, Total Recoverable**

Monitoring only, continued from the previous permit. This pollutant was reported believed absent at outfall #001 and #003, and a non-detect was reported for outfall #002 in the application materials received 04/22/2014. It is in the best professional judgment of the permit writer to continue monitoring for this pollutant at all outfalls because it is a pollutant of concern at landfill sites. Antimony is mainly used in the production of flame retardants. It is also found as an alloy with lead in lead-acid batteries and as an opacifier in enamel. There is a potential for wastes from these uses to be found at a waste disposal site. There have been no exceedances of this parameter at these outfalls in the last permit cycle, and the single value reported (50 µg/L) was well below the HHF water quality standard of 4300 µg/L. There is not enough data for this parameter to determine reasonable potential, therefore monitoring will continue.

**Arsenic, Total Recoverable**

Monitoring with a 33 µg/L daily maximum benchmark. The previous permit required monitoring only for this parameter. The only data reported in the last permit cycle for all three outfalls was one analysis of 100 µg/L. The application materials received 04/22/2014 reported “believed present” at outfall #001, with no analytical data provided; “believed present” at outfall #002 with a value of 1.1 µg/L; and “believed present” at outfall #003, with no analytical data provided. The chronic Missouri water quality standard for the protection of aquatic life for arsenic is 20 µg/L. The permittee was not consistently utilizing adequately sensitive laboratory methods for analysis of this pollutant in the previous permit cycle (see Part VI, Sufficiently Sensitive Analytical Methods). The permittee must use sufficiently sensitive methods to determine actual levels of arsenic in the effluent at these outfalls. The permittee supplied additional laboratory data (received 09/14/2016) which showed arsenic as a non-detect with a detection limit of 1.0 µg/L at outfalls #001 and #003. Because of the limited availability of data, it is in the best professional judgment of the permit writer to require additional monitoring to determine reasonable potential. A benchmark is added for the permittee to assess whether their BMP is performing adequately, and to give guidance to the permittee to determine whether the analysis method chosen is adequate to meet water quality standards.

AQL WQS: 20 µg/L

LTA<sub>c</sub>: 20 (0.527) = 10.54 [CV = 0.6, 99<sup>th</sup> Percentile]

Maximum Daily Benchmark: 10.54 (3.11) = 32.78 = **33 µg/L**

**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. Outfall #002 had the only reported data point for this parameter at 90 µg/L, and 85 µg/L in the application materials received 04/22/2016. The drinking water standard for this pollutant is 2000 µg/L, so the reported value is significantly less than the standard, indicating it is not at a level to harm human health. In addition, treatment mechanisms for barium are cation exchange, reverse osmosis, and distillation. These methods are not typically utilized in stormwater treatment. Additional analytical results were supplied to the permit writer (received 09/14/2016) showing 14 µg/L at outfall #001 and 13 µg/L at outfall #003. These analytical results supply further support that this pollutant is not present at levels of water quality concern.

**Beryllium, Total Recoverable**

Daily maximum limit of 8.2 µg/L. The previous permit required monitoring only. Beryllium has a large number of industrial uses due to its light weight and particular chemical properties, especially as an alloy. There is potential for wastes from these uses to be found at a landfill site. The only reported data from the last permit cycle was a single analysis at 10 µg/L. The state water quality standard for the protection of aquatic life is 5 µg/L. Due to the potential to exceed the water quality standard, this parameter will be limited to 8.2 µg/L in the next permit cycle. Additionally, it is possible that the permittee is not using sufficiently sensitive methods to determine actual levels of beryllium in the effluent at this outfall (see Part VI, Sufficiently sensitive analytical methods, for more information). A three year schedule of compliance is offered to the facility to meet this new limit.

AQL WQS: 5 µg/L

Set WQS to WLA (when no mixing considerations) = 5 µg/L

LTA<sub>c</sub> = 5 (0.527) = 2.635

MDL = 2.635 (3.11) = 8.1948 = **8.2 µg/L** [CV = 0.6, 99<sup>th</sup> Percentile]

**Boron, Total Recoverable**

Monitoring only, continued from the previous permit. Boron has many 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 these outfalls; however, there are not enough available data points to determine the reasonable potential for exceedance of this parameter. Monitoring will be continued to collect more data.

**Cadmium, Total Recoverable**

Daily maximum limit of 8.2 µg/L. The previous permit required monitoring only. 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 has been only one reported data point for cadmium, which was 20 µg/L. This indicates an exceedance of the acute water quality standard for protection of aquatic life, which is 8.2 µg/L. A limit will be placed on this pollutant in the next permit cycle to protect aquatic life. Additionally, 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 VI, Sufficiently sensitive analytical methods, for more information). A three year schedule of compliance is offered to the facility to meet this new limit.

$$\begin{aligned} \text{Acute AQL WQS:} & e^{(1.0166 * \ln 162 - 3.062490)} * (1.136672 - \ln 162 * 0.041838) = 7.6028 \quad [\text{at Hardness 162}] \\ \text{Acute TR WQS:} & 7.6028 \div 0.9238 = 8.2298 \quad [\text{Total Recoverable Conversion}] \\ \text{Acute WLA:} & \text{WLA} = 8.2298 \quad [\text{WLA=WQS when no mixing}] \\ \text{Daily maximum limit:} & \mathbf{8.2 \mu\text{g/L}} \end{aligned}$$

**Chromium (III), Total Recoverable**

Monitoring only. This is continued from the previous parameter. There was only one value (100 µg/L) reported for this parameter across all three outfalls in the previous permit cycle. 100 µg/L is the IRR water quality standard for this pollutant. 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 VI, Sufficiently sensitive analytical methods, for more information). Monitoring of this parameter will continue due to lack of data to determine potential for exceedances.

**Chromium VI, Total Recoverable**

Monitoring with a daily maximum benchmark of 15 µg/L. The previous permit required monitoring only. The DMRs showed two non-detect values of 100 µg/L, which is above the acute water quality standard for protection of aquatic life found at 10 CSR 20-7.031 table A, which is 15 µg/L. The application reported this pollutant believed absent at outfall #001 and #003, and a value of 10 µg/L was reported on the application data received 04/22/2016. It is in the best professional judgment to require monitoring on this parameter for the next permit cycle to determine the actual level of chromium VI in the effluent. The permittee must use sufficiently sensitive methods in the coming permit cycle (see Part VI, Sufficiently sensitive analytical methods, for more information). A benchmark is added to determine if BMP measures are performing as expected, and to give guidance to the permittee in choosing BMPs and appropriate testing methods.

**Copper, Total Recoverable**

Daily maximum limit of 22 µg/L. The previous permit required 26 µg/L daily maximum limit, with a monthly average of 13 µg/L. There was one exceedance in the previous permit cycle of the limits at outfall #001. Outfall #002 and #003 had no reported exceedances. The application materials received 04/22/2014 reported 23 µg/L at outfall #001, 10 µg/L at outfall #002, and 5 µg/L at outfall #003. The acute water quality standard for protection of aquatic life is 22 µg/L. The values above 22 µg/L reported for this pollutant indicate reasonable potential to exceed water quality standards; therefore, a limit is placed at the acute water quality standard for protection of aquatic life. A three year schedule of compliance is provided for this parameter.

$$\begin{aligned} \text{Acute AQL WQS:} & e^{(0.9422 * \ln 162 - 1.7003)} * 0.960 = 21.163 \quad [\text{at Hardness 162}] \\ \text{Acute TR WQS:} & 21.163 \div 0.96 = 22.048 \quad [\text{Total Recoverable Conversion}] \\ \text{Acute WLA:} & C_e = 22.048 \quad [\text{WLA=WQS when no mixing}] \\ \text{Daily maximum limit} & = \mathbf{22 \mu\text{g/L}} \end{aligned}$$

**Iron, Total Recoverable**

Daily maximum limit of 4000 µg/L. The previous permit required 1639 µg/L as a daily maximum, and a monthly average of 817 µg/L. The increase on limits on this parameter is valid under anti-backsliding regulations due to new information which impacts the validity of the previously assigned limitations. 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. It is in the best professional judgment of the permit writer that a discharge from this outfall at 4000 µg/L per storm event is unlikely to cause an exceedance of the chronic water quality standard of 1000 µg/L over four days. After reviewing other sources of data and studies, it is in the permit writer's best professional judgment to require a 4000 µg/L daily maximum limit for this facility. In accordance with the department's current stormwater permitting, under the direction of EPA guidance, it is the permit writer's best professional judgment that an iron limit of 4000 µg/L is protective of water quality at this facility.

After reviewing five years of DMR data, it is unclear to the permit writer whether exceedances of the limits occurred. A data reporting error had the limits set as 1643 mg/L daily maximum limit rather than µg/L as was appropriate. If the values reported on the DMR sheets are in mg/L, they greatly exceed aquatic life standards. The application materials submitted 04/22/2014 report 5.3 mg/L for outfall #001 and 11 mg/L for outfall #002. Both of these amounts greatly exceed the chronic standard of 1000 µg/L, and both exceed the new limit of 4000 µg/L (4.0 mg/L). Due to the exceedance of the water quality standards, a limit is required for this parameter under 40 CFR 122.44 (d) iii: "When the permitting authority determines, using the procedures in paragraph (d)(1)(ii) of this section, that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a State numeric criteria within a State water quality standard for an individual pollutant, the permit must contain effluent limits for that pollutant." In addition, aquatic life is protected by the general criteria found at 10 CSR 20-7.031(4), which state, "Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life." A schedule of compliance will not be provided to meet this limit, as it is higher than the previous limits on these outfalls.

Source:

Birge, W.J., Black, J.A., Westerman, A.G., Short, T.M., Taylor, S.B., Bruser, D.M. and Wallingford, E.D. 1985  
Recommendations on Numerical Values for Regulating Iron and Chloride Concentrations for the Purpose of Protecting Warmwater Species of Aquatic Life in the Commonwealth of Kentucky. Memorandum of Agreement No. 5429, Kentucky Natural Resources and Environmental Protection Cabinet.

**Lead, Total Recoverable**

Monitoring only, continued from the previous permit. There were no exceedances of water quality standards during the previous permit cycle for this parameter. Lead has numerous industrial uses, including batteries, as an alloy, solder, a coolant, in electronics, and others. Lead is a known common pollutant of concern at sanitary waste disposal sites; therefore, quarterly monitoring will be required for this pollutant.

**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 groundwater standards. The receiving streams for these outfalls are not groundwater. The highest value reported for manganese in the previous permit cycle was a non-detect, with a reporting limit of 50 µg/L on the application. 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. 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.

Sources 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](http://www.who.int/water_sanitation_health/dwq/chemicals/manganese.pdf), last accessed 4/27/2016.

**Mercury, Total Recoverable**

Monitoring only, continued from the previous permit. Mercury is used industrially for the manufacture of chemicals, in fluorescent lights, and in electronics. There is a potential for wastes from these uses to be found at a solid waste disposal site. There have been no exceedances of this parameter at these outfalls; however, data is not sufficient to determine reasonable potential to exceed water quality standards for this pollutant.

**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 potential for wastes from these uses to be found at a solid waste disposal site. There have been no exceedances of this parameter at these outfalls; however, data is not sufficient to determine reasonable potential to exceed water quality standards for this pollutant.

**Selenium, Total Recoverable**

Monitoring only, with a daily maximum benchmark of 8.2 µg/L. The previous permit required monitoring only. After review of five years of data for all three outfalls, only one data point for selenium was found, 50 µg/L. The water quality standard for protection of aquatic life is 5 µg/L. The application materials also report a non-detect with a reporting limit of 100 µg/L. It is possible the reported value in the DMR data is also a non-detect; however, the non-detect in both cases is from a test which is not sensitive enough to meet water quality standards. The permittee must use sufficiently sensitive methods to determine actual levels of selenium in the effluent at this outfall (see Part VI, Sufficiently sensitive analytical methods, for more information). The permittee supplied additional laboratory data (received 09/14/2016) which showed selenium as a non-detect with a detection limit of 1.0 µg/L at outfalls #001-#003. Because of the limited availability of data, it is in the best professional judgment of the permit writer to require additional monitoring to determine reasonable potential. A benchmark is added to assess BMP technology performance and provide guidance to the permittee in determining whether analytical methods are sufficiently sensitive.

AQL WQS: 5 µg/L      Set WQS to WLA (when no mixing considerations) = 5 µg/L  
LTA<sub>c</sub> = 5 (0.527) = 2.635      MDL = 2.635 (3.11) = 8.1948 = **8.2 µg/L** [CV = 0.6, 99<sup>th</sup> Percentile]

**Silver, Total Recoverable**

Monitoring only, with a daily maximum benchmark of 8.7 µg/L. The previous permit required monitoring only. After review of five years of data only one data point for silver was found for outfall #002, 50 µg/L. The acute water quality standard for protection of aquatic life is 8.7 µg/L. The application materials report a non-detect with a reporting limit of 50 µg/L at outfall #002. It is possible the reported value in the DMR data is also a non-detect; however, the both the non-detects are from a test which is not sensitive enough to meet water quality standards. The permittee must use sufficiently sensitive methods to determine actual levels of silver in the effluent at this outfall (see Part VI, Sufficiently sensitive analytical methods for more information). The permittee supplied additional laboratory data (received 09/14/2016) which showed silver as a non-detect with a detection limit of 10 µg/L at outfalls #001-#003. In the future permit cycle, the permittee must utilize an approved CWA test method (Part 136) which detects silver below 8.7 µg/L. EPA Method 200.8 will achieve the desired results. Because of the limited availability of data, it is in the best professional judgment of the permit writer to require additional monitoring to determine reasonable potential. A benchmark is added to assess BMP technology performance and provide guidance to the permittee in determining whether analytical methods are sufficiently sensitive.

Acute AQL WQS:  $e^{(1.72 * \ln 162 - 6.588144)} * 0.850 = 7.389$  [at Hardness 162]

Acute TR WQS:  $7.389 \div 0.850 = 8.69$

Acute WLA: WLA = 8.69 [WLA=WQS when no mixing]

Daily maximum benchmark: **8.7 µg/L**

**Thallium, Total Recoverable**

Monitoring only, continued from the previous permit. The application materials received on 04/22/2014 reported “believed absent” for this pollutant at outfall #001, reported a non-detect with a reporting limit of 1 µg/L at outfall #002, and reported “believed absent” for outfall #003. The previous data reviewed by the permit writer had one data point available at outfall #002, reported as 50 µg/L, per the permittee, 50 µg/L is the non-detect level for the testing method used. It is the professional judgment of the permit writer that the permittee was not utilizing sufficiently sensitive methods to test for this pollutant in the previous permit cycle. The permittee must use sufficiently sensitive methods to determine actual levels of thallium in the effluent at this outfall (see Part VI, Sufficiently sensitive analytical methods, for more information). The permittee supplied additional laboratory data (received 09/14/2016) which showed thallium as a non-detect with a detection limit of 0.5µg/L at outfalls #001-#003. Because of the limited availability of data, it is in the best professional judgment of the permit writer to require additional monitoring to determine reasonable potential.

HHF WQS: 6.3 µg/L

[mixing not allowed when calculating limits based on human health standards; TSD section 5.4.4]

LTA<sub>c</sub> = 6.3 \* 1.64 = **10.3 µg/L**

**Vanadium, Total Recoverable**

This parameter will be removed from this permit. There are no water quality standards for this pollutant, and technology based standards have not been established. Discharges of vanadium will likely be controlled by the same BMPs that control for other metals and solids in this permit.

**Zinc, Total Recoverable**

Daily maximum limit of 181 mg/L. The previous permit required monitoring only for this parameter. No values were reported for this pollutant for outfall #001 in five years of DMRs, 210 µg/L was reported at outfall #002, and no values were reported at outfall #003. The application materials received 04/22/2014 reported zinc as believed absent at all three outfalls, with a non-detect value of <150 µg/L reported at outfall #002. The value reported for outfall #002 exceeds the acute water quality standard for protection of aquatic life of 181 µg/L, therefore a limit will be applied at the acute standard to protect aquatic life in the receiving stream. A three year schedule of compliance is provided for this parameter.

Acute AQL WQS:  $e^{(0.8473 * \ln 162 + 0.884)} * 0.98 = 176.71$  [at Hardness 162]  
 Chronic AQL WQS:  $e^{(0.8473 * \ln 162 + 0.884)} * 0.98 = 176.71$  [at Hardness 162]  
 Acute TR WQS:  $176.71 \div 0.978 = 180.69$  [Total Recoverable Conversion]  
 Daily maximum benchmark = 181 µg/L

**NUTRIENTS:**

**Ammonia, Total as Nitrogen**

Monitoring only, continued from the previous permit. Ammonia is a pollutant of concern in landfill leachate, as indicated by the ELG found at 40 CFR Part 445. Ammonia can also be a pollutant of concern for the composting industry, and is found in the Missouri General Permits for composting operations. Monitoring for this parameter will continue to evaluate the potential of this facility to discharge this pollutant.

**Nitrogen, Total N (TN)**

Monitoring only. This is a new parameter for this permit. Nitrogen is a pollutant of concern in the composting industry. This parameter is added for monitoring to evaluate the potential for this pollutant to be released by this facility.

**Phosphorous, Total P (TN)**

Monitoring only. This is a new parameter in this permit. Phosphorus is a pollutant of concern in the composting industry. This parameter is added for monitoring to evaluate the potential for this pollutant to be released by this facility.

**HYDROCARBONS:**

**Benzene**

Monitoring only, continued from the previous permit. There are not enough data available to determine reasonable potential for this parameter; therefore, quarterly monitoring will continue. The heavy truck traffic and machinery onsite increase the potential for a hydrocarbon release (gas or oil), and benzene is a primary ingredient in fuel and is present in oils.

**Ethylbenzene**

Monitoring only, continued from the previous permit. There are not enough data available to determine reasonable potential for this parameter; therefore, quarterly monitoring will continue. The heavy truck traffic and machinery onsite increase the potential for a hydrocarbon release (gas or oil), and ethylbenzene is a present in both fuels and oils.

**Toluene**

Monitoring only, continued from the previous permit. There are not enough data available to determine reasonable potential for this parameter; therefore, quarterly monitoring will continue. The heavy truck traffic and machinery onsite increase the potential for a hydrocarbon release (gas or oil), and toluene is a present in both fuels and oils.

**Xylene**

Monitoring only, continued from the previous permit. There are not enough data available to determine reasonable potential for this parameter; therefore, quarterly monitoring will continue. The heavy truck traffic and machinery onsite increase the potential for a hydrocarbon release (gas or oil), and xylene is a present in both fuels and oils.

**OTHER:**

**Calcium**

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. Calcium is largely a concern in connection with water hardness. Increased levels of calcium indicate increased water hardness. Water hardness is also not a regulated water quality parameter in the state of Missouri. Calcium is found in high concentrations in streams in Missouri, and the calcium discharged by this facility is not expected to contribute to a water quality issue.

### **Chloride**

Monitoring only. This parameter was limited in the prior permit to 858.7 µg/L daily maximum, and a monthly average limit of 428 µg/L. Review of five years of DMR data indicate this pollutant does not have reasonable potential to exceed water quality standards. It is in the best professional judgment of the permit writer to continue monitoring for this parameter as chloride is a pollutant of concern at landfill sites.

### **Chloride + Sulfate**

Daily maximum limit of 1000 mg/L, continued from the previous permit. Chloride + Sulfate is a parameter of concern at landfill sites. DMR data from the last five years does not indicate a potential to exceed limits at this site, however, extensive earthwork is occurring, with the potential to release increased amounts of pollutants. A limit will protect water quality standards in the receiving stream, and quarterly monitoring will provide data in determining reasonable potential at the next renewal.

### **Fluoride**

Monitoring only, continued from the previous permit. Fluoride is a pollutant of concern at landfill sites. Landfills are one of the few industrial sources of fluoride in surface water. Quarterly monitoring will provide data in determining reasonable potential at the next renewal.

### **Sodium, Total Recoverable**

This parameter will be removed from this permit. Sodium is not a regulated pollutant in the state of Missouri. The only source of data in the last five years is from outfall #002, which has one analysis of 4 mg/L reported. The toxicity of sodium to aquatic organisms is generally much higher than 4 mg/L, and the amount being discharged by this facility does not cause or contribute to a water quality concern.

## **Part VI. SAMPLING AND REPORTING REQUIREMENTS:**

Refer to each outfall's derivation and discussion of limits section to review individual sampling and reporting frequencies and sampling type.

### **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>.

### **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 FREQUENCY JUSTIFICATION:**

Sampling for many parameters was increased from annually to quarterly. Entire years were reported as "No Discharge" in the previous permitting cycle. Other years, analysis was not conducted. It is vital that the permit writer have data to assess the facility's potential to discharge pollutants. This facility is undergoing extensive earthwork and regrading, and conditions are changing rapidly. Quarterly sampling ensures the variable conditions are being monitored for. Sampling frequency for stormwater-only outfalls is typically quarterly, and most landfills require quarterly sampling for pollutants of concern. The facility may sample more frequently if they need additional data to determine if their best management technology is performing as expected.

**SAMPLING TYPE JUSTIFICATION:**

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

**Part VII. 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 1<sup>st</sup> quarter, 2019.*

**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 November 18, 2016 to December 19, 2016. No responses were received.

**DATE OF FACT SHEET:** 09/15/2016

**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](mailto:Amberly.schulz@dnr.mo.gov)



STANDARD CONDITIONS FOR NPDES PERMITS  
ISSUED BY  
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MISSOURI CLEAN WATER COMMISSION  
REVISED  
AUGUST 1, 2014

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

## Part I – General Conditions

### Section A – Sampling, Monitoring, and Recording

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

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

### Section B – Reporting Requirements

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



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
    - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
    - ii. Any upset which exceeds any effluent limitation in the permit.
    - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
  - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
  4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
  5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
  6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
  7. **Discharge Monitoring Reports.**
    - a. Monitoring results shall be reported at the intervals specified in the permit.
    - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
    - c. Monitoring results shall be reported to the Department no later than the 28<sup>th</sup> 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



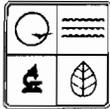
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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second 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.



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

AP17687

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
8/10/14	ESB

**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- 0123790 Expiration Date 8/13/14

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 Centropolis Sanitary Landfil		TELEPHONE WITH AREA CODE (816) 739-4793	
ADDRESS (PHYSICAL) 7700 East 40 HWY		CITY Kansas City	FAX
		STATE MO	ZIP CODE 64129

**3. OWNER**

NAME Hamilton Hauling Inc.		E-MAIL ADDRESS stacylb67@hotmail.com	TELEPHONE WITH AREA CODE (816) 739-4793	
ADDRESS (MAILING) 700 Mulberry St		CITY Pleasant Hill	FAX	
		STATE MO	ZIP CODE 64080	

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

**4. CONTINUING AUTHORITY**

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

**5. OPERATOR**

NAME Missouri Organic Recycling		CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE (816) 483-0908	
ADDRESS (MAILING) 7700 East 40 Hwy		CITY Kansas City	FAX	
		STATE MO	ZIP CODE 64129	

**6. FACILITY CONTACT**

NAME Kevin Anderson		TITLE Vice-President	TELEPHONE WITH AREA CODE (816) 564-5994	
		FAX		

**7. ADDITIONAL FACILITY INFORMATION**

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

001 NE ¼ SW ¼ Sec 18 T 49N R 32W JAK County  
 UTM Coordinates Easting (X): +3903556 Northing (Y): -09429295  
*For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)*

002 SW ¼ NW ¼ Sec 18 T 49N R 32W JAK County  
 UTM Coordinates Easting (X): +3904110 Northing (Y): -09429424

003 NE ¼ SW ¼ Sec 18 T 49N R 32W JAK County  
 UTM Coordinates Easting (X): +3904002 Northing (Y): -09429254

004 ¼ ¼ 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 #562212 002 – SIC and NAICS

003 – SIC and NAICS 004 – SIC and NAICS

KC  
Jackson

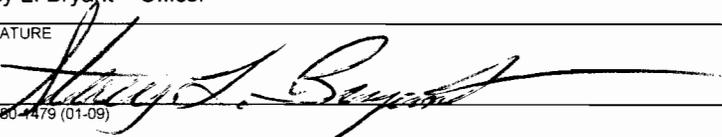
**8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION**  
(Complete all forms that are applicable.)

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 type="checkbox"/>	NO <input checked="" type="checkbox"/>
B.	Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C and D.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
C.	Is application for storm water discharges only? If yes, complete EPA Form 2F.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
D.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.		
E.	Is wastewater land applied? If yes, complete Form I.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
F.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>

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

NAME Advantage Metals Recycling Inc.			
ADDRESS 3001 Manchester	CITY Kansas City	STATE MO	ZIP CODE 64080

**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) Stacy L. Bryant Officer	TELEPHONE WITH AREA CODE (816) 739-4793
SIGNATURE 	DATE SIGNED 02/05/2014

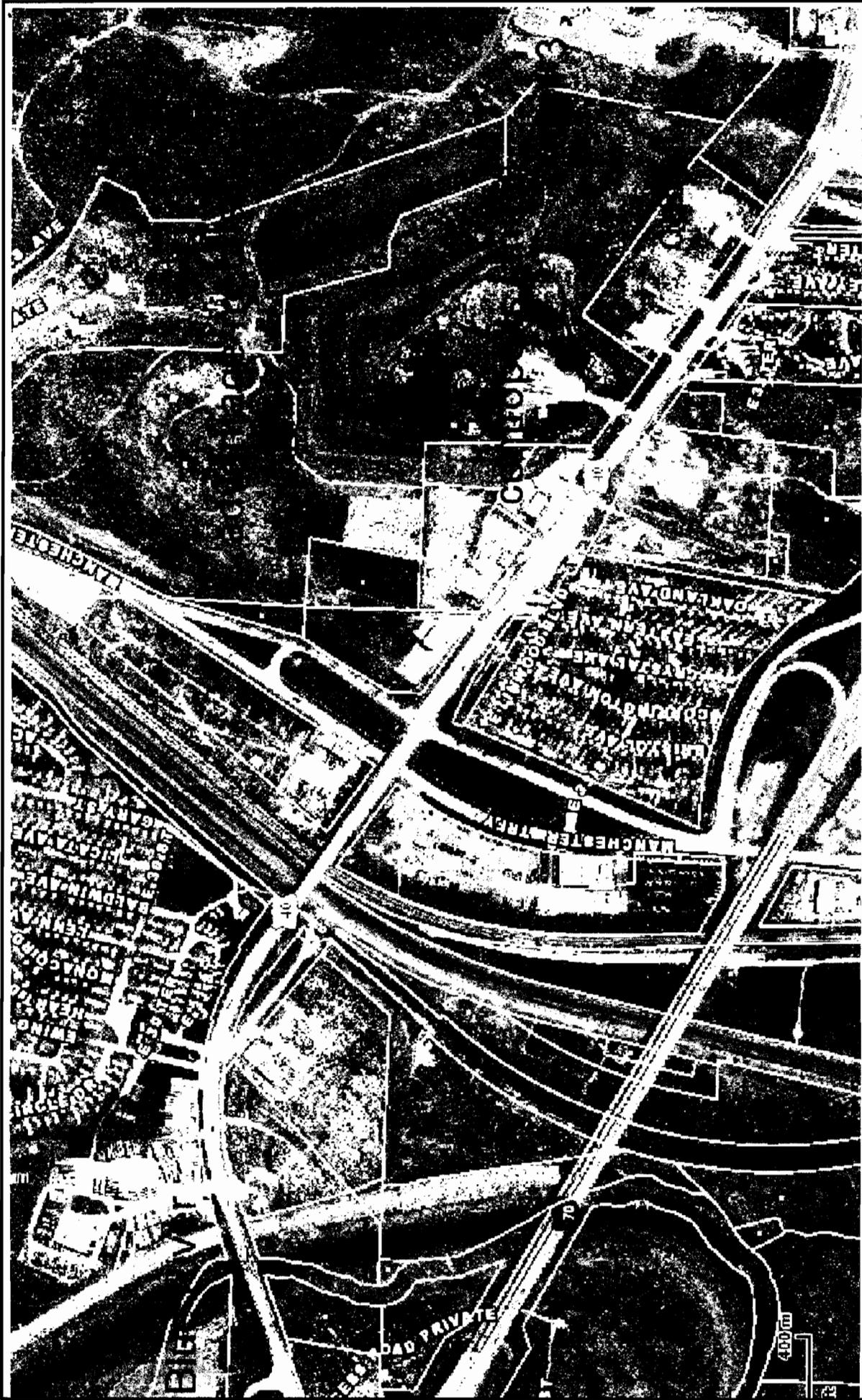
MO 780-4479 (01-09)

**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?



Printed: Feb 05, 2014

# Jackson County, MO

## Parcel Viewer



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