

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-0113352

Owner: City of Fulton  
Address: P.O. Box 130, Fulton, MO 65251

Continuing Authority: Same as above  
Address: Same as above

Facility Name: Fulton Sanitary Landfill  
Facility Address: 6797 County Road 305, Fulton, MO 65251

Legal Description: SEE PAGE TWO  
Latitude/Longitude: SEE PAGE TWO

Receiving Stream: SEE PAGE TWO  
First Classified Stream and ID: SEE PAGE TWO  
USGS Basin & Sub-watershed No.: SEE PAGE TWO

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

**FACILITY DESCRIPTION**

SEE PAGE TWO

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

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

April 24, 2009  
Effective Date

  
Mark N. Templeton, Director  
Department of Natural Resources

April 23, 2014  
Expiration Date

\_\_\_\_\_  
Irene Crawford  
Regional Director, Northeast Regional Office

FACILITY DESCRIPTION (continued)

Outfall #001 – Open Sanitary Landfill – SIC #4953

Stormwater runoff

Actual flow is dependent upon precipitation.

Legal Description: SW ¼, SW ¼, SE ¼, Sec. 26, T47N, R10W, Callaway County  
Latitude/Longitude: +3848574/-09200502

Receiving Stream: Unnamed tributary to Middle River (U)  
First Classified Stream and ID: Middle River (C) (00724)  
USGS Basin & Sub-watershed No.: (10300102-240001)

Outfall #002 – Open Sanitary Landfill – SIC #4953

Stormwater runoff

Actual flow is dependent upon precipitation.

Legal Description: SE ¼, SW ¼, SE ¼, Sec. 26, T47N, R10W, Callaway County  
Latitude/Longitude: +3848526/-09200406

Receiving Stream: Unnamed tributary to Middle River (U)  
First Classified Stream and ID: Middle River (C) (00724)  
USGS Basin & Sub-watershed No.: (10300102-240001)

Outfall #003 – Open Sanitary Landfill – SIC #4953

Stormwater runoff from borrow area and compost/construction and demolition waste processing areas

Actual flow is dependent upon precipitation.

Legal Description: SW ¼, SE ¼, SE ¼, Sec. 26, T47N, R10W, Callaway County  
Latitude/Longitude: +3848526/-09200338

Receiving Stream: Unnamed tributary to Middle River (U)  
First Classified Stream and ID: Middle River (C) (00724)  
USGS Basin & Sub-watershed No.: (10300102-240001)

Outfall #004 – Open Sanitary Landfill – SIC #4953

Stormwater runoff from borrow area and compost/construction and demolition waste processing areas

Actual flow is dependent upon precipitation.

Legal Description: SE ¼, SE ¼, SE ¼, Sec. 26, T47N, R10W, Callaway County  
Latitude/Longitude: +3848526/-09200242

Receiving Stream: Unnamed tributary to Middle River (U)  
First Classified Stream and ID: Middle River (C) (00724)  
USGS Basin & Sub-watershed No.: (10300102-240001)

Outfall #005 – Open Sanitary Landfill – SIC #4953

Storm water runoff

Actual flow is dependent upon precipitation.

Legal Description: NE ¼, SW ¼, SE ¼, Sec. 26, T47N, R10W, Callaway County  
Latitude/Longitude: +3849024/-09200502

Receiving Stream: Unnamed tributary to Middle River (U)  
First Classified Stream and ID: Middle River (C) (00724)  
USGS Basin & Sub-watershed No.: (10300102-240001)

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

PAGE NUMBER 3 of 13

PERMIT NUMBER MO-0113352

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 upon issuance and remain in effect until one (1) year after the effective date of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001, #002, &amp; #005 (Note 1)</u>						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Rainfall (Note 2)	Inches	*		*	once/day	measured
Chemical Oxygen Demand	mg/L	120		90	once/quarter***	grab
Biochemical Oxygen Demand <sub>5</sub>	mg/L	60		45	once/quarter***	grab
Total Suspended Solids	mg/L	80		60	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Chloride + Sulfate	mg/L	1000		*	once/quarter***	grab
Chloride	mg/L	*		*	once/quarter***	grab
Fluoride	mg/L	*		*	once/quarter***	grab
Benzene	µg/L	*		*	once/quarter***	grab
Ethylbenzene	µg/L	*		*	once/quarter***	grab
Toluene	µg/L	*		*	once/quarter***	grab
Aluminum, Total Recoverable	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE JULY, 28, 2009. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

**B. STANDARD CONDITIONS**

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, STANDARD CONDITIONS DATED October 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

PAGE NUMBER 4 of 13

PERMIT NUMBER MO-0113352

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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001, #002, &amp; #005</u> (Note 1)						
Total Hardness	mg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	µg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (III), Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (VI), Dissolved	µg/L	*		*	once/quarter***	grab
Cobalt, Total Recoverable	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab

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**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

PAGE NUMBER 5 of 13

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		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001, #002, &amp; #005</u> (Note 1)						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Rainfall (Note 2)	Inches	*		*	once/day	measured
Chemical Oxygen Demand	mg/L	90		60	once/quarter***	grab
Biochemical Oxygen Demand <sub>5</sub>	mg/L	45		30	once/quarter***	grab
Total Suspended Solids	mg/L	80		50	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Chloride + Sulfate	mg/L	1000		*	once/quarter***	grab
Chloride	mg/L	*		*	once/quarter***	grab
Fluoride	mg/L	*		*	once/quarter***	grab
Benzene	µg/L	*		*	once/quarter***	grab
Ethylbenzene	µg/L	*		*	once/quarter***	grab
Toluene	µg/L	*		*	once/quarter***	grab
Aluminum, Total Recoverable	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE JULY 28, 2010. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

**B. STANDARD CONDITIONS**

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**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

PAGE NUMBER 6 of 13

PERMIT NUMBER MO-0113352

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OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001, #002, &amp; #005 (Note 1)</u>						
Total Hardness	mg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	µg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (III), Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium (VI), Dissolved	µg/L	*		*	once/quarter***	grab
Cobalt, Total Recoverable	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	1643		819	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab

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**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

PAGE NUMBER 7 of 13

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OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #003 &amp; #004 (Note 1)</u>						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Rainfall (Note 2)	Inches	*		*	once/day	measured
Chemical Oxygen Demand	mg/L	120		90	once/quarter***	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter***	grab
Biochemical Oxygen Demand <sub>5</sub>	mg/L	60		45	once/quarter***	grab
Total Suspended Solids	mg/L	100		50	once/quarter***	grab
pH – Units	SU	**		**	once/quarter**	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Ammonia nitrogen as N	mg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE JULY, 28, 2009. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

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<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 8 of 13	
					PERMIT NUMBER MO-0113352	
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 one (1) year after the effective date of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAG	MONTHLY	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #003 &amp; #004 (Note 1)</u>						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Rainfall (Note 2)	Inches	*		*	once/day	measured
Chemical Oxygen Demand	mg/L	90		60	once/quarter***	grab
Settleable Solids	mL/L/hr	1.5		1.0	once/quarter***	grab
Biochemical Oxygen Demand <sub>5</sub>	mg/L	45		30	once/quarter***	grab
Total Suspended Solids	mg/L	100		50	once/quarter***	grab
pH – Units	SU	**		**	once/quarter**	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Ammonia nitrogen as N	mg/L	*		*	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>JULY 28, 2010</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

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

- \* Monitoring requirement only.
- \*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
- \*\*\* See table below for quarterly sampling

Sample discharge at least once for the months of:	Report is due:
January, February, March (1st Quarter)	April 28
April, May, June (2nd Quarter)	July 28
July, August, September (3rd Quarter)	October 28
October, November, December (4th Quarter)	January 28

Note 1 - Sample once per quarter during a rainfall event, when there is runoff from the landfill site. The sample shall be collected no later than one hour after storm water runoff begins. Report as "no-discharge" if a discharge does not occur during the monitoring period. Samples shall be collected at the property boundary for each storm water discharge point and the sample from each outfall shall be tested separately.

Note 2 - Rainfall data can be submitted as one report for all outfalls

D. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

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

2. All outfalls must be clearly marked in the field.
3. This permit applies to stockpiling of yard wastes as necessary for the active production of compost. This permit also applies to the stockpiling of finished composts.
4. Yard waste is defined as those plant waste products that are produced during private, public or commercial lawn care and yard maintenance such as leaves, grass clippings, shrub and tree trimmings, and plant waste from greenhouses, household flower and vegetable gardens
5. The permittee shall not allow animal wastes, biosolids, septage, or any other form of domestic sewage to be placed in the compost.
6. The permittee shall not allow painted or treated wood products to be placed in the compost. Untreated wood is defined as lumber and other wooden materials that have not been chemically treated for resistance to moisture, fire, fungi, insects and other pests, or has not otherwise been treated or manufactured with chemicals, or that does not contain adhesives or resins. Untreated wood does not include plywood, particleboard, chipboard, and wood with other than insignificant quantities of paint, coating or finish.
7. If the permittee accepts animal wastes, biosolids, septage, or any other form of domestic sewage in the landfill, these types of wastes shall be buried in the active face of the landfill and covered immediately upon receipt.
8. The permittee shall not allow the stockpiling of processed (ground) painted and/or treated wood products. Processed painted and/or treated wood products are to be immediately placed on the Solid Waste Management Program permitted landfill area.
9. Changes in Discharges of Toxic Substances

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

- a. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
    - (1) One hundred micrograms per liter (100 µg/L);
    - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
    - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
    - (4) The level established in Part A of the permit by the Director.
  - b. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
  - c. That the effluent limit established in part A of the permit will be exceeded.
10. Report as no-discharge when a discharge does not occur during the report period.

D. SPECIAL CONDITIONS (continued)

11. Water Quality Standards

- a. 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.
12. An individual shall be designated by the permittee as responsible for environmental matters. The individual responsible for environmental matters shall have a thorough and demonstrable knowledge of the site's SWPPP and sediment and erosion control practices in general. The individual responsible for environmental matters or a designated inspector knowledgeable in erosion, sediment, and stormwater control principles, shall periodically inspect all structures that function to prevent pollution of waters of the state. These inspections shall be conducted in accordance with Special Conditions #16.
13. The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be prepared within 30 days and implemented within 90 days of permit issuance. The SWPPP must be kept on-site and should not be sent to the department unless specifically requested. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following documents:

***Storm Water Management For Industrial Activities, Developing Pollution Prevention Plans and Best Management Activities***, (Document number EPA 832-R-92-006) published by the United States Environmental Protection Agency (USEPA) in September 1992. **This manual is available at The USEPA internet site;** and

***Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices***, (Document number EPA 832-R-92-005) published by the United States Environmental Protection Agency (USEPA) in 1992. **This manual is available at The USEPA internet site;** and

The latest version of ***Protecting Water Quality: A field guide to erosion, sediment and storm water best management practices for development sites in Missouri***, published by the Missouri Department of Natural Resources. This manual is available on the department's internet site at: <http://www.dnr.mo.gov/env/wpp/wpcp-guide.htm>

The permittee is not limited to the use of these guidance manuals. Other guidance publications may be used to select appropriate BMPs. However, all BMPs should be described and justified in the SWPPP. EPA and DNR continue to update BMP information on their web sites. It is recommended that the permittee review this information when developing a SWPPP.

The purpose of the SWPPP is to ensure the design, implementation, management, and maintenance of Best Management Practices in order to reduce the amount of sediment and other pollutants in storm water discharges associated with landfill activities; comply with the Missouri Water Quality Standards; and ensure compliance with the terms and conditions of this permit.

D. SPECIAL CONDITIONS (continued)

A copy of the SWPPP must be available on site at all times. The SWPPP must be made available to a department representative upon request. The SWPPP should not be submitted to the department unless it is requested. The SWPPP must incorporate Best Management Practices specific to site conditions and provide for maintenance and adherence to the plan.

This plan must be made available as specified in Special Conditions #17 of this permit. The permittee shall fully implement the provisions of the SWPPP required under this part as a condition of this permit.

14. SWPPP Requirements: The following information and practices shall be provided for in the SWPPP.
- a. Site Description: In order to identify the site, the SWPPP shall include the facility and outfall information provided in the application form.
  - b. The SWPPP: The SWPPP shall have sufficient information to be of practical use to contractors and site construction workers to guide the installation and maintenance of BMPs. Site boundaries and outfalls shall be marked on a site map included as part of the SWPPP.
  - c. Selection Of Temporary And Permanent Non-Structural BMPs: The permittee shall select appropriate non-structural BMPs for use at the site and list them in the SWPPP. The SWPPP shall require existing vegetation to be preserved where practical. The time period for disturbed areas without vegetative cover shall be minimized to the maximum extent practicable. For sites that will be inactive six months or more, establishing a vegetative cover is a highly recommended choice for a proper BMP.
  - d. Selection Of Temporary And Permanent Structural BMPs: The permittee shall select appropriate structural BMPs for use at the site and list them in the SWPPP.
  - e. Description Of Best Management Practices: The SWPPP shall include a description of both structural and non-structural BMPs that will be used at the site. The SWPPP shall provide the following general information for each BMP which will be used one or more times at the site:
    - i. Physical description of the BMP;
    - ii. Site and physical conditions that must be met for effective use of the BMP;
    - iii. BMP installation/construction procedures, including typical drawings; and
    - iv. Operation and maintenance procedures for the BMP.

The SWPPP shall provide the following information for each specific instance where a BMP is to be installed:

    - i. Whether the BMP is temporary or permanent;
    - ii. Where, in relation to other site features, the BMP is to be located;
    - iii. When the BMP will be installed; and
    - iv. What site conditions must be met before removal of the BMP, if the BMP is not permanent.
  - f. Disturbed Areas: Where soil disturbing activities cease in an area for 14 days or more, the permittee shall construct BMPs to establish interim stabilization. Interim stabilization shall consist of well established and maintained BMPs that are reasonably certain to protect waters of the state from sediment pollution over an extended period of time. This may require adding more BMPs to an area than is normally used during daily operations. These BMPs may include a combination of sediment basins, check dams, sediment fences, and mulch. The types of BMPs used must be suited to the area disturbed, taking into account the number of acres exposed and the steepness of the slopes. If the slope of the area is greater than 3:1 (3 feet horizontal to 1 foot vertical) or if the slope is greater than 3% and greater than 150 feet in length, then the permittee shall establish interim stabilization within 7 days of ceasing operations on that part of the site.
  - g. Installation: The permittee shall ensure the BMPs are properly installed at the locations and relative times specified in the SWPPP. Storm water discharges from disturbed areas, which leave the site, shall pass through an appropriate impediment to sediment movement, such as a sedimentation basin, sediment traps, silt fences, etc. prior to leaving the land disturbance site. The location of all BMPs must be indicated on a site map, included in the SWPPP.
  - h. Additional Site Management Requirements: The SWPPP shall address other BMPs and requirements, as required by site activities, to prevent contamination of storm water runoff. Such BMPs and requirements include:
    - i. Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
    - ii. Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.

D. SPECIAL CONDITIONS (continued)

- iii. Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
  - iv. Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
  - v. 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 to the department upon request.
15. Amending/Updating the SWPPP: The permittee shall amend and update the SWPPP as appropriate during the term of the land disturbance activity. The permittee shall amend the SWPPP, at a minimum, whenever the:
  - a. Design, operation, or maintenance of BMPs is changed;
  - b. Design of the construction project is changed that could significantly affect the quality of the storm water discharges;
  - c. Permittee's inspections indicate deficiencies in the SWPPP or any BMP;
  - d. MDNR notifies the permittee in writing of deficiencies in the SWPPP;
  - e. SWPPP is determined to be ineffective in significantly minimizing or controlling pollutants (e.g., there is visual evidence, such as sediment deposits offsite or into waters of the state, or effluent limit violations);
  - f. MDNR determines violations of Water Quality Standards may occur or have occurred.
16. Site Inspections Reports: The permittee (or a representative of the permittee) shall conduct regularly scheduled inspections at least once per seven calendar days. These inspections shall be conducted by the person responsible for environmental matters at the site, or a person trained by and directly supervised by the person responsible for environmental matters at the site. All installed BMPs and other pollution control measures shall be inspected for proper installation, operation and maintenance. All storm water outfalls shall be inspected for evidence of erosion or sediment deposition. Any structural or maintenance problem shall be noted in an inspection report and corrected within seven calendar days of the inspection. If a rainfall event results in storm water runoff on site, the BMPs must be inspected within a reasonable time period (not to exceed 48 hours) after the rainfall event has ceased. If weather conditions make it impossible to correct the problem within seven days, a detailed report, including pictures, must be filed with the regular inspection reports. The permittee shall correct the BMP problem as soon as weather conditions allow. Any corrective measure that necessitates major construction may also need a construction permit.

A log of each inspection and copy of the inspection report must be retained onsite and made available to the Department upon request. The inspection report is to include the following minimum information: inspector's name, date of inspection, observations relative to the effectiveness of the BMPs, actions taken or necessary to correct the observed problem, and listing of areas where land disturbance operations have permanently or temporarily stopped. The inspection report shall be signed by the person designated in the SWPPP to conduct the inspections. Inspection reports must be kept on site with the SWPPP.
17. Records: The permittee shall retain copies of this permit, the SWPPP and all amendments to the SWPPP, results of monitoring and analysis, and all site inspection records required by this permit. The records shall be accessible during normal business hours. The records shall be retained for a period of five years. The permittee shall provide a copy of the SWPPP to MDNR, USEPA, or any local agency or government representative if they request a copy in the performance of their official duties. The permittee shall provide those who are responsible for installation, operation, or maintenance of any BMP a copy of the SWPPP.
18. The purpose of the SWPPP and the BMPs listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.
19. All fueling facilities present on the site shall adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures.
20. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 et. seq.) and the use of such pesticides shall be in a manner consistent with its label.

D. SPECIAL CONDITIONS (continued)

21. Substances, regulated by federal law under the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERLA), that are transported, stored, or used for maintenance, cleaning or repair, shall be managed according to RCRA and CERLA.

E. SCHEDULE OF COMPLIANCE

1. The Final Effluent Limitations shall be met by **(issue date + 1 year)**. If the permittee determines that the new effluent limitations will not or can not be met by **(issue date + 1 year)**, then the permittee shall submit a Compliance Report to the Northeast Regional Office by **(issue date + 11 months)** for review. The Compliance Report shall include the following:
  - a. Reason(s) that the new effluent limitation will not or can not be met for each specific pollutant.
  - b. Steps taken or planned to be taken by the permittee to meet the new effluent limitations for each specific pollutant.
  - c. A compliance schedule to be implemented by the permittee to meet the new effluent limitation for each specific pollutant.

REPORTING OF EFFLUENT VIOLATIONS

If any of the sampling results from any of the outfalls show any violation of the permit discharge limitations, written notification shall be made to the Department of Natural Resources within five (5) days of notification of analytical results. Notification shall indicate the date(s) of sample collection, the analytical results, and permit number, and shall include a statement concerning the revisions or modifications in management practices that are being implemented to address the violation of the limitations that occurred.

After a violation has been reported, a sample of storm water runoff resulting from the next rainfall shall be collected at outfall(s) for which the violation occurred. Analytical results of this sample shall be submitted in writing to the Department of Natural Resources (this paragraph supersedes Part I, Section B: 2. A. Noncompliance Notification).

RECORDS, RETENTION AND RECORDING

Monitoring reports shall be submitted within 28 days after the end of each quarter. All sampling data shall be maintained by the permittee for a period of five (5) years and shall be supplied to the Department of Natural Resources upon request (supersedes Part I, Section A: 7. Records Retention). A copy of all of the sampling data must be submitted with an application for reissuance of this permit.

PERMIT TRANSFER

This permit may be transferred to a new owner by submitting an "Application for Transfer of Operating Permit" signed by the seller and buyer of the facility, along with the appropriate modification fee.

PERMIT RENEWAL REQUIREMENTS

Unless this permit is terminated, the permittee shall submit an application for the renewal of this permit no later than six (6) months prior to the permit's expiration date. Failure to apply for renewal may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.

TERMINATION

In order to terminate this permit, the permittee shall notify the department by submitting Form J, included with the State Operating Permit. The permittee shall complete Form J and mail it to the department at the address noted in the cover letter of this permit. Proper closure of the landfill is required prior to permit termination. A closure plan shall be submitted to the department and approved prior to initiating closure activities.

DUTY OF COMPLIANCE

The permittee shall comply with all conditions of this permit. Any noncompliance with this permit constitutes a violation of Chapter 644, Missouri Clean Water Law, and 10 CSR 20-6. Noncompliance may result in enforcement action, termination of this authorization, or denial of the permittee's request for renewal.

This permit authorizes only the activities described in this permit. Compliance with this permit may not be considered a shield from compliance with any local ordinance, State Regulation or State Law.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FACT SHEET  
INDUSTRIAL STORM WATER RUNOFF FROM LANDFILL ACTIVITIES  
STANDARD INDUSTRIAL CLASSIFICATION (SIC): 4953  
FOR THE PURPOSE OF RENEWAL OF  
MO-0113352  
FULTON 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 storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law (MCWL)" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Fact Sheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

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

**Part A – Applicability & Facility Description**

Landfill are to obtain a MSOP in accordance the MCWL, documented above, and its implementing regulations 10 CSR 20-6.010(1)(A); 10 CSR 20-6.010(5)(A); and 10 CSR 20-6.200(1)(A). Storm water runoff from landfills are considered Industrial activities in accordance with 10 CSR 20-6.200(2)(B)3.B. Closed landfills may also be required to maintain a MSOP in accordance with 10 CSR 20.600(1)(B)10.

Facility Description:

The facility is a sanitary landfill that began operation in the 1970s. The current permit has five outfalls. Outfalls #001, #002, and #005 are associated with stormwater runoff from the landfill. Outfalls #003 and #004 are associated with stormwater runoff from the borrow area, construction and demolition stockpiling and processing area, and yard waste stockpiling and compost area. Actual flow is dependent upon precipitation.

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

**Part B – Outfall Information & Descriptions**

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	Variable	BMP*	Industrial – Storm water runoff	~2.84
002	Variable	BMP*	Industrial – Storm water runoff	~2.11
003	Variable	BMP*	Industrial – Storm water runoff	~2.08
004	Variable	BMP*	Industrial – Storm water runoff	~2.02
005	Variable	BMP*	Industrial – Storm water runoff	~2.44

\* - BMP means Best Management Practices

Outfall #001 – Open Sanitary Landfill – SIC #4953

Legal Description: SW ¼, SW ¼, SE ¼, Sec. 26, T47N, R10W, Callaway County  
Latitude/Longitude: +3848574/-09200502

Outfall #002 – Open Sanitary Landfill – SIC #4953

Legal Description: SE ¼, SW ¼, SE ¼, Sec. 26, T47N, R10W, Callaway County  
Latitude/Longitude: +3848526/-09200406

Outfall #003 – Open Sanitary Landfill – SIC #4953

Legal Description: SW ¼, SE ¼, SE ¼, Sec. 26, T47N, R10W, Callaway County  
Latitude/Longitude: +3848526/-09200338

Outfall #004 – Open Sanitary Landfill – SIC #4953

Legal Description: SE ¼, SE ¼, SE ¼, Sec. 26, T47N, R10W, Callaway County  
Latitude/Longitude: +3848526/-09200242

Outfall #005 – Open Sanitary Landfill – SIC #4953

Legal Description: NE ¼, SW ¼, SE ¼, Sec. 26, T47N, R10W, Callaway County  
Latitude/Longitude: +3849024/-09200502

Outfalls #001 - #005

Receiving Stream: Unnamed tributary to Middle River (U)  
First Classified Stream and ID: Middle River (C) (00724)  
USGS Basin & Sub-watershed No.: (10300102-240001)

Water Quality History:

WQIS Basin Inventory lists: No offsite deposition (1996), Minor leachate (2002), BOD=116, TSS=571 (DMR 3/2007). WQIS Stream Survey lists: 001: No flow at outfall but trickle flow in pasture 100 yards downgradient, C=2, pH=6.5, SC=1040, No color or odor in water or substrate. 002: Flow=trickle, C=0.5, pH=5.9, SC=1200, No color or odor in water or substrate. 003: Flow=trickle, C=1.5, pH=6.7, SC=840, No color or odor in water or substrate. 004 and 005: No discharge and no flowing water within first 200 yards downgradient.

Comments:

On September 17 and 18, and October 9 and 15, 2008 the department conducted compliance inspections of the facility. The facility was found in non-compliance due to the facility failing to submit complete Discharge Monitoring Reports as required in part “A” of the permit, failing to comply with the effluent limits contained in Part “A” of the permit, failing to prevent a discharge of untreated leachate as required by the permit, and discharging water contaminants into waters of the state which reduced the quality of such waters below the Water Quality Standards established by the Missouri Clean Water Commission. The facility was referred to the Water Protection Program’s Enforcement Section due to the violations discovered during the inspections. The facility failed to meet effluent limits for Settleable Solids for Outfall #005 in February 2003. In July 2004, the facility failed to meet effluent limits for Outfall #002 for Chemical Oxygen Demand & Total Suspended Solids, Outfall #003 for Settleable Solids, and Outfall #005 for Settleable Solids and Total Suspended Solids. In January 2005, the facility failed to meet effluent limits for Outfall #001 for Chemical Oxygen Demand & Total Suspended Solids, Outfall #002 for Total Suspended Solids, and Outfall #005 for Total Suspended Solids. In April 2007, the facility failed to meet effluent limits for Outfall #001 for Total Suspended Solids, Outfall #002 for Total Suspended Solids, and Outfall #005 for Chemical Oxygen Demand and Total Suspended Solids. In April 2008, the facility failed to meet effluent limits for Outfall #002 for five-day Biochemical Oxygen Demand, Chemical Oxygen Demand, and Total Suspended Solids, and Outfall #005 for Total Suspended Solids.

**Part C – Receiving Stream Information**

**APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:**

As per Missouri’s Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category list 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 [10 CSR 20-7.015(2)]:
- Lake or Reservoir [10 CSR 20-7.015(3)]:
- Losing [10 CSR 20-7.015(4)]:
- Metropolitan No-Discharge [10 CSR 20-7.015(5)]:
- Special Stream [10 CSR 20-7.015(6)]:
- Subsurface Water [10 CSR 20-7.015(7)]:
- All Other Waters [10 CSR 20-7.015(8)]:

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

**RECEIVING STREAM(S) TABLE:**

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed tributary to Middle River	U	NA	General Criteria	10300102	Ozark/Moreau/Loutre
Middle River	C	00724	LWW, AQL, WBC-B		

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

**Part D – Rationale and Derivation of Effluent Limitations & Permit Conditions**

**ANTI-BACKSLIDING:**

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

- All limits in this Factsheet are at least as protective as those previously established; therefore, backsliding does not apply.

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

**ANTIDEGRADATION:**

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

As per [10 CSR 20-7.031(2)(D)], the three (3) levels of protection provided by the antidegradation policy in subsections (A), (B), and (C) of this section shall be implemented according to procedures developed by the department. On April 20, 2007, the Missouri Clean Water Commission approved *Missouri Antidegradation Rule and Implementation Procedure* (Antidegradation Rule), which is applicable to new or upgraded/expanded facilities. The implementation of the Antidegradation Rule will be implemented upon promulgation, which occurred on August 31, 2008.

**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.

Applicable ;

The permittee/facility is currently under enforcement action due to failing to comply with the effluent limits contained in Part "A" of the permit, failing to prevent a discharge of untreated leachate as required by the permit, discharging water contaminants into waters of the state which reduced the quality of such waters below the Water Quality Standards established by the Missouri Clean Water Commission, and failing to submit complete Discharge Monitoring Reports (DMRs) as required by the permit. Enforcement activities are still pending at the time of the writing of this permit.

**FLOW BASED PERMITTING:**

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

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

Sufficient rainfall to cause a discharge for one hour or more from a facility would not necessarily cause significant flow in a receiving stream. Acute WQSs are based on a one hour of exposure, and must be protected at all times in unclassified streams, and within mixing zones of class P streams [10 CSR 20-7.031(3) and (4)]. Therefore, industrial storm water facilities with toxic contaminants do have the potential to cause a violation of acute WQSs if those toxic contaminants occur in sufficient amounts.

It is due to the items stated above that staff drafting this fact sheet are unable to perform statistical Reasonable Potential Analysis and calculate Wasteload Allocations via a mass-balance equation for effluent limit determination. However, staff may use their best professional judgment in determining if a facility has a potential to violate Missouri's Water Quality Standards. Effluent limitations are based on actual criteria that are subjected to Long Term Averages and then converted into Maximum Daily Limits or Average Monthly Limits.

**SCHEDULE OF COMPLIANCE (SOC):**

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

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(10)]. A Schedule of Compliance has been included for meeting Total Recoverable Iron, Chemical Oxygen Demand, five-day Biochemical Oxygen Demand, and Total Suspended Solids effluent limits.

Not Applicable ;

This permit does not contain a SOC.

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP):**

A plan to schedule activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. The plan may include, but is not limited to, treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Applicable ;

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

**WLA MODELING:**

Not Applicable ;

A WLA study was either not submitted or determined not applicable by department staff.

**WHOLE EFFLUENT TOXICITY (WET) TEST:**

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

Not Applicable ;

At this time, the permittee is not required to conduct WET test for this facility.

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

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

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

Not Applicable ;

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

## Part E – Effluent Limits Determination

Outfalls #001, #002, & #005 – Effluent Limitation Table:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	gpd	1	*		*	No	S
RAINFALL	Inches	9	*		*	No	S
COD (INTERIM)	mg/L	9	120		90	No	S
COD (FINAL)	mg/L	9	90		60	YES	120/90
BOD <sub>5</sub> (INTERIM)	mg/L	1/9	60		45	No	S
BOD <sub>5</sub> (FINAL)	mg/L	1/9	45		30	YES	60/45
TSS (INTERIM)	mg/L	1	80		60	No	S
TSS (FINAL)	mg/L	1	80		50	YES	80/60
pH	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6 - 9
SETTLABLE SOLIDS	mL/L/hr	1/9	1.5		1.0	No	S
OIL & GREASE	mg/L	1/2/9	15		10	YES	*
TOTAL AMMONIA AS N	mg/L	1/2/5/9	*		*	No	S
CHLORIDE + SULFATES	mg/L	1/2/9	1000		*	No	S
CHLORIDE	mg/L	1/2/9	*		*	YES	NA
FLUORIDE	mg/L	1/2/9	*		*	No	S
BENZENE	µg/L	1/2/9	*		*	YES	NA
ETHYLBENZENE	µg/L	1/2/9	*		*	YES	NA
TOLUENE	mg/L	1/2/9	*		*	YES	NA
ALUMINUM, TR	µg/L	1/2/9	*		*	YES	NA
TOTAL HARDNESS	mg/L	9	*		*	No	S
ANTIMONY, TR	mg/L	1/2/9	*		*	No	S
ARSENIC, TR	µg/L	1/2/9	*		*	No	S
BERYLLIUM, TR	µg/L	1/2/9	*		*	No	S
CADMIUM, TR	µg/L	1/2/9	*		*	No	S
CHROMIUM (III), TR	µg/L	1/2/9	*		*	YES	NA
CHROMIUM (VI), TR	µg/L	1/2/9	*		*	YES	NA
COBALT, TR	µg/L	1/2/9	*		*	No	S
COPPER, TR	µg/L	1/2/9	*		*	No	S
IRON, TR (INTERIM)	µg/L	1/2/9	*		*	No	S
IRON, TR (FINAL)	µg/L	1/2/9	1643		819	YES	*
LEAD, TR	µg/L	1/2/9	*		*	No	S
MERCURY, TR	µg/L	1/2/9	*		*	No	S
NICKEL, TR	µg/L	1/2/9	*		*	No	S
SELENIUM, TR	µg/L	1/2/9	*		*	No	S
SILVER, TR	µg/L	1/2/9	*		*	No	S
THALLIUM, TR	µg/L	1/2/9	*		*	No	S
ZINC, TR	µg/L	1/2/9	*		*	No	S
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only

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

TR – means Total Recoverable

S – Same as previous operating permit

N/A – Not applicable

Basis for Limitations Codes:

1. State or Federal Regulation/Law
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
5. Ammonia Policy
6. Dissolved Oxygen Policy
7. Antidegradation Policy
8. Water Quality Model
9. Best Professional Judgment
10. TMDL or Permit in lieu of TMDL
11. WET Test Policy

**OUTFALLS #001, #002, & #005 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Flow.** Monitoring only requirement in accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification to determine an alternate location for flow monitoring.
- **Rainfall.** Monitoring only requirement. Precipitation data obtained from DMRs is used to aid in the determination of this facilities specific runoff coefficient and theoretical loading in the watershed.
- **Chemical Oxygen Demand (COD).** Effluent limitations of 90 mg/L as a Daily Maximum and 60 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits.
- **Biochemical Oxygen Demand (BOD<sub>5</sub>).** Effluent limitations of 45 mg/L as a Daily Maximum and 30 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits.
- **Total Suspended Solids (TSS).** Effluent limitations of 80 mg/L as a Daily Maximum and 50 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits.
- **pH.** Effluent limitation range is from 6.5 to 9.0 Standard pH Units (SU), as per [10 CSR 20-7.031(4)(E)]. pH is not to be averaged.
- **Settleable Solids.** Effluent limitations of 1.5 mL per L per hour as a Daily Maximum and 1.0 mL per L per hour as a Monthly Average are applicable and are consistent with other landfill operating permits.
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **Total Ammonia Nitrogen.** Monitoring only requirement. The previous state operating permit contained a monitoring requirement providing that the value did not exceed the WQS, but at a once per year frequency to be collected in September of each year. This parameter needs further monitoring to determine if it has potential violate Missouri's WQS
- **Chlorides + Sulfate.** Effluent limitation of 1000 mg/L as a Daily Maximum is applicable as per [10 CSR 20-7.031(L)1.].
- **Chlorides.** Monitoring requirement only. Chlorides have been included in this permit to determine what percentage of the Chlorides + Sulfate parameter is Chlorides and what percentage is Sulfates.
- **Fluoride.** Monitoring requirement only. The previous state operating permit contained a monitoring requirement only, but at a once per year frequency to be collected in September of each year. This parameter needs further monitoring to determine if it has potential violate Missouri's WQS.
- **Benzene.** Monitoring requirement only. The previous state operating permit contained a combination parameter known as BETX, which was Benzene, Ethylbenzene, Toluene, and Total Xylene. This parameter needs further monitoring to determine if it has potential to violate Missouri's WQS.
- **Ethylbenzene.** Monitoring requirement only. The previous state operating permit contained a combination parameter known as BETX, which was Benzene, Ethylbenzene, Toluene, and Total Xylene. This parameter needs further monitoring to determine if it has potential to violate Missouri's WQS.
- **Toluene.** Monitoring requirement only. The previous state operating permit contained a combination parameter known as BETX, which was Benzene, Ethylbenzene, Toluene, and Total Xylene. This parameter needs further monitoring to determine if it has potential to violate Missouri's WQS.

## Metals

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

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

METAL	CONVERSION FACTORS
	ACUTE
Arsenic	1.0
Cadmium	0.916
Chromium III	0.316
Chromium VI	0.982
Copper	0.960
Lead	0.695
Mercury	0.85
Nickel	0.998
Silver	0.85
Zinc	0.978

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

- **Total Hardness.** Monitoring only requirement due to the fact that Metals toxicity varies by hardness.
- **Aluminum, Total Recoverable.** Monitoring requirement only. This parameter needs monitoring to determine if it has potential to violate Missouri’s WQS.
- **Antimony, Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri’s WQS.
- **Arsenic, Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri’s WQS.
- **Beryllium, Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri’s WQS.
- **Cadmium, Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri’s WQS.
- **Chromium (III), Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri’s WQS.
- **Chromium (VI), Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri’s WQS.
- **Cobalt, Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri’s WQS.
- **Copper, Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri’s WQS.

- **Iron, Total Recoverable.** Iron does not have an Acute criteria at this time; therefore, the Protection of Aquatic Life Chronic Criteria (CCC) of 1000 µg/L is applicable. No mixing allowed; therefore, the CCC = the WLA.

$$WLA_c = 1000 \mu\text{g/L}$$

$$LTA_c = 1000 \mu\text{g/L} (0.5274) = 527.4 \mu\text{g/L}$$

$$MDL = 527.4 \mu\text{g/L} (3.115) = 1643 \mu\text{g/L}$$

$$AML = 527.4 \mu\text{g/L} (1.552) = 819 \mu\text{g/L}$$

$$[CV = 0.6, 99^{\text{th}} \text{ Percentile}]$$

$$[CV = 0.6, 99^{\text{th}} \text{ Percentile}]$$

$$[CV = 0.6, 95^{\text{th}} \text{ Percentile}, n = 4]$$

- **Lead, Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri's WQS.
- **Mercury, Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri's WQS.
- **Nickel, Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri's WQS.
- **Selenium, Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri's WQS.
- **Silver, Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri's WQS.
- **Thallium, Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri's WQS.
- **Zinc, Total Recoverable.** Monitoring requirement only. This parameter needs further monitoring to determine if it has potential to violate Missouri's WQS.
- **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/QUARTER	ONCE/QUARTER
RAINFALL	ONCE/DAY	ONCE/QUARTER
COD	ONCE/QUARTER	ONCE/QUARTER
BOD <sub>5</sub>	ONCE/QUARTER	ONCE/QUARTER
TSS	ONCE/QUARTER	ONCE/QUARTER
PH (S.U.)	ONCE/QUARTER	ONCE/QUARTER
SETTLABLE SOLIDS	ONCE/QUARTER	ONCE/QUARTER
OIL & GREASE	ONCE/QUARTER	ONCE/QUARTER
AMMONIA AS N	ONCE/QUARTER	ONCE/QUARTER
CHLORIDES + SULFATES	ONCE/QUARTER	ONCE/QUARTER
CHLORIDE	ONCE/QUARTER	ONCE/QUARTER
FLUORIDE	ONCE/QUARTER	ONCE/QUARTER
BENZENE	ONCE/QUARTER	ONCE/QUARTER
ETHYLBENZENE	ONCE/QUARTER	ONCE/QUARTER
TOLUENE	ONCE/QUARTER	ONCE/QUARTER
TOTAL HARDNESS	ONCE/QUARTER	ONCE/QUARTER
ALUMINUM, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
ANTIMONY, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
ARSENIC, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
BERYLLIUM, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
CADMIUM, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
CHROMIUM (III), TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
CHROMIUM (VI), TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
COBALT, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
COPPER, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
IRON, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
LEAD, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
MERCURY, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
NICKEL, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
SELENIUM, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
SILVER, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
THALLIUM, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
ZINC, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER

**Outfall #003 & #004 – Effluent Limitation Table:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	gpd	1	*		*	No	S
RAINFALL	Inches	9	*		*	No	S
COD (INTERIM)	mg/L	9	120		90	No	S
COD (FINAL)	mg/L	9	90		60	YES	120/90
SETTLABLE SOLIDS	mL/L/hr	1/9	1.5		1.0	No	S
BOD <sub>5</sub> (INTERIM)	mg/L	1/9	60		45	No	S
BOD <sub>5</sub> (FINAL)	mg/L	1/9	45		30	YES	60/45
TSS	mg/L	1	100		50	YES	**
PH	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6 - 9
OIL & GREASE	mg/L	1/2/9	15		10	YES	**
TOTAL AMMONIA AS N	mg/L	1/2/5/9	*		*	YES	**
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only

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

TR – means Total Recoverable

S – Same as previous operating permit

N/A – Not applicable

**Basis for Limitations Codes:**

- |  |                                    |
|--|------------------------------------|
| 7. State or Federal Regulation/Law       | 7. Antidegradation Policy          |
| 8. Water Quality Standard (includes RPA) | 8. Water Quality Model             |
| 9. Water Quality Based Effluent Limits   | 9. Best Professional Judgment      |
| 10. Lagoon Policy                        | 10. TMDL or Permit in lieu of TMDL |
| 11. Ammonia Policy                       | 11. WET Test Policy                |
| 12. Dissolved Oxygen Policy              |                                    |

**OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Flow.** Monitoring only requirement in accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification to determine an alternate location for flow monitoring.
- **Rainfall.** Monitoring only requirement. Precipitation data obtained from DMRs is used to aid in the determination of this facilities specific runoff coefficient and theoretical loading in the watershed.
- **Chemical Oxygen Demand (COD).** Effluent limitations of 90 mg/L as a Daily Maximum and 60 mg/L as a Monthly Average are applicable to this facility and are consistent with other composting permits.
- **Biochemical Oxygen Demand (BOD<sub>5</sub>).** Effluent limitations of 45 mg/L as a Daily Maximum and 30 mg/L as a Monthly Average are applicable to this facility and are consistent with other composting permits.
- **Total Suspended Solids (TSS).** Effluent limitations of 100 mg/L as a Daily Maximum and 50 mg/L as a Monthly Average are applicable to this facility and are consistent with other composting permits.
- **pH.** Effluent limitation range is from 6.5 to 9.0 Standard pH Units (SU), as per [10 CSR 20-7.031(4)(E)]. pH is not to be averaged.
- **Settleable Solids.** Effluent limitations of 1.5 mL per L per hour as a Daily Maximum and 1.0 mL per L per hour as a Monthly Average are applicable and are consistent with other landfill operating permits.
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **Total Ammonia Nitrogen.** Monitoring only requirement to determine if it has potential to violate Missouri’s WQS.

- **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/QUARTER	ONCE/QUARTER
RAINFALL	ONCE/DAY	ONCE/QUARTER
COD	ONCE/QUARTER	ONCE/QUARTER
BOD <sub>5</sub>	ONCE/QUARTER	ONCE/QUARTER
TSS	ONCE/QUARTER	ONCE/QUARTER
PH (S.U.)	ONCE/QUARTER	ONCE/QUARTER
SETTLABLE SOLIDS	ONCE/QUARTER	ONCE/QUARTER
OIL & GREASE	ONCE/QUARTER	ONCE/QUARTER
AMMONIA AS N	ONCE/QUARTER	ONCE/QUARTER

## **Part F – 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.

### **PUBLIC NOTICE:**

As per the Missouri Clean Water Law, the Missouri Clean Water Commission, and the federal Clean Water Act, persons wishing to comment on Missouri State Operating Permits are directed to do so by a department approved Public Notice coversheet. This Public Notice coversheet is attached to a Missouri State Operating Permit during the Public Notice period.

- The Public Notice period for this operating permit is tentatively schedule to begin on March 13, 2009 or is in process.

- The Public Notice period for this operating permit was from (DATE) to (DATE). Responses to the Public Notice of this operating permit warrant the modification of effluent limits and/or the terms and conditions of this permit. (Please explain). (Also if applicable – Due to the major modifications of this permit, this operating permit is to be placed on Public Notice again, which is tentatively scheduled to begin on (DATE) or is in process.

- The Public Notice period for this operating permit was from (DATE) to (DATE). No responses received or responses to the Public Notice of this operating permit do not warrant the modification of effluent limits and/or the terms and conditions of this permit.

**Date of Factsheet:** February 9, 2009

**Date of Public Notice:** March 13, 2009

Submitted by

Brant Farris, Environmental Specialist  
 Northeast Regional Office  
 (660) 385-8000  
[brant.farris@dnr.mo.gov](mailto:brant.farris@dnr.mo.gov)

Reviewed by

Abbie Stockett, Environmental Specialist  
 Northeast Regional Office  
 (660) 385-8000  
[abbie.stockett@dnr.mo.gov](mailto:abbie.stockett@dnr.mo.gov)

\_\_\_\_\_  
 Brant Farris

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 Date

\_\_\_\_\_  
 Abbie Stockett

\_\_\_\_\_  
 Date

## **Part VII – Appendices**

### **APPENDIX # – RPA RESULTS:**

CONSTITUENT	CMC*	RWC ACUTE*	CCC*	RWC CHRONIC*	REASONABLE POTENTIAL	# OF SAMPLES**	CV***
IRON, TOTAL RECOVERABLE	NA	NA	1000	100,080	YES	7	0.6

N/A – Not Applicable

\* - Units are ( $\mu\text{g/L}$ ) unless otherwise noted.

\*\* - If the number of samples is greater than 10, then the CV value must be used in the WQBEL for the applicable constituent.

\*\*\* - Coefficient of Variation (CV) is calculated by dividing the Mean of the sample by the Standard Deviation of the sample.

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2).

A more detailed version including calculations of this RPA is available upon request.