

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

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

Permit No. MO-0108723

Owner: City of Moberly
Address: 101 West Reed Street, Moberly, MO 65270

Continuing Authority: Same as above
Address: Same as above

Facility Name: Moberly Sanitary Landfill
Facility Address: East of County Road 95 and County Road 96 intersection, Huntsville, MO 65259

Legal Description: SEE PAGE 2
Latitude/Longitude: 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 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.

June 4, 2010

Effective Date



Mark N. Templeton, Director
Department of Natural Resources

June 3, 2015

Expiration Date



Irene Crawford
Regional Director, Northeast Regional Office

FACILITY DESCRIPTION (Continued)

Outfall #001- Inactive Landfill - SIC #4953
Stormwater runoff.
Design flow is 0.38 MGD.
Actual flow is dependent on rainfall.

Legal Description: SW ¼, SE ¼, NW ¼, Sec. 17, T54N, R14W, Randolph County
Latitude/Longitude: +3928357/-09230380

Receiving Stream: Unnamed tributary to Sinking Creek (U)
First Classified Stream and ID: East Fork Chariton River (P) (00682) 303(d) list
USGS Basin & Sub-watershed No.: (10280203-040002)

Outfall #002- Inactive Landfill - SIC #4953
Stormwater runoff.
Design flow is 1.67 MGD.
Actual flow is dependent on rainfall.

Legal Description: SE ¼, NE ¼, SW ¼, Sec. 17, T54N, R14W, Randolph County
Latitude/Longitude: +3928238/-09230295

Receiving Stream: Unnamed tributary to Sugar Creek (U)
First Classified Stream and ID: Sugar Creek (P) (00686) 303(d) list
USGS Basin & Sub-watershed No.: (10280203-040002)

Outfall #003- Inactive Landfill - SIC #4953
Stormwater runoff.
Design flow is 1.99 MGD.
Actual flow is dependent on rainfall.

Legal Description: SE ¼, NW ¼, SE ¼, Sec. 17, T54N, R14W, Randolph County
Latitude/Longitude: +3928263/-09230160

Receiving Stream: Unnamed tributary to Sugar Creek (U)
First Classified Stream and ID: Sugar Creek (P) (00686) 303(d) list
USGS Basin & Sub-watershed No.: (10280203-040002)

Outfall #004- Inactive Landfill - SIC #4953
Stormwater runoff.
Design flow is 1.00 MGD.
Actual flow is dependent on rainfall.

Legal Description: SE ¼, NE ¼, NW ¼, Sec. 17, T54N, R14W, Randolph County
Latitude/Longitude: +3928511/-09230325

Receiving Stream: Unnamed tributary to Sinking Creek (U)
First Classified Stream and ID: East Fork Chariton River (P) (00682) 303(d) list
USGS Basin & Sub-watershed No.: (10280203-040002)

Outfall #005- Inactive Landfill - SIC #4953
Stormwater runoff.
Design flow is 1.33 MGD.
Actual flow is dependent on rainfall.

Legal Description: SW ¼, NW ¼, NE ¼, Sec. 17, T54N, R14W, Randolph County
Latitude/Longitude: +3928504/-09230204

Receiving Stream: Unnamed tributary to Sinking Creek (U)
First Classified Stream and ID: East Fork Chariton River (P) (00682) 303(d) list
USGS Basin & Sub-watershed No.: (10280203-040002)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PAGE NUMBER 4 of 11

PERMIT NUMBER MO-0108723

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 three (3) years from the date of issuance 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>Outfalls #001, 002, 003, 004 & 005</u>						
Chloride + Sulfate	mg/L	*		*	once/quarter***	grab

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

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 two (2) years before the date of expiration of this permit and remain in effect until expiration of the 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 AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #001, 002, 003, 004 & 005</u>						
Chloride + Sulfate	mg/L	1000		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2013. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PERMIT NUMBER MO-0108723

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>Outfalls #001, 002, 003, 004 & 005</u>						
Flow	MGD	*		*	once/quarter***	24 hr Estimate
Rainfall	Inches	*		*	once/daily	grab
Chemical Oxygen Demand	mg/L	120		90	once/quarter***	grab
Biochemical Oxygen Demand ₅	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
Nitrate as N	mg/L	*		*	once/quarter***	grab
Chloride	mg/L	*		*	once/quarter***	grab
Sulfate	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

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

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #001, 004 and 005</u>						
Total Xylene	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2010. 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 6 of 11	
					PERMIT NUMBER MO-0108723	
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>Outfalls #001, 002, 003, 004 & 005</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	*		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2010</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #001, 004 and 005</u>						
Barium, Total Recoverable	µg/L	*		*	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2010</u> . 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 <u>Parts I</u> , STANDARD CONDITIONS DATED <u>October 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PERMIT NUMBER MO-0108723

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 AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #001, 002, 003, 004 & 005</u>						
Flow	MGD	*		*	once/quarter***	24 hr Estimate
Rainfall	Inches	*		*	once/daily	grab
Chemical Oxygen Demand	mg/L	90		60	once/quarter***	grab
Biochemical Oxygen Demand ₅	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
Nitrate as N	mg/L	*		*	once/quarter***	grab
Chloride	mg/L	*		*	once/quarter***	grab
Sulfate	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

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2011. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #001, 004 and 005</u>						
Total Xylene	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2011. 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

PERMIT NUMBER MO-0108723

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 AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #001, 002, 003, 004 & 005</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	1639		817	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2011. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE			
<u>Outfalls #001, 004 and 005</u>						
Barium, Total Recoverable	µg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2011. 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 Part I STANDARD CONDITIONS DATED October 1, 1980, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

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.
- *** Grab samples shall be collected during a rainfall event, when there is runoff from the landfill site. The sample shall be collected no later than one hour after runoff begins. 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

C. SPECIAL CONDITIONS

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

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

2. All outfalls must be clearly marked in the field.
3. 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.
4. Report as no-discharge when a discharge does not occur during the report period.

5. 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;

C. SPECIAL CONDITIONS

- (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.

6. 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 DNR unless specifically requested. The SWPPP must be reviewed and updated, if needed, every five (5) years or as site conditions change. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

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.

The SWPPP must include the following:

- (a) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter storm water. Minimum BMPs are listed in SPECIAL CONDITIONS #7 below.
- (b) The SWPPP must include a schedule for a bi-monthly site inspection and a brief written report. The inspections must include observation and evaluation of BMP effectiveness. Deficiencies must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report, including photographs. Any corrective measure that necessitates major construction may also need a construction permit. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to DNR personnel upon request.
- (c) A provision for designating an individual to be responsible for environmental matters.
- (d) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.

7. Permittee shall adhere to the following minimum Best Management Practices:

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

8. 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.

C. SPECIAL CONDITIONS

9. 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.
10. Before releasing water that has accumulated in secondary containment areas it must be examined for hydrocarbon odor and presence of a sheen. When the presence of hydrocarbons is indicated, and at a minimum of once/quarter, this water must be tested for Total Petroleum Hydrocarbons (TPH). The suggested analytical method for testing TPH is non-Halogenated Organic by Gas Chromatography method 8015 (also known as OA1 and OA2). However, if the permittee so desires to use other approved testing methods (i.e. EPA 1664), they may do so. If the concentration for TPH exceeds 10mg/L, the water shall be taken to a WWTP for treatment.
11. 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.

D. SCHEDULE OF COMPLIANCE

The Final Effluent Limitations other than Chloride Plus Sulfate shall be met within twelve (12) months of the effective date of this operating permit. Due to the Interim time period being only twelve (12) months, the final milestone compliance date shall be twelve (12) months from the effective date of this operating permit. If the permittee determines that the new effluent limitations will not or can not be met by the milestone date, then the permittee shall submit a Compliance Report eleven (11) months from the effective date of this operating permit. The Compliance Report shall include:

- a. Reason(s) that the new effluent limitation will not or can not be met for each specific pollutant.
- b. Steps taken by the permittee to meet the new effluent limitations for each specific pollutant.
- c. A reasonable compliance schedule to be implemented by the permittee to meet the new effluent limitation for each specific pollutant.

CHLORIDE PLUS SULFATE

The final effluent limitation shall be met within three years of the effective date of this operating permit. The facility shall submit interim progress reports every twelve months documenting steps taken to meet the final effluent limitations.

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 greater than 0.1 inches 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: e.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.

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-0108723
MOBERLY 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 Moberly Sanitary Landfill is a solid waste disposal facility, located approximately five miles northwest of Moberly, Missouri. The facility is owned and operated by the City of Moberly. The landfill consists of three different developments. The three different developments are the original landfill, the vertical expansion portion of the original landfill (15 acres), and the Subtitle D Landfill (31.9 acres). All but the 15-acre vertical expansion of the original landfill were closed in 1990. The 15-acre vertical expansion of the original landfill was closed in 1993. The 31.9-acre Subtitle D Landfill was opened in 1993, and ceased accepting waste in 2005. A Closure and Post-Closure Plan for the 31.9-acre Subtitle D Landfill was approved by the Department on December 10, 2001. The Moberly Sanitary Landfill has not received final closure approval from the Department's Solid Waste Management Program, and currently operates as an inactive landfill. The current permit has five outfalls. Outfall #001 is associated with the stormwater sedimentation basin located on the west side of the landfill. Outfall #002 is associated with the stormwater sedimentation basin located on the south side of the landfill. Outfall #003 is associated with the stormwater sedimentation basin located on the southeast side of the landfill. Outfall #004 is associated with the stormwater sedimentation basin located on the northeast side of the landfill. Outfall #005 is associated with the stormwater sedimentation basin located on the north side of the landfill. Actual flow is dependent upon precipitation.

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

Part B – Outfall Information & Descriptions

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (MGD)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.38**	Sedimentation Basin & BMP*	Industrial – Storm water runoff	~2.45
002	1.67**	Sedimentation Basin & BMP*	Industrial – Storm water runoff	~0.70
003	1.99**	Sedimentation Basin & BMP*	Industrial – Storm water runoff	~0.77
004	1.00**	Sedimentation Basin & BMP*	Industrial – Storm water runoff	~2.80
005	1.33**	Sedimentation Basin & BMP*	Industrial – Storm water runoff	~3.00

* - BMP means Best Management Practices

** - Based on 10 year 24 hour storm event.

Outfall #001- Inactive Landfill - SIC #4953

Stormwater runoff.

Design flow is 0.38 MGD.

Actual flow is dependent on rainfall.

Legal Description: SW ¼, SE ¼, NW ¼, Sec. 17, T54N, R14W, Randolph County
 Latitude/Longitude: +3928357/-09230380

Receiving Stream: Unnamed tributary to Sinking Creek (U)
 First Classified Stream and ID: East Fork Chariton River (P) (00682) 303(d) list
 USGS Basin & Sub-watershed No.: (10280203-040002)

Outfall #002- Inactive Landfill - SIC #4953

Stormwater runoff.

Design flow is 1.67 MGD.

Actual flow is dependent on rainfall.

Legal Description: SE ¼, NE ¼, SW ¼, Sec. 17, T54N, R14W, Randolph County
 Latitude/Longitude: +3928238/-09230295

Receiving Stream: Unnamed tributary to Sugar Creek (U)
 First Classified Stream and ID: Sugar Creek (P) (00686) 303(d) list
 USGS Basin & Sub-watershed No.: (10280203-040002)

Outfall #003- Inactive Landfill - SIC #4953

Stormwater runoff.

Design flow is 1.99 MGD.

Actual flow is dependent on rainfall.

Legal Description: SE ¼, NW ¼, SE ¼, Sec. 17, T54N, R14W, Randolph County
 Latitude/Longitude: +3928263/-09230160

Receiving Stream: Unnamed tributary to Sugar Creek (U)
 First Classified Stream and ID: Sugar Creek (P) (00686) 303(d) list
 USGS Basin & Sub-watershed No.: (10280203-040002)

Outfall #004- Inactive Landfill - SIC #4953
Stormwater runoff.
Design flow is 1.00 MGD.
Actual flow is dependent on rainfall.

Legal Description: SE ¼, NE ¼, NW ¼, Sec. 17, T54N, R14W, Randolph County
Latitude/Longitude: +3928511/-09230325

Receiving Stream: Unnamed tributary to Sinking Creek (U)
First Classified Stream and ID: East Fork Chariton River (P) (00682) 303(d) list
USGS Basin & Sub-watershed No.: (10280203-040002)

Outfall #005- Inactive Landfill - SIC #4953
Stormwater runoff.
Design flow is 1.33 MGD.
Actual flow is dependent on rainfall.

Legal Description: SW ¼, NW ¼, NE ¼, Sec. 17, T54N, R14W, Randolph County
Latitude/Longitude: +3928504/-09230204

Receiving Stream: Unnamed tributary to Sinking Creek (U)
First Classified Stream and ID: East Fork Chariton River (P) (00682) 303(d) list
USGS Basin & Sub-watershed No.: (10280203-040002)

Water Quality History:

The most recent compliance inspection was conducted on June 2, 2009 and June 4, 2009. The facility was found to not be in compliance during the inspection. The facility was cited for causing pollution of its unnamed tributaries, discharging from an unpermitted outfall, failing to submit a timely WET test, failure to report erosion control activities, and failure to clearly mark outfalls in the field.

- Outfall #001 – Effluent violations from 2005 to present (1) TSS.
- Outfall #002 – Effluent violations from 2005 to present (1) TSS.
- Outfall #003 – No effluent exceedances.
- Outfall #004 – Effluent violations from 2005 to present (1) TSS.
- Outfall #005 – Effluent violations from 2005 to present (2) TSS.

Comments:

Monitoring frequency for the majority of parameters has been increased to provide the department with an adequate amount of data to determine if these pollutants are being discharged in high enough concentrations to cause a violation of Missouri’s WQS.

Several parameters/pollutants were removed from the previous state operating permit due to the fact that they did not have any applicable beneficial use (e.g.. Protection of Aquatic Life, Drinking Water Supply). The parameters/pollutants are as follows: Total Dissolved Solids, Conductivity, Calcium, Boron, Sodium, Nitrate + Nitrite, Total Phosphorus, Manganese, Magnesium, Total Organic Carbon, and Vanadium.

The Schedule of Compliance has been extended from one year to three years for Chloride plus Sulfate to allow the facility time to implement measures needed to meet the final limit. Also, the measurement for Chromium VI has been changed from Total Recoverable to Dissolved.

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 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed tributary to Sinking Creek	U	NA	General Criteria	10280203	Central Plains / Grand / Chariton
East Fork Chariton River	P	00682	LWW, AQL, WBC***, DWS		
Unnamed tributary to Sugar Creek	U	NA	General Criteria		
Sugar Creek	P	00686	LWW, AQL, WBC****		

* - 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

*** - UAA conducted on July 5, 2005 and WBCR use was retained.

**** - UAA conducted on September 29, 2006 and a determination has not been made.

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 ;

Not Applicable ;

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

FLOW BASED PERMITTING:

A standard mass-balance equation cannot be calculated for 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 Chlorides + Sulfate, Biochemical Oxygen Demand, Chemical Oxygen Demand, Total Suspended Solids, pH and Total Recoverable Iron effluent limits. The Schedule of Compliance has been extended from one year to three years for Chloride plus Sulfate to allow the facility time to implement measures needed to meet the final limit.

Not Applicable ;

This permit does not contain a SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of storm water 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 *Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* [EPA 832-R-92-006] (Storm Water Management), BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Storm Water 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.

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.

Not Applicable ;

At this time, the permittee is not required to develop and implement a SWPPP.

WLA MODELING:Applicable ;Not Applicable ;

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

WATER QUALITY STANDARDS:

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

WHOLE EFFLUENT TOXICITY (WET) TEST:

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

Applicable ;

In accordance with the 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. Furthermore, WET testing is a means by which the department determines that [10 CSR 20-7.031(3)(D, F, & G)] are being met by the permitted facility. In addition to justification for the WET testing, WET tests are required under [10 CSR 20-6.010(8)(A)4] to be performed by specialist who are properly trained in conducting the test according to the methods prescribed by the Federal Government as referenced in [40 CFR Part 136]. WET test will be required by all facilities meeting the following criteria:

- Facility is a designated Major.
- Facility continuously or routinely exceeds its design flow.
- Facility (industrial) that alters its production process throughout the year.
- Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH₃)
- Facility is a municipality or domestic discharger with a Design Flow \geq 22,500 gpd.
- Other – please justify.

Not Applicable ;

At this time, the permittee is not required to conduct WET test for this facility. The WET test was removed from this permit as the facility no longer has any outfalls draining active landfill areas.

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

Applicable ;

East Fork Chariton River is listed on the 2006 Missouri 303(d) List for Sulfates and Sugar Creek is listed on the 2006 Missouri 303(d) List for Low Dissolved Oxygen.

– This facility is not considered to be a source of the above listed pollutant(s) or considered to contribute to the impairment of Sugar Creek or East Fork Chariton River.

– This facility is considered to be a source of or has the potential to contribute to the above listed pollutant(s).

Not Applicable ;

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

Part E – Effluent Limits Determination

All Outfalls – Effluent Limitation Table:

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

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	mg/L	9	90		60	YES	120/90
BOD ₅	mg/L	1/9	45		30	YES	60/45
TSS	mg/L	1	80		50	YES	80/60
pH	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6.0-9.0
SETTLABLE SOLIDS	mL/L/hr	1/9	1.5		1.0	NO	S
OIL & GREASE	mg/L	1/2/9	15		10	NO	S
TOTAL AMMONIA AS N	mg/L	9	*		*	NO	S
NITRATE AS N	mg/L	9	*		*	NO	S
CHLORIDE + SULFATES	mg/L	9	1000		*	YES	*
CHLORIDE	mg/L	9	*		*	YES	**
SULFATE	mg/L	9	*		*	YES	**
FLUORIDE	mg/L	9	*		*	NO	S
BENZENE	µg/L	9	*		*	YES	BETX OF 0.75
ETHYLBENZENE	µg/L	9	*		*	YES	BETX OF 0.75
TOLUENE	mg/L	9	*		*	YES	BETX OF 0.75
TOTAL XYLENE, (OUTFALLS 1, 4, & 5)	mg/L	9	*		*	YES	BETX OF 0.75
TOTAL HARDNESS	mg/L	9	*		*	NO	S
ANTIMONY, TR	mg/L	9	*		*	NO	S
ARSENIC, TR	µg/L	9	*		*	NO	S
BARIUM, TR	µg/L	9	*		*	NO	S
BERYLLIUM, TR	µg/L	9	*		*	NO	S
CADMIUM, TR	µg/L	9	*		*	NO	S
CHROMIUM (III), TR	µg/L	9	*		*	YES	TOTAL CHROMIUM
CHROMIUM (VI), D	µg/L	9	*		*	YES	TOTAL CHROMIUM
COBALT, TR	µg/L	9	*		*	NO	S
COPPER, TR	µg/L	9	*		*	NO	S
IRON, TR	µg/L	1/2/9	1639		817	YES	*
LEAD, TR	µg/L	9	*		*	NO	S
MERCURY, TR	µg/L	9	*		*	NO	S
NICKEL, TR	µg/L	9	*		*	NO	S
SELENIUM, TR	µg/L	9	*		*	NO	S
SILVER, TR	µg/L	9	*		*	NO	S
THALLIUM, TR	µg/L	9	*		*	NO	S
ZINC, TR	µg/L	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

Basis for Limitations Codes:

- | | |
|--|------------------------------------|
| 1. State or Federal Regulation/Law | 7. Antidegradation Policy |
| 2. Water Quality Standard (includes RPA) | 8. Water Quality Model |
| 3. Water Quality Based Effluent Limits | 9. Best Professional Judgment |
| 4. Lagoon Policy | 10. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy | 11. WET Test Policy |
| 6. 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 landfill operating permits.
- **Biochemical Oxygen Demand (BOD₅)**. 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 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.
- **Nitrate as N**. Monitoring only requirement. 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.
- **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 only requirement. Chlorides have been included in this permit to determine what percentage of the Chlorides + Sulfate parameter is Chlorides and what percentage is Sulfates.
- **Sulfate**. Monitoring only requirement. Sulfate has been included in this permit to determine what percentage of the Chlorides + Sulfate parameter is Chlorides and what percentage is Sulfates.
- **Fluoride**. Monitoring only requirement. 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 only requirement. 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 only requirement. 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 only requirement. 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.
- **Total Xylene.** Monitoring only requirement. 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.
- **Antimony, Total Recoverable.** 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.
- **Arsenic, Total Recoverable.** 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.
- **Barium, Total Recoverable.** 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.
- **Beryllium, Total Recoverable.** 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.

- **Cadmium, Total Recoverable**. 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.
- **Chromium (III), Total Recoverable**. 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.
- **Chromium (VI), Dissolved**. 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.
- **Cobalt, Total Recoverable**. 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.
- **Copper, Total Recoverable**. 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.
- **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.

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

$$LTA_c = 1000 \mu\text{g/L} (0.527) = 527 \mu\text{g/L} \quad [\text{CV} = 0.6, 99^{\text{th}} \text{ Percentile}]$$

$$\text{MDL} = 527 \mu\text{g/L} (3.11) = 1639 \mu\text{g/L} \quad [\text{CV} = 0.6, 99^{\text{th}} \text{ Percentile}]$$

$$\text{AML} = 527 \mu\text{g/L} (1.55) = 817 \mu\text{g/L} \quad [\text{CV} = 0.6, 95^{\text{th}} \text{ Percentile}, n = 4]$$

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.

- **Lead, Total Recoverable**. 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.
- **Mercury, Total Recoverable**. 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.
- **Nickel, Total Recoverable**. 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.
- **Selenium, Total Recoverable**. 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.
- **Silver, Total Recoverable**. 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.
- **Thallium, Total Recoverable**. 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.
- **Zinc, Total Recoverable**. 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.

• **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 ₅	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
NITRATE AS N	ONCE/QUARTER	ONCE/QUARTER
CHLORIDES + SULFATES	ONCE/QUARTER	ONCE/QUARTER
CHLORIDE	ONCE/QUARTER	ONCE/QUARTER
SULFATE	ONCE/QUARTER	ONCE/QUARTER
FLUORIDE	ONCE/QUARTER	ONCE/QUARTER
BENZENE	ONCE/QUARTER	ONCE/QUARTER
ETHYLBENZENE	ONCE/QUARTER	ONCE/QUARTER
TOLUENE	ONCE/QUARTER	ONCE/QUARTER
XYLENE	ONCE/QUARTER	ONCE/QUARTER
TOTAL HARDNESS	ONCE/QUARTER	ONCE/QUARTER
ANTIMONY, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
ARSENIC, TOTAL RECOVERABLE	ONCE/QUARTER	ONCE/QUARTER
BARIUM, 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), DISSOLVED	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

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 (DATE) 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 Statement of Basis: November 30, 2009

Date of Public Notice: March 12, 2010

Submitted by

Matt Sperry, Environmental Specialist
Northeast Regional Office
(660) 385-8000
matt.sperry@dnr.mo.gov

Reviewed by

Lantz Tipton, Environmental Specialist
Northeast Regional Office
(660) 385-8000
lantz.tipton@dnr.mo.gov

Matt Sperry

Date

Lantz Tipton

Date