

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-0108731

Owner: City of Joplin
Address: 602 South Main St., Joplin, MO 64801

Continuing Authority: same as above
Address: same as above

Facility Name: Joplin Municipal Landfill
Facility Address: Route P, Joplin, MO 64802

Legal Description: NW¼, NE¼, NW¼, Sec. 32, T28N, R33W, Jasper County
UTM Coordinates: X = 361303, Y = 4108365

Receiving Stream: Unnamed Tributary to Turkey Creek
First Classified Stream and ID: Turkey Creek (P) WBID #3216 303(d) List
USGS Basin & Sub-watershed No.: 11070207-0901

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

FACILITY DESCRIPTION

Outfall #001 - Closed Sanitary Landfill SIC #4953
Stormwater Only
Maximum flow is approximately 35,000 gpd.

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

April 1, 2015
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

September 30, 2017
Expiration Date

John Madras, Director, Water Protection Program

OUTFALL #001	TABLE A-1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS
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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 **April 1, 2015**, and remain in effect through expiration. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

EFFLUENT PARAMETER(S) (Note 1)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Precipitation	inches	*		*	once/quarter***	measurement
Biochemical Oxygen Demand ₅	mg/L	45		30	once/quarter***	grab
Chemical Oxygen Demand	mg/L	120		90	once/quarter***	grab
Total Suspended Solids	mg/L	75		50	once/quarter***	grab
pH – Units	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
Chloride + Sulfate	mg/L	1000		--	once/quarter***	grab
Cadmium, Total Recoverable (Note 2)	µg/L	*		--	once/quarter***	grab
Lead, Total Recoverable (Note 2)	µg/L	*		--	once/quarter***	grab
Zinc, Total Recoverable	µg/L	200		--	once/quarter***	grab

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

- * 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.

Minimum Sampling Requirements			
Quarter	Months	Influent Parameters	Report is Due
First	January, February, March	Sample at least once during any month of the quarter	April 28 th
Second	April, May, June	Sample at least once during any month of the quarter	July 28 th
Third	July, August, September	Sample at least once during any month of the quarter	October 28 th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 th

Note 1 – All samples shall be collected from a discharge resulting from a precipitation event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable precipitation event. If a precipitation event does not occur within the reporting period, report as **no discharge**. Report the total amount of precipitation during the event from which the samples were collected.

Note 2 - This parameter incorporates a Benchmark Value associated with Best Management Practices (BMPs). See Special Condition #10 for Benchmark Value.

OUTFALL #001	TABLE A-1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS
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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 **April 1, 2015**, and remain in effect through expiration. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

EFFLUENT PARAMETER(S) (Note 1)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Benzene	µg/L	*			once/year	grab
Ethylbenzene	µg/L	*			once/year	grab
Toluene	µg/L	*			once/year	grab
Antimony, Total Recoverable	µg/L	*			once/year	grab
Arsenic, Total Recoverable	µg/L	*			once/year	grab
Beryllium, Total Recoverable	µg/L	*			once/year	grab
Chromium (III), Total Recoverable	µg/L	*			once/year	grab
Chromium (VI), Dissolved	µg/L	*			once/year	grab
Cobalt, Total Recoverable	µg/L	*			once/year	grab
Copper, Total Recoverable	µg/L	*			once/year	grab
Iron, Total Recoverable	µg/L	2,000			once/year	grab
Mercury, Total Recoverable	µg/L	*			once/year	grab
Nickel, Total Recoverable	µg/L	*			once/year	grab
Selenium, Total Recoverable	µg/L	*			once/year	grab
Silver, Total Recoverable	µg/L	*			once/year	grab
Thallium, Total Recoverable	µg/L	*			once/year	grab

MONITORING REPORTS SHALL BE SUBMITTED **ANNUALLY**; THE FIRST REPORT IS DUE **JANUARY 28, 2016**. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

* Monitoring requirement only.

Note 1 – All samples shall be collected from a discharge resulting from a precipitation event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable precipitation event. If a precipitation event does not occur within the reporting period, report as **no discharge**. Report the total amount of precipitation during the event from which the samples were collected.

B. STANDARD CONDITIONS

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

C. SPECIAL CONDITIONS

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

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
2. All outfalls must be clearly marked in the field.
3. Water Quality Standards
 - (a) To the extent required by law, Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
 - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
4. Changes in Discharges of Toxic Substances
The permittee shall notify the Director as soon as it knows or has reason to believe:
 - (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established by the Director in accordance with 40 CFR 122.44(f).
 - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
5. Report as no-discharge when a discharge does not occur during the report period.

C. SPECIAL CONDITIONS (continued)

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

7. The permittee shall implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be prepared and implemented **90 days from the effective date of this permit**. The SWPPP must be kept on-site and should not be sent to the department unless specifically requested. The SWPPP must be reviewed and updated, if needed, every five (5) years or as site conditions change. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

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

The SWPPP must include the following:
 1. A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter stormwater. The BMPs at the facility should be designed to meet this value during rainfall event up to the 10 year, 24 hour rain event.
 2. The SWPPP must include a schedule for quarterly site inspections and brief written reports. The inspection report must include weather information for the entire period since last inspection, as well as observations and evaluations of BMP effectiveness. Deficiencies must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report, including photographs. Any corrective measure that necessitates major construction may also need a construction permit. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to department personnel upon request.
 3. A provision for designating an individual to be responsible for environmental matters.
 4. A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of the department.

8. Permittee shall adhere to the following minimum Best Management Practices (BMPs):
 1. 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.
 2. Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
 3. Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
 4. Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
 5. 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 permit conditions.

9. 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 (continued)

10. This permit stipulates pollutant benchmarks applicable to your discharge. The benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation. Benchmark monitoring and visual inspections shall be used to determine the overall effectiveness of SWPPP and to assist you in knowing when additional corrective action may be necessary to protect water quality. If a sample exceeds a benchmark concentration you must review your SWPPP and your BMPs to determine what improvements or additional controls are needed to reduce that pollutant in your stormwater discharge(s).

Outfall #001	
Parameter	Benchmark
Cadmium, total recoverable	10 µg/L
Lead, total recoverable	197 µg/L

Any time a benchmark exceedance occurs a Corrective Action Report (CAR) must be completed. A CAR is a document that records the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. CARs must be retained with the SWPPP and available to the department upon request. If the efforts taken by the facility are not sufficient and subsequent exceedances of a benchmark occur, the facility must contact the department if a benchmark value cannot be achieved. Failure to take corrective action to address a benchmark exceedance and failure to make measureable progress towards achieving the benchmarks is a permit violation.

11. 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.
12. Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the SWPPP and made available to the department upon request.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL OF
MO-0108731
JOPLIN MUNICIPAL LANDFILL**

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law (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. This fact sheet is for industrial stormwater runoff from landfill activities, standard industrial classification (SIC): 4953.

Part I – Applicability & Facility Description

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

Facility Description:

This permit authorizes stormwater discharges only, from the closed Joplin Municipal Landfill. Leachate is collected in an underground drain collection system and gravity piped to the Turkey Creek Treatment plant headworks. The City owns a 180 acre parcel that was permitted for a 30 acre demolition landfill and a 40 acre sanitary landfill. Both landfills were closed around 1990 and landfill permits were terminated. The entire site is bermed to direct all stormwater runoff to outfall 001.

The facility's application listed an average flow of 18,657 gallons per day (gpd); actual flow is dependent on precipitation. The maximum flow reported on discharge monitoring reports from 1/1/2010 – 09/30/2014 was 34,560 gpd. The maximum reported flow is used as the design flow below.

OUTFALL(S) TABLE:

OUTFALL	MAX FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.05	BMPs	Stormwater

* - BMP means Best Management Practices

Water Quality History:

From the TMDL:

A variety of studies have been conducted over the years to determine various water quality problems on both Center Creek and Turkey Creek. All of these studies have noted that upper Center Creek water quality is good, but that water quality deteriorates once Grove Creek joins Center Creek. A Missouri Department of Conservation study conducted in 1976 reported that lower Center Creek and Turkey Creek had invertebrate communities indicative of polluted streams. In fact, Turkey Creek has been called Missouri's most polluted interstate stream. Some of these studies examined parameters other than zinc contamination, but they provide a wealth of information on the history and problems that exist in the Joplin abandoned mine land region.

Comments:

Data from the previous permit indicate compliance with the effluent limits. The outfall location is corrected in this renewal; this did not require any change to the receiving stream.

Part II – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

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

All Other Waters:

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

RECEIVING STREAM(S) TABLE:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	DISTANCE TO CLASSIFIED SEGMENT	12-DIGIT HUC
#001	Unnamed tributary to Turkey Creek	--	--	General Criteria	0.4 mi	11070207-0901
	Turkey Creek	P	3216	AQL, LWW, 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).

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

ANTI-BACKSLIDING:

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

- 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.
- ✓ The Department determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b). The previous permit did not have a fact sheet, therefore the justification for some of the previous permit requirements is unknown. This permit removes many of the monthly average limits and reporting requirements. Due to the intermittent/acute nature of the stormwater discharge, monthly average limits are not required by regulation. Several parameters were also removed because there were no applicable standards for the designated uses of the receiving stream. See Part IV below for a detailed explanation of all parameters removed.

ANTIDegradation:

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

- Renewal no degradation proposed and no further review necessary.

COMPLIANCE AND ENFORCEMENT:

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

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

FLOW BASED PERMITTING:

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

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

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

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

SCHEDULE OF COMPLIANCE (SOC):

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

Not Applicable; This permit does not contain a SOC. No SOC is necessary for effluent limits in this renewal, however, 90 days are allowed for SWPPP development because this is a new requirement.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators, (Document number EPA 833-B-09-002), BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of stormwater discharges.

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

SPILL REPORTING:

Per 10 CSR 24-3.010, any emergency involving a hazardous substance must be reported to the department's 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. The department may require the submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply whether or not the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the Noncompliance Reporting requirement found in Standard Conditions Part I.

VARIANCE:

As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

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

WATER QUALITY STANDARDS:

Per [10 CSR 20-7.031(4)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TEST:

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

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

303(d) LIST:

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

Applicable. Turkey Creek (3216) is listed on the 2014 Missouri 303(d) List for *E. coli*, cadmium in water and sediment, zinc in sediment, and lead in sediment.

TOTAL MAXIMUM DAILY LOAD (TMDL):

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. 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. Turkey Creek (3216, 3217) is associated with the 2006 EPA Approved TMDL for zinc.

- ✓ This facility was identified as a source of zinc. The TMDL proposes a daily maximum permit limit of 0.216 mg/L total recoverable zinc for point sources in this watershed. That limit is higher the previous permit limit. Please see the derivation and discussion of limits below for the final effluent limitations.

Part IV – Effluent Limits Determination

Outfall #001 – 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 supersede the terms and conditions, including effluent limitations, of this operating permit.

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	gpd	1	*	*	NO	*
PRECIPITATION	Inches	6	*	*	NO	*
COD	mg/L	6	120	90	NO	120/60
BOD ₅	mg/L	1	45	30	NO	45/30
TSS	mg/L	1	75	50	NO	75/50
pH	SU	1	6.5 – 9.0		YES	6.0-9.0
SETTLABLE SOLIDS	mL/L/hr	1/6	1.5	1.0	NO	1.5/1.0
OIL & GREASE	mg/L	1/2	15	10	NO	15/10
CHLORIDE + SULFATE	mg/L	1/2/6	1000	--	NO	1000/*
FLUORIDE	mg/L	1/2/6	*	--	NO	*/*
BENZENE	µg/L	1/2/6	*	--	YES	0.75/0.75 BTEX
ETHYLBENZENE	µg/L	1/2/6	*	--	YES	0.75/0.75 BTEX
TOLUENE	µg/L	1/2/6	*	--	YES	0.75/0.75 BTEX
ANTIMONY, TR	µg/L	1/2/6	*	--	NO	*/*
ARSENIC, TR	µg/L	1/2/6	*	--	YES	40/*
BERYLLIUM, TR	µg/L	1/2/6	*	--	YES	10/*
CADMIUM, TR	µg/L	1/2/6	10 (BENCHMARK)	--	YES	52/*
CHROMIUM (III), TR	µg/L	1/2/6	*	--	YES	62/* TOTAL CHROMIUM
CHROMIUM (VI), DISSOLVED	µg/L	1/2/6	*	--	YES	
COBALT, TR	µg/L	1/2/6	*	--	NO	*/*
COPPER, TR	µg/L	1/2/6	*	--	YES	45/*
IRON, TR	µg/L	1/2/6	2,000	--	NO	2,000/*
LEAD, TR	µg/L	1/2/6	197 (BENCHMARK)	--	YES	130/*
MERCURY, TR	µg/L	1/2/6	*	--	YES	2.4/*
NICKEL, TR	µg/L	1/2/6	*	--	YES	4600/*
SELENIUM, TR	µg/L	1/2/6	*	--	YES	20/*
SILVER, TR	µg/L	1/2/6	*	--	YES	8.2/*
THALLIUM, TR	µg/L	1/2/6	*	--	NO	*/*
ZINC, TR	µg/L	1/2/6	200	--	YES	200/110
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.					

* - Monitoring requirement only
TR –Total Recoverable

Basis for Limitations Codes:

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

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

NPDES stormwater permits must contain conditions that ensure water quality standards are protected. This does not always require the use of numeric water-quality based effluent limitations. Under the Clean Water Act and NPDES regulations, permitting authorities may employ a variety of conditions and limitations in stormwater permits as the necessary water quality based limitations. The EPA's Technical Support Document for Water Quality Based Toxics Control (TSD) establishes a methodology for deriving numeric water quality based effluent limitations; however, it was developed primarily for continuous wastewater discharges at low flow conditions in the receiving water, not intermittent wet weather discharges during high flow conditions. After evaluating the site specific conditions of this facility, the permit writer has used best professional judgment to establish either daily maximum effluent limitations or benchmarks as deemed necessary to protect water quality standards. The limits/benchmarks are established using acute criteria wherever it is available. Chronic criteria are used as a benchmark only when acute criteria are not established. Statistical multipliers derived from the TSD do not apply to this type of discharge, therefore, water quality standards are applied directly.

AQL – Aquatic Life

DWS – Drinking Water Source

HHF – Human Health Factor (can be applied when AQL is not available)

- **Flow.** Monitoring only requirement in accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification to determine an alternate location for flow monitoring.
- **Precipitation.** Monitoring only requirement. Precipitation data obtained from DMRs is used to aid in the determination of this facilities specific runoff coefficient and estimated loading in the watershed.
- **Biological Oxygen Demand (BOD).** Effluent limitations of 45 mg/L as a Daily Maximum and 30 mg/L as a Monthly Average were achieved during the previous permit cycle and are consistent with other landfill operating permits BOD is a pollutant of concern associated with landfills identified in both the Landfill Effluent Limitation Guideline and EPA's MSGP. Effluent limitations from the previous permit have been reevaluated and determined to be achievable and protective of the receiving stream.
- **Chemical Oxygen Demand (COD).** Effluent limitations of 120 mg/L as a Daily Maximum and 90 mg/L as a Monthly Average are applicable to this facility and are consistent with other landfill operating permits. Effluent limitations have been retained from previous state operating permit.
- **Total Suspended Solids (TSS).** Effluent limitations of 75 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. Effluent limitations have been retained from previous state operating permit.
- **pH.** Effluent limitation range is from 6.5 to 9.0 Standard pH Units (SU), as per [10 CSR 20-7.031(5)(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.** Parameter removed. Ammonia was not detected above the detection limit during the previous permit cycle. No reasonable potential demonstrated.
- **Nitrate as N.** Nitrate is removed at this renewal. The only water quality standards for nitrate are for the drinking water and groundwater uses. Those uses do not apply to this receiving stream.
- **Phosphorous.** Parameter removed. No water quality standard is available for this pollutant. The effluent regulation found at 10 CSR 7.015 does not apply to stormwater, therefore monitoring and limits are not required.
- **Chlorides + Sulfate.** Parameter retained from previous permit. As per 10 CSR 7.031(4)(L), for streams with a 7Q10 low flow of less than 1 cubic foot per second, the concentration of chloride plus sulfate shall not exceed 1,000 mg/L. Maximum daily limit = 1,000 mg/L

- **Fluoride.** Chronic LWW WQS= 4 mg/L
 Only one result (0.117 mg/L) for fluoride was reported during the previous permit cycle. This is not sufficient data to make a reasonable potential determination. This parameter is retained in the permit with annual monitoring.
- **Benzene.** Chronic AQL WQS = 71 µg/L
 The previous permit applied a BTEX limit of 0.75 mg/L. All BTEX results reported were .002-.003 mg/L. In order to determine reasonable potential to exceed water quality standards for benzene, the BTEX limit is replaced with annual monitoring for benzene.
- **Ethylbenzene.** Chronic AQL WQS = 320 µg/L
 The previous permit applied a BTEX limit of 0.75 mg/L. All BTEX results reported were .002-.003 mg/L. In order to determine reasonable potential to exceed water quality standards for benzene, the BTEX limit is replaced with annual monitoring for ethylbenzene.
- **Toluene.** Chronic AQL WQS = 200,000 µg/L
 The previous permit applied a BTEX limit of 0.75 mg/L. All BTEX results reported were .002-.003 mg/L. In order to determine reasonable potential to exceed water quality standards for benzene, the BTEX limit is replaced with annual monitoring for toluene.
- **Total Xylene.** The previous permit applied a BTEX limit of 0.75 mg/L. All BTEX results reported were .002-.003 mg/L. Xylene is not included in this renewal. The only water quality standards for xylene are for the drinking water and groundwater uses. Those uses do not apply to this receiving stream.

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.

HARDNESS DEPENDENT METALS	CONVERSION FACTORS
	ACUTE
Cadmium	0.915
Chromium III	0.316
Copper	0.960
Lead	0.690
Mercury	0.85
Nickel	0.998
Silver	0.850
Zinc	0.980

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 = 200 mg/L. This hardness was established in the applicable TMDL using USGS data.

- **Antimony, Total Recoverable.** Chronic HHF WQS = 4.3 mg/L
 Only one result (0.5 µg/L) for antimony was reported during the previous permit cycle. This is not sufficient data to make a reasonable potential determination. This parameter is retained in the permit with annual monitoring.
- **Arsenic, Total Recoverable.** Chronic AQL WQS = 20 µg/L
 Data from the previous permit cycle indicate arsenic concentrations in the discharge ranged from (0.56 – 1.8 µg/L). It is the permit writer’s best professional judgment that this facility does not have reasonable potential to exceed water quality standards for this parameter. Annual monitoring only required for this permit cycle.

- **Barium, Total Recoverable.** Barium is removed at this renewal. The only water quality standards for boron are for the irrigation and groundwater uses. Those uses do not apply to this receiving stream.
- **Boron, Total Recoverable.** Boron is removed at this renewal. The only water quality standards for boron are for the drinking water and groundwater uses. Those uses do not apply to this receiving stream.
- **Beryllium, Total Recoverable.** Chronic AQL WQS = 5µg/L
Data from the previous permit cycle indicate beryllium concentrations in the discharge consistently around 0.2 µg/L. It is the permit writer's best professional judgment that this facility does not have reasonable potential to exceed water quality standards for this parameter. Annual monitoring only required for this permit cycle.
- **Cadmium, Total Recoverable.** Turkey Creek is on the 2014 303(d) List for cadmium in the water and sediment. Data from the previous permit cycle indicate that concentrations of cadmium in the discharge range from 0.23 – 3.0 µg/L. The previous permit applied an effluent limitation of 52 µg/L, but provides no justification. This renewal applies the acute aquatic life standard as a benchmark to ensure the protection of water quality in Turkey Creek.

$$\begin{aligned} \text{Acute AQL WQS} &= e(1.0166 * \ln 200 - 3.062490) * (1.136672 - (\ln 200 * 0.041838)) \\ &= 2.3238 * 0.9150 = 9.3462 \text{ } \mu\text{g/L dissolved cadmium} \\ \text{Total recoverable conversion} &= 9.3462 / 0.915 = 10.2 \text{ } \mu\text{g/L total recoverable cadmium} \end{aligned}$$

Benchmark = 10 µg/L

- **Chromium (III), Total Recoverable.**
Acute AQL WQS = $e(0.8190 * \ln 200 + 3.725666) * 0.316$
 $e8.065 * 0.316 = 1005 \text{ } \mu\text{g/L dissolved chromium (III)}$
Total recoverable conversion = $1005 / 0.316 = 3,180 \text{ } \mu\text{g/L total recoverable chromium (III)}$

Data from the previous permit cycle indicate that concentrations of total recoverable chromium in the discharge range from 0.92 - 4.7 µg/L. It is the permit writer's best professional judgment that this facility does not have reasonable potential to exceed water quality standards for this parameter. Annual monitoring only required for this permit cycle.

- **Chromium (VI), Dissolved.** Acute AQL WQS = 15 µg/L
Chromium (VI) was not found in the previous permit. This renewal requires annual monitoring to determine reasonable potential to exceed water quality standards.
- **Cobalt, Total Recoverable.** Chronic LWW WQS = 1,000 µg/L
Only one result (4 µg/L) for cobalt was reported during the previous permit cycle. This is not sufficient data to make a reasonable potential determination. This parameter is retained in the permit with annual monitoring.
- **Copper, Total Recoverable.**
Acute AQL WQS = $e(0.9422 * \ln 200 - 1.7003) * 0.960$
 $e3.2918 * 0.960 = 25.8156 \text{ dissolved copper}$
Total recoverable conversion = $25.8156 / 0.960 = 26.891 \text{ total recoverable copper}$

Data from the previous permit cycle indicate that concentrations of total recoverable copper in the discharge range from 2 - 9.7 µg/L. It is the permit writer's best professional judgment that this facility does not have reasonable potential to exceed water quality standards for this parameter. Annual monitoring only required for this permit cycle.

- **Iron, Total Recoverable.** Data from the previous permit cycle indicate that concentrations of total recoverable iron in the discharge range from 440 - 3710 µg/L. The previous permit applied a limitation of 2,000 µg/L total recoverable iron. This limit was reevaluated and determined to be protective of water quality, 2,000 µg/L is retained as a maximum daily limit in this renewal.
- **Lead, Total Recoverable.**
Acute AQL WQS = $e(1.273 * \ln 200 - 1.460448) * (1.46203 - (\ln 200 * 0.145712))$
 $e5.2843 * 0.690 = 136.08 \text{ dissolved lead}$

$$\text{Total recoverable conversion} = 136.08 / 0.690 = 197.21 \text{ } \mu\text{g/L total recoverable lead}$$

Benchmark = 197 µg/L

Turkey Creek is on the 2014 303(d) List for lead in sediment. Data from the previous permit cycle indicate that concentrations of lead in the discharge range from 1.6 – 33.4 µg/L. The previous permit applied an effluent limitation of 130 µg/L, but provides no justification. This renewal applies the acute aquatic life standard as a benchmark to ensure the protection of water quality in Turkey Creek.

- **Manganese, Total Recoverable.** Manganese is removed at this renewal. The only water quality standard for manganese is for the groundwater use. That use does not apply to this receiving stream
- **Mercury, Total Recoverable.** Acute AQL WQS = 2.4 µg/L
Data from the previous permit cycle indicate a concentration of 0.2 µg/L for every mercury result, this may be a detection limit. The previous permit included an effluent limitation of 2.4 µg/L, which may have been based on the acute aquatic life standard. It is the permit writer's best professional judgment that this facility does not have reasonable potential to exceed water quality standards for this parameter. Annual monitoring only required for this permit cycle.

- **Nickel, Total Recoverable.**
Acute AQL WQS = $e^{(0.8460 \cdot \ln 200 + 2.255647)} \cdot 0.998$
 $e^{6.7380} \cdot 0.998 = 842.18 \text{ µg/L dissolved nickel}$
Total recoverable conversion = $842.18 / 0.998 = 843.87 \text{ total recoverable nickel}$

Only one result (8.2 µg/L) for nickel was reported during the previous permit cycle. This is not sufficient data to make a reasonable potential determination. This parameter is retained in the permit with annual monitoring.

- **Selenium, Total Recoverable.** Chronic AQL WQS = 5 µg/L
Data from the previous permit cycle indicate that concentrations of selenium in the discharge range from 0.5 – 0.67 µg/L. The previous permit applied an effluent limitation of 20 µg/L, but provides no justification. It is the permit writer's best professional judgment that this facility does not have reasonable potential to exceed water quality standards for this parameter. Annual monitoring only required for this permit cycle.

- **Silver, Total Recoverable.**
Acute AQL WQS = $e^{(1.72 \cdot \ln 200 - 6.588144)} \cdot 0.85$
 $e^{2.5249} \cdot 0.859 = 10.73 \text{ µg/L dissolved silver}$
Total recoverable conversion = $10.73 / 0.850 = 12.62 \text{ µg/L total recoverable silver}$

Data from the previous permit cycle indicate a concentration of 0.5 µg/L for every silver result; this may be a detection limit. The previous permit included an effluent limitation of 8.2 µg/L, but provides no justification. It is the permit writer's best professional judgment that this facility does not have reasonable potential to exceed water quality standards for this parameter. Annual monitoring only required for this permit cycle.

- **Sodium.** There is no applicable water quality standard for this parameter; monitoring requirement is removed during this renewal.

- **Thallium, Total Recoverable.** HHF WQS = 6.3 µg/L
Only one result (0.5 µg/L) for thallium was reported during the previous permit cycle. This is not sufficient data to make a reasonable potential determination. This parameter is retained in the permit with annual monitoring.

- **Zinc, Total Recoverable.**
Acute AQL WQS = $e^{(0.8473 \cdot \ln 200 + 0.884)} \cdot 0.98$
 $e^{5.3732} \cdot 0.98 = 211.24 \text{ µg/L dissolved zinc}$
Total recoverable conversion = $211.24 / 0.98 = 215.55 \text{ µg/L total recoverable zinc}$

The 2006 TMDL for Center and Turkey Creeks addresses the zinc in water impairment for Turkey Creek. The TMDL proposes an effluent limitation for this facility of 216 µg/L, which is consistent with the calculations above using the water quality standard. The previous permit established a limit of 200 µg/L. This discharge exceeded this limit twice in 2009, but has met the limit in all subsequent samples. Since the previous permit maximum daily limit was obtained it will be retained in this permit. The monthly average limit of 110 µg/L is removed due to acute nature of the discharge.

Maximum daily limit of 200 µg/L was achieved in previous permit cycle and is retained to conform to antibacksliding provisions of the Clean Water Act.

Minimum Sampling and Reporting Frequency Requirements. Indicator parameters and those with some potential to contribute to water quality issues have quarterly monitoring and reporting in this renewal. This frequency for this suite of parameters will help identify BMP deficiencies at least quarterly and will help the facility effectively implement corrective actions when necessary. Parameters that require additional data collection to make or support a reasonable potential determination have annual monitoring and reporting in this renewal.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/quarter	once/quarter
Precipitation	once/quarter	once/quarter
Biochemical Oxygen Demand ₅	once/quarter	once/quarter
Chemical Oxygen Demand	once/quarter	once/quarter
Total Suspended Solids	once/quarter	once/quarter
pH – Units	once/quarter	once/quarter
Settleable Solids	once/quarter	once/quarter
Oil & Grease	once/quarter	once/quarter
Chloride + Sulfate	once/quarter	once/quarter
Cadmium, Total Recoverable	once/quarter	once/quarter
Lead, Total Recoverable	once/quarter	once/quarter
Zinc, Total Recoverable	once/quarter	once/quarter
Fluoride	once/year	once/year
Benzene	once/year	once/year
Ethylbenzene	once/year	once/year
Toluene	once/year	once/year
Antimony, Total Recoverable	once/year	once/year
Arsenic, Total Recoverable	once/year	once/year
Beryllium, Total Recoverable	once/year	once/year
Chromium (III), Total Recoverable	once/year	once/year
Chromium (VI), Dissolved	once/year	once/year
Cobalt, Total Recoverable	once/year	once/year
Copper, Total Recoverable	once/year	once/year
Iron, Total Recoverable	once/year	once/year
Mercury, Total Recoverable	once/year	once/year
Nickel, Total Recoverable	once/year	once/year
Selenium, Total Recoverable	once/year	once/year
Silver, Total Recoverable	once/year	once/year
Thallium, Total Recoverable	once/year	once/year

Sampling Type Justification:

Grab samples are an appropriate method for collecting stormwater samples.

Part V – Cost Analysis for Compliance

Pursuant to Section 644.145, RSMo, when issuing permits under this chapter that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [publicly owned] treatment works, the Department of Natural Resources shall make a “finding of affordability” on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits that do not include new requirements may be deemed affordable.

- The Department is required to determine “findings of affordability” because the permit applies to a **combined or separate sanitary sewer system for a publically-owned treatment works**.

Cost Analysis for Compliance - The Department has made a reasonable search for empirical data indicating the permit is affordable. The search consisted of a review of Department records that might contain economic data on the community, a review of information provided by the applicant as part of the application, and public comments received in response to public notices of this draft permit. If the empirical cost data was used by the permit writer, this data may consist of median household income, any other ongoing projects that the Department has knowledge, and other demographic financial information that the community provided as contemplated by Section 644. 145.3. See **Appendix – Cost Analysis for Compliance**

Part V – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PERMIT SYNCHRONIZATION:

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than three years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit. This permit will expire September 30, 2017.

PUBLIC NOTICE:

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- The Public Notice period for this operating permit was from 02/02/2015 to 03/02/2015. No responses were received.

DATE OF FACT SHEET: 12/26/2014

COMPLETED BY:

**AMANDA SAPPINGTON, CHIEF
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MISSOURI DEPARTMENT OF NATURAL RESOURCES
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**Missouri Department of Natural Resources
Water Protection Program
Cost Analysis for Compliance
(In accordance with RSMo 644.145)**

**Joplin Landfill, Permit Renewal
City of Joplin
Missouri State Operating Permit #MO-0108731**

Section 644.145 RSMo requires the Department of Natural Resources (DNR) to make a “finding of affordability” when “issuing permits under” or “enforcing provisions of” state or federal clean water laws “pertaining to any portion of a combined or separate sanitary sewer system for publicly-owned treatment works.”

The Department is required to issue a permit with final effluent limits in accordance with 644.051.1.(1) RSMo, 644.051.1.(2) RSMo, and the Clean Water Act. The practical result of many affordability findings will be to allow longer compliance schedules to mitigate adverse impact to distressed populations resulting from the costs of upgrading the facility.

This cost analysis is based on data available to the Department as provided by the permittee and data obtained from readily available sources. For the most accurate analysis, it is essential that the permittee provides the Department with current information about the City’s financial and socioeconomic situation.

Facility Description:

This permit authorizes stormwater discharges only, from the closed Joplin Municipal Landfill. Leachate is collected in underground drain collection system and gravity piped to The Turkey Creek Treatment plant headworks. The City owns a 180 acre parcel that was permitted for a 30 acre demolition landfill and a 40 acre sanitary landfill. Both landfills have been closed and landfill permits were terminated. The entire site is bermed to direct all stormwater runoff to outfall 001.

New Permit Requirements:

This permit renewal adds annual benzene, ethylbenzene and toluene monitoring. These parameters replace the previous requirement for quarterly BTEX monitoring. It also increases the frequency of oil and grease monitoring from annually to quarterly. This renewal requires compliance with a benchmark for cadmium that is lower than the previous limit. The analysis below shows that, overall, this permit renewal reduces costs for sampling and analysis by removing several other parameters. This permit also requires implementation of a Stormwater Pollution Prevention Plan (SWPPP) to ensure continued compliance with numeric parameters.

Anticipated Costs Associated with Complying with the New Requirements:

The primary cost associated with this renewal is related to the new SWPPP requirement. Given that the facility is closed and has achieved compliance with proposed limitations, the department assumes a simple SWPPP can be developed by a consultant for approximately \$5,000. The SWPPP can be implemented and maintained by existing City staff. Because this is a closed facility, with static conditions, the department assumes that changes to the SWPPP will be rare and this is a one-time cost. Data collected during the previous permit cycle indicate that the cadmium benchmark is achievable; therefore, the department is assuming no new costs are associated with this requirement.

Estimates for analytical cost savings and new costs are summarized in the table below.

Parameter Removed	Laboratory Cost per Analysis in dollars
Total Dissolved Solids	15
Conductivity	9
Calcium	17
Fluoride	24
Total Hardness	21
Nitrate and Nitrite as N	32
Sulfate	18
Total Organic Carbon	35
α – Terpineol	38
Benzoic Acid	38
p-Cresol	38
Sodium	17
Manganese	17
Magnesium	17
Total Organic Halogens	45
Boron	23
Barium	17
Phenol	63
Total Phosphorus	24
BTEX	220
Parameter with Decreased Monitoring	Laboratory Cost per Analysis in dollars
Beryllium	23
Silver	17
Chromium	37
Copper	17
Mercury	35
Arsenic	32
Selenium	32
Annual Savings	\$2154

New Parameter	Laboratory Cost per Analysis in dollars
Benzene	88
Ethylbenzene	88
Toluene	88
Parameter with Increased Monitoring	Laboratory Cost per Analysis in dollars
Oil & Grease	40
Annual Additional Cost	\$384

Total change to analytical cost is a savings of \$1,770/year for a total of \$3,540 this permit cycle (2 year permit). The department believes the funds saved in sampling, analysis and reporting for those parameters significantly off-sets the additional cost and effort of developing and maintain a SWPPP.

(1) A community’s financial capability and ability to raise or secure necessary funding;

Due to the minimal cost associated with this new permit requirement, the Department anticipates the City of Joplin has the means to raise \$5,000 for a one-time SWPPP development.

(2) Affordability of pollution control options for the individuals or households at or below the median household income level of the community;

The total cost estimated for the new SWPPP requirements is \$5,000. The \$5,000 cost is partially off-set by the annual savings of \$1,770 for sampling and analyses. Due to the minimal cost associated with this new requirement, the department anticipates no rate increase will be necessary that could impact individuals or households of the community.

(3) An evaluation of the overall costs and environmental benefits of the control technologies;

Development, implementation and maintenance of a SWPPP are the department’s preferred method for implementing state and federal stormwater requirements. SWPPPs aid the facility in implementing adaptive management practices that include inspections and corrective actions when a deficiency is identified or a numeric target is exceeded. Environmental benefits result from the immediate actions taken to reduce pollutant loading instream. This facility is in a sensitive watershed and has been identified as a source of the pollutants of concern. SWPPP implementation complies with the assumptions and requirements of the TMDL which contains wasteload allocations designed to restore the designated uses to Turkey Creek. SWPPP implementation, along with continued compliance with the permit and water quality standards may result in reduced permit requirements in the future.

(4) Inclusion of ongoing costs of operating and maintaining the existing stormwater collection system and best management practices, including payments on outstanding debts when calculating projected rates:

The community did not provide the Department with information, nor could it be found through readily available data.

(5) An inclusion of ways to reduce economic impacts on distressed populations in the community, including but not limited to low and fixed income populations. This requirement includes but is not limited to:

- (a) Allowing adequate time in implementation schedules to mitigate potential adverse impacts on distressed populations resulting from the costs of the improvements and taking into consideration local community economic considerations.
- (b) Allowing for reasonable accommodations for regulated entities when inflexible standards and fines would impose a disproportionate financial hardship in light of the environmental benefits to be gained.

Socioeconomic Data^{3-6:}

Potentially Distressed Populations – City of Joplin	
Unemployment	5.1%
Adjusted Median Household Income (MHI)	\$39,124
Percent Change in MHI (1990-2012)	+93.5%
Percent Population Growth/Decline (1990-2012)	+21.7%
Change in Median Age in Years (1990-2012)	+1.2
Percent of Households in Poverty	18.6%
Percent of Households Relying on Food Stamps	16.9%

The new permit requirements are not expected to impact distressed population in the City of Joplin.

(6) An assessment of other community investments and operating costs relating to environmental improvements and public health protection;

The community did not report any other investments relating to environmental improvements

(7) An assessment of factors set forth in the United States Environmental Protection Agency's guidance, including but not limited to the "Combined Sewer Overflow Guidance for Financial Capability Assessment and Schedule Development" that may ease the cost burdens of implementing wet weather control plans, including but not limited to small system considerations, the attainability of water quality standards, and the development of wet weather standards;

The SWPPP development requirement associated with this permit will not impose a financial burden on the community, nor will the new requirements require the City of Joplin to seek funding from an outside source.

(8) An assessment of any other relevant local community economic condition.

The community did not report any other relevant local economic conditions.

Conclusion and Finding

As a result of new regulations, the Department is proposing modifications to the current operating permit that may require the permittee to develop a SWPPP. The Department identified the actions for which cost analysis for compliance is required under Section 644.145 RSMo.

The Department estimates the cost for SWPPP development of a one-time cost of \$5,000. This cost is partially offset by savings on reduced monitoring in this renewal. The department believes the rest of the cost should be readily available in the City's budget.

The Department considered the eight (8) criteria presented in subsection 644.145.3 when evaluating the cost associated with the relevant actions. Taking into consideration these criteria, this analysis examined whether the above referenced permit modifications affects the ability of an individual customer or household to pay a utility bill without undue hardship or unreasonable sacrifice in the essential lifestyle or spending patterns of the individual or household. As a result of reviewing the above criteria, the Department hereby finds that the action described above may result in a low burden with regard to the community's overall financial capability and a low financial impact for most individual customers/households; therefore, the new permit requirements are affordable.

References:

1. $((\text{Estimated cost for sampling annually}/\text{Total connections})/12 \text{ months}) = \text{Cost per household per month}$
2. $(\text{Cost per household per month}/(\text{MHI}/12)) * 100 = \text{Cost per household as a percent of MHI}$
3. Unemployment data was obtained from Missouri Department of Economic Development (July 2014) – <http://www.missourieconomy.org/pdfs/urel1407.pdf>
4. Median Household Income data from American Community Survey – Median income in the past 12 months – http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?_afpt=table
5. Population trend data was obtained from online at: 2012 Census Bureau Population Data - http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?_afpt=table, 2000 Census Bureau Population Data - <http://www.census.gov/popest/data/cities/totals/2009/tables/SUB-EST2009-04-29.xls>, 1990 Census Bureau Population Data - <http://www.census.gov/prod/cen1990/cp1/cp-1-27.pdf>
6. Poverty data – American Community Survey- <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

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

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

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

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

Section B – Reporting Requirements

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



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

Section C – Bypass/Upset Requirements

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

Section D – Administrative Requirements

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



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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittee with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

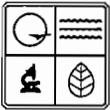


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10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
 - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
 - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
 - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
 - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
 - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

AUG - 3 2012

AP 12704



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

FOR AGENCY USE ONLY	
CHECK NUMBER	No Fee required
DATE RECEIVED	8/1/12
FEE SUBMITTED	0

Note PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:

- An operating permit and antidegradation review public notice
- A construction permit following an appropriate operating permit and antidegradation review public notice
- A construction permit and concurrent operating permit and antidegradation review public notice
- A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)
- An operating permit for a new or unpermitted facility Construction Permit # _____
- An operating permit renewal: permit # MO- D105731 Expiration Date March 20, 2012
- An operating permit modification: permit # MO- _____ Reason: _____

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

2. FACILITY

NAME <u>Joplin Municipal Landfill - Inactive</u>		TELEPHONE WITH AREA CODE	
ADDRESS (PHYSICAL) <u>Route P</u>		FAX	ZIP CODE
CITY <u>Joplin</u>	STATE <u>MO</u>	<u>64802</u>	

3. OWNER

NAME <u>City of Joplin</u>		E-MAIL ADDRESS	TELEPHONE WITH AREA CODE <u>(417) 624-3615</u>
ADDRESS (MAILING) <u>602 S. Main St.</u>		CITY <u>Joplin</u>	FAX <u>(417) 625-4726</u>
		STATE <u>MO</u>	ZIP CODE <u>64802</u>

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

4. CONTINUING AUTHORITY

NAME <u>City of Joplin</u>		TELEPHONE WITH AREA CODE <u>(417) 624-3615</u>	
ADDRESS (MAILING) <u>602 S. Main</u>		FAX <u>(417) 625-4726</u>	ZIP CODE
CITY <u>Joplin</u>	STATE <u>MO</u>	<u>64802</u>	

5. OPERATOR

NAME <u>City of Joplin</u>		CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE
ADDRESS (MAILING)		CITY	FAX
		STATE	ZIP CODE

6. FACILITY CONTACT

NAME <u>Lyndell J Edwards</u>		TITLE <u>Superintendent Wastewater Treatment</u>	TELEPHONE WITH AREA CODE <u>(417) 624-3615</u>
			FAX <u>(417) 625-4726</u>

7. ADDITIONAL FACILITY INFORMATION

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

001 SW 1/4 NE 1/4 Sec 32 T 28N R 33W Jasper County
 UTM Coordinates Easting (X): _____ Northing (Y): _____
 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

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

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

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

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

Storm water runoff

001 - SIC 9953 and NAICS 562212 002 - SIC _____ and NAICS _____
 003 - SIC _____ and NAICS _____ 004 - SIC _____ and NAICS _____

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

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

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

NAME <i>Larry Wald and Sandy Wald</i>			
ADDRESS <i>18424 E 11th Rd</i>	CITY <i>Carthage</i>	STATE <i>MO</i>	ZIP CODE <i>64836</i>

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT) <i>Lyndell J Edwards Superintendent of Wastewater</i>	TELEPHONE WITH AREA CODE
SIGNATURE <i>[Signature]</i>	DATE SIGNED <i>July 27, 2012</i>

MO 786 (1475) (4-1-09)

BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.
 Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

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

AUG - 1 2012



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
(SEE MAP FOR APPROPRIATE REGIONAL OFFICE)
**FORM C - APPLICATION FOR DISCHARGE PERMIT - MANUFACTURING,
COMMERCIAL, MINING AND SILVICULTURE OPERATIONS**

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

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

1.00 NAME OF FACILITY

Joplin Municipal Landfill - inactive

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

MO-0108731

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

NA

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

A. FIRST 4953 - NAICS-562212 B. SECOND

C. THIRD D. FOURTH

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) _____ ¼ _____ ¼ SEC _____ T _____ R _____ County

001 SW ¼ NE ¼ Sec 32 T 28N R33W Jasper

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER.

OUTFALL NUMBER (LIST)

RECEIVING WATER

001

Unnamed Tributary to Turkey Creek
elev 913

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS:

Closed Municipal landfill.

2.40 CONTINUED

C. EXCEPT FOR STORM RUNOFF, LEAKS, OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL?
 YES (COMPLETE THE FOLLOWING TABLE) NO (GO TO SECTION 2.50)

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

2.50 MAXIMUM PRODUCTION

A. DOES AN EFFLUENT GUIDELINE LIMITATION PROMULGATED BY EPA UNDER SECTION 304 OF THE CLEAN WATER ACT APPLY TO YOUR FACILITY?
 YES (COMPLETE B.) NO (GO TO SECTION 2.60)

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINE EXPRESSED IN TERMS OF PRODUCTION (OR OTHER MEASURE OF OPERATION)?
 YES (COMPLETE C.) NO (GO TO SECTION 2.60)

C. IF YOU ANSWERED "YES" TO B. LIST THE QUANTITY THAT REPRESENTS AN ACTUAL MEASUREMENT OF YOUR MAXIMUM LEVEL OF PRODUCTION, EXPRESSED IN THE TERMS AND UNITS USED IN THE APPLICABLE EFFLUENT GUIDELINE AND INDICATE THE AFFECTED OUTFALLS.

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

2.60 IMPROVEMENTS

A. ARE YOU NOW REQUIRED BY ANY FEDERAL, STATE OR LOCAL AUTHORITY TO MEET ANY IMPLEMENTATION SCHEDULE FOR THE CONSTRUCTION, UPGRADING OR OPERATION OF WASTEWATER TREATMENT EQUIPMENT OR PRACTICES OR ANY OTHER ENVIRONMENTAL PROGRAMS THAT MAY AFFECT THE DISCHARGES DESCRIBED IN THIS APPLICATION? THIS INCLUDES, BUT IS NOT LIMITED TO, PERMIT CONDITIONS, ADMINISTRATIVE OR ENFORCEMENT ORDERS, ENFORCEMENT COMPLIANCE SCHEDULE LETTERS, STIPULATIONS, COURT ORDERS AND GRANT OR LOAN CONDITIONS.
 YES (COMPLETE THE FOLLOWING TABLE) NO (GO TO 3.00)

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

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

3.10 BIOLOGICAL TOXICITY TESTING DATA

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

YES (IDENTIFY THE TEST(S) AND DESCRIBE THEIR PURPOSES BELOW.)

NO (GO TO 3.20)

3.20 CONTRACT ANALYSIS INFORMATION

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

YES (LIST THE NAME, ADDRESS AND TELEPHONE NUMBER OF AND POLLUTANTS ANALYZED BY EACH SUCH LABORATORY OR FIRM BELOW.)

NO (GO TO 3.30)

A. NAME	B. ADDRESS	C. TELEPHONE (area code and number)	D. POLLUTANTS ANALYZED (list)

3.30 CERTIFICATION

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE NUMBER (AREA CODE AND NUMBER)
SIGNATURE (SEE INSTRUCTIONS)	DATE SIGNED

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

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)										OUTFALL NO.		
PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.												
1. POLLUTANT	2. EFFLUENT				3. UNITS (specify if blank)				4. INTAKE (optional)		B. NO. OF ANALYSES	
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE		D. NO. OF ANALYSES		A. LONG TERM AVRG. VALUE			B. MASS
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) ANALYSES	(2) ANALYSES	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	
A. Biochemical Oxygen Demand (BOD)												
B. Chemical Oxygen Demand (COD)												
C. Total Organic Carbon (TOC)												
D. Total Suspended Solids (TSS)												
E. Ammonia (as N)												
F. Flow	VALUE		VALUE		VALUE				VALUE			
G. Temperature (winter)	VALUE		VALUE		VALUE				VALUE		°C	
H. Temperature (summer)	VALUE		VALUE		VALUE				VALUE		°C	
I. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM							STANDARD UNITS	

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

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

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE (optional)		B. NO. OF ANALYSES	
	A. BE-LIEVED PRE-SENT	B. BE-LIEVED AB-SENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	B. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	(2) MASS	C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	(2) MASS	A. CONCENTRATION	B. MASS		A. LONG TERM AVRG. VALUE (1) CONCENTRATION
G. Nitrogen Total Organic (as N)												
H. Oil and Grease												
I. Phosphorus (as P) Total (7723-14-0)												
J. RADIOACTIVITY												
(1) Alpha Total												
(2) Beta Total												
(3) Radium Total												
(4) Radium 226 Total												
K. Sulfate (as SO ₄) (14806-79-8)												
L. Sulfide (as S)												
M. Sulfite (as SO ₃) (14265-45-3)												
N. Surfactants												
O. Aluminum Total (7429-90-5)												
P. Barium Total (7440-39-3)												
Q. Boron Total (7440-42-8)												
R. Cobalt Total (7440-48-4)												
S. Iron total (7439-89-6)												
T. Magnesium Total (7439-95-4)												
U. Molybdenum Total (7439-98-7)												
V. Manganese Total (7439-96-5)												
W. Tin Total (7440-31-5)												
X. Titanium Total (7440-32-6)												

Missouri Department of Natural Resources
Water Protection Program
P.O. Box 176
Jefferson City, MO 65102
Attn. Alan Moreau

AUG - 1 2012

Re. NPDES permit renewal MO-0108731

Mr. Moreau,

I do appreciate your help. I can't seem to remember how to hold a pencil anymore. I am including three quarterly reports and an annual. We missed some last year after the tornado and we have a dry spell going on now. I found the temporary permit for the borrow area and it expires in 2014. Hopefully we can allow it to expire with proper notification.



Lyndell J. Edwards

Superintendent of Wastewater Treatment

City of Joplin

(417) 624-3615

(417) 439-6467 cell

and a map of the landfill and Form A

See
MAP IN
FILE

Quarterly Sampling - Quarterly porting (Non-Municipal)

OWNER ADDRESS:
 OPLIN MUNICIPAL LANDFILL
 MO-0108731
 ASPER COUNTY
 NACTIVE LANDFILL

OWNER ADDRESS:
 City of Joplin
 602 S. Main Street
 Joplin, MO 64801

If Address Change is Requested: Owner Billing

BILLING ADDRESS:
 City of Joplin
 602 S. Main Street
 Joplin, MO 64801

THIS REPORT COVERS THE PERIOD:

Please place an "X" in the box beneath the appropriate quarter.

1st Quarter = January through March
 Sample in January - March
 Due April 28th

2nd Quarter = April through June
 Sample in April - June
 Due July 28th

3rd Quarter = July through September
 Sample in July - September
 Due October 28th

4th Quarter = October through December
 Sample in October - December
 Due January 28th

Outfall #: 001
 Samples Collected By: Meth Napier

Phone: 417-624-3615

Analyses Performed by (LAB): Turkey Creek Creek 4478, Pass Analytical

Phone: 417-624-3615
913-599-5665

PARAMETERS	UNITS	PERMITTED FINAL LIMITS	RECORD ACTUAL RESULTS OF ANALYSIS - DO NOT AVERAGE	SAMPLE DATE	SAMPLE TIME	SAMPLE TYPE	ANALYSIS DATE	ANALYTICAL METHOD
FLOW	GPD	Monitoring only	20,093	3-20-12	09:30	24 hr. estimate	3-20-12	N.A.
RAINFALL	inches	Monitoring only	4.11			Grab	N.A.	N.A.
BIOCHEMICAL OXYGEN DEMAND	mg/L	30 monthly avg. 45 daily max.	2.36			Grab	3-20-12	Std. Method 20 th Ed. 52108
CHEMICAL OXYGEN DEMAND	mg/L	90 monthly avg. 120 daily max.	29			Grab	3-20-12	Hook Method 8000
TOTAL SUSPENDED SOLIDS	mg/L	50 monthly avg. 75 weekly avg.	18.8			Grab	3-20-12	Std. Method 20 th Ed. 25500
pH	SU	6.0 - 9.0	7.52			Grab	3-20-12	Std. Method 20 th Ed. 4500H18
BTEX	mg/L	0.75 monthly avg. 0.75 daily max.	< 0.003			Grab	3-28-12	EPA 8260
SETTLABLE SOLIDS	mL/L/hr	1.0 monthly avg. 1.5 daily max.	< 0.1			Grab	3-20-12	Std. Method 20 th Ed. 2540 F
TOTAL DISSOLVED SOLIDS	mg/L	Monitoring only	117			Grab	3-20-12	Std. Method 20 th Ed. 2550 C
CHLORIDE PLUS SULFATES	mg/L	1000 daily max.	27.8			Grab	3-26-12	Hook Method 8206 + 8051
IRON, TOTAL RECOVERABLE	µg/L	2000 daily max.	1400			Grab	3-29-12	EPA 200.8
BERYLLIUM, TOTAL RECOVERABLE	µg/L	10 daily max.	< 0.20			Grab	"	"
SILVER, TOTAL RECOVERABLE	µg/L	8.2 daily max.	< 0.50			Grab	"	"
ZINC TOTAL RECOVERABLE	mg/L	0.11 monthly avg. 0.20 daily max.	0.0802			Grab	"	"
CADMIUM, TOTAL RECOVERABLE	µg/L	52 daily max.	0.39			Grab	"	"
CHROMIUM, TOTAL RECOVERABLE	µg/L	62 daily max.	2.5			Grab	"	"

(continue)

PARAMETERS	UNITS	PERMITTED FINAL LIMITS	RECORD ACTUAL RESULTS OF ANALYSIS - DO NOT AVERAGE	SAMPLE DATE	SAMPLE TIME	SAMPLE TYPE	ANALYSIS DATE	ANALYTICAL METHOD
COPPER, TOTAL RECOVERABLE	µg/L	45 daily max.	5.4	3-20-12	09:30	Grab	3-29-12	EPA 200.8
AMMONIA AS N	mg/L	10 monthly avg. 4.9 weekly avg.	< 0.25			Grab	3-30-12	EPA 350.2
MERCURY, TOTAL RECOVERABLE	µg/L	2.4 daily max	< 0.20			Grab	3-28-12	EPA 245.1
ARSENIC TOTAL RECOVERABLE	µg/L	40 daily max.	0.94			Grab	3-29-12	EPA 200.8
LEAD, TOTAL RECOVERABLE	µg/L	130 daily max.	5.3			Grab		"
SELENIUM, TOTAL RECOVERABLE	µg/L	20 daily max.	< 0.50			Grab		"

Facility Contact:

Lyndell J Edwards

Phone:

(417) 624-3615

Operator:

City of Joplin

Phone:

Owner Approval (printed):

City of Joplin
Lyndell J Edwards

Owner Approval (signature):

[Signature]

Date:

4-27-2012

Comments (If violation occurred, please explain possible cause)

Conductivity: 156 umhos/cm, collected 3-20-12 @ 9:30, analyzed 3-26-12, EPA 120.1

Return form to: Missouri Department of Natural Resources
Southwest Regional Office
2040 West Woodland
Springfield, MO 65807

(continue)

PARAMETERS	UNITS	PERMITTED FINAL LIMITS	RECORD ACTUAL RESULTS OF ANALYSIS - DO NOT AVERAGE	SAMPLE DATE	SAMPLE TIME	SAMPLE TYPE	ANALYSIS DATE	ANALYTICAL METHOD
COPPER, TOTAL RECOVERABLE	µg/L	45 daily max.	4.2	11-8-11	11:22	Grab	11-23-11	EPA 200.8
AMMONIA AS N	mg/L	10 monthly avg. 4.9 weekly avg.	< 0.25		11:23	Grab	11-11-11	EPA 350.2
MERCURY, TOTAL RECOVERABLE	µg/L	2.4 daily max	< 0.20		11:23	Grab	11-16-11	EPA 245.1
ARSENIC TOTAL RECOVERABLE	µg/L	40 daily max.	1.5		"	Grab	11-23-11	EPA 200.8
LEAD, TOTAL RECOVERABLE	µg/L	130 daily max.	24.5		"	Grab	"	"
SELENIUM, TOTAL RECOVERABLE	µg/L	20 daily max.	< 0.50		"	Grab	"	"

Facility Contact:

Phone:

Operator:

Phone:

Lyndell J Edwards

917 624 3615

Lyndell J Edwards

Same

Owner Approval (printed):

Owner Approval (signature):

Date:

Lyndell J Edwards

[Signature]

1-31-12

Comments (If violation occurred, please explain possible cause)

Conductivity: 147 mc/h/cm, collected 11-8-11 @ 11:22, analyzed 11-21-11, EPA 120.1
Stormwater runoff from Temporary transfer station, MO-REO/H/95 passes through sample point of Closed head fill.
See December cover letter. *[Signature]*

Return form to: Missouri Department of Natural Resources
Southwest Regional Office
2040 West Woodland
Springfield, MO 65807



NANDES MONITORING REPORT FOR STORMWATER AND WASTEWATER DISCHARGES

Annual Sampling - Annual Reporting

JOPLIN MUNICIPAL LANDFILL
 MO-0108731
 JASPER COUNTY
 INACTIVE LANDFILL

Owner Address:
 City of Joplin
 602 S. Main Street
 Joplin, MO 64801

If Address Change is Requested: Owner Billing

Billing Address:
 City of Joplin
 602 S. Main Street
 Joplin, MO 64801

THIS REPORT COVERS THE PERIOD FROM

January, 20 11 through December, 20 11

REPORT DUE JANUARY 28TH

Outfall #: **001** Samples Collected By: Cyndee Edwards Phone: 417-624-3615 Analyses Performed by (LAB): Tunkley Creek WWT; Turner Fisher/EP Sci.; Pass Analytical Phone: 417-624-3615, 800-331-7925, 913-599-5665

PARAMETERS UNITS	PERMITTED FINAL LIMITS	RECORD ACTUAL RESULTS OF ANALYSIS - DO NOT AVERAGE	SAMPLE DATE	SAMPLE TIME	SAMPLE TYPE	ANALYSIS DATE	ANALYTICAL METHOD
CALCIUM	Monitoring only	17.7	3-8-11	9:30	Grab	3-17-11	EPA 200.8
FLUORIDE	Monitoring only	0.102		9:25	Grab	3-15-11	EPA 340.2
TOTAL HARDNESS	Monitoring only	54.0		9:15	Grab	3-8-11	HAZL 8226
NITRATE AND NITRITE AS N	Monitoring only	0.523		9:27	Grab	3-9-11	EPA 300.0
SULFATE	Monitoring only	< 2		9:15	Grab	3-8-11	HAZL 8051
TOTAL ORGANIC CARBON	Monitoring only	12.1		9:22	Grab	3-9-11	EPA 415.2
OIL & GREASE	10 monthly avg. 15 daily max.	< 4.0		9:24	Grab	3-15-11	EPA 1664, REV. A
α-TERPINEOL	0.016 monthly avg. 0.033 daily max.	< 0.010		9:29	Grab	3-28-11	EPA 8270
BENZOIC ACID	0.071 monthly avg. 0.12 daily max.	< 0.050		"	Grab	"	"
p-CRESOL	0.014 monthly avg. 0.025 daily max.	< 0.010		"	Grab	"	"
COBALT, TOTAL RECOVERABLE	Monitoring only	0.59		9:30	Grab	3-17-11	EPA 200.8
SODIUM, TOTAL RECOVERABLE	Monitoring only	3.02		9:30	Grab	3-17-11	"
PHOSPHORUS, TOTAL RECOVERABLE	Monitoring only	0.33		9:25	Grab	3-14-11	EPA 6010
MANGANESE, TOTAL RECOVERABLE	Monitoring only	13.3		9:30	Grab	3-17-11	EPA 200.8
ANTIMONY, TOTAL RECOVERABLE	Monitoring only	< 0.50		"	Grab	"	"
NICKEL, TOTAL RECOVERABLE	4600 daily max.	2.7		"	Grab	"	"
THALLIUM, TOTAL RECOVERABLE	Monitoring only	< 0.10		"	Grab	"	"

(continued)

PARAMETERS	UNITS	PERMITTED FINAL LIMITS	RECORD ACTUAL RESULTS OF ANALYSIS - DO NOT AVERAGE	SAMPLE DATE	SAMPLE TIME	SAMPLE TYPE	ANALYSIS DATE	ANALYTICAL METHOD
VANADIUM, TOTAL RECOVERABLE	µg/L	Monitoring only	2.3	3-8-11	9:30	Grab	3-17-11	EPA 200.8
BARIUM, TOTAL RECOVERABLE	µg/L	Monitoring only	34.7		"	Grab	"	"
BORON, TOTAL RECOVERABLE	µg/L	Monitoring only	9.8		"	Grab	"	"
TOTAL ORGANIC HALOGENS	mg/L	Monitoring only	< 0.020		9:32	Grab	3-15-11	EPA 9020 B
PHENOL	mg/L	0.015 monthly avg. 0.026 daily max.	< 0.010		9:29	Grab	3-28-11	EPA 8270

Facility Contact: Gail Francis	Phone: 417-624-3615	Operator:	Phone:
Owner Approval (printed): Lyndell J Edwards	Owner Approval (signature): <i>[Signature]</i>	Date: 4/12/11	

Comments (if violation occurred, please explain possible cause)
Mg: 1610 µg/L, collected 3-8-11 @ 9:30, analyzed 3-17-11, EPA 200.8

Return form to: Missouri Department of Natural Resources

Southwest Regional Office

2040 West Woodland

Springfield, MO 65807

Quarterly Sampling - Quarter Reporting (Non-Municipal)

Owner Address:
 City of Joplin
 602 S. Main Street
 Joplin, MO 64801

City of Joplin
 602 S. Main Street
 Joplin, MO 64801

City of Joplin
 602 S. Main Street
 Joplin, MO 64801

Billing Address:
 City of Joplin
 602 S. Main Street
 Joplin, MO 64801

THIS REPORT COVERS THE PERIOD:

1st Quarter = January through March
 Sample in January - March
 Due April 28th

2nd Quarter = April through June
 Sample in April - June
 Due July 28th

3rd Quarter = July through September
 Sample in July - September
 Due October 28th

4th Quarter = October through December
 Sample in October - December
 Due January 28th

PARAMETERS	UNITS	PERMITTED FINAL LIMITS	RECORD ACTUAL RESULTS OF ANALYSIS - DO NOT AVERAGE	SAMPLE DATE	SAMPLE TIME	SAMPLE TYPE	ANALYSIS DATE	ANALYTICAL METHOD
Outfall #: 001								
Samples Collected By: <u>Lynelle Edwards</u>		Phone: <u>417-624-3615</u>		Analyses Performed by (LAB): <u>Turnkey Creek WTP, Thomas Fisher/EP Sci. Pass Analytical</u>		Phone: <u>417-624-3615</u> <u>800-331-7425, 913-599-5615</u>		
FLOW	GPD	Monitoring only	24,686	3-8-11	9:15	24 hr. estimate	3-8-11	N.A.
RAINFALL	inches	Monitoring only	1.27		-	Grab	N.A.	N.A.
BIOCHEMICAL OXYGEN DEMAND	mg/L	30 monthly avg. 45 daily max.	3.24		9:15	Grab	3-8-11	Std. Mtd. 20 th Ed, 52108
CHEMICAL OXYGEN DEMAND	mg/L	90 monthly avg. 120 daily max.	36.5		9:15	Grab	3-8-11	Hach Mtd. 8000
TOTAL SUSPENDED SOLIDS	mg/L	50 monthly avg. 75 weekly avg.	11.2		9:15	Grab	3-8-11	Std. Mtd. 20 th Ed, 2540A
pH	SU	6.0 - 9.0	7.61		9:06	Grab	3-8-11	Std. Mtd. 20 th Ed, 4500HF8
BTEX	mg/L	0.75 monthly avg. 0.75 daily max.	< 0.002		9:21	Grab	3-14-11	EPA 624
SETTLABLE SOLIDS	ml/L/hr	1.0 monthly avg. 1.5 daily max.	< 0.1		9:15	Grab	3-8-11	Std. Mtd. 20 th Ed, 2540F
TOTAL DISSOLVED SOLIDS	mg/L	Monitoring only	97.0		9:15	Grab	3-8-11	Std. Mtd. 20 th Ed, 2540C
CHLORIDE PLUS SULFATES	mg/L	1000 daily max.	< 6.6		9:15	Grab	3-8-11	Hach Mtd. 8225 + 8051
IRON, TOTAL RECOVERABLE	µg/L	2000 daily max.	941		9:30	Grab	3-17-11	EPA 200.8
BERYLLIUM, TOTAL RECOVERABLE	µg/L	10 daily max.	< 0.20		"	Grab	"	"
SILVER, TOTAL RECOVERABLE	µg/L	8.2 daily max	< 0.50		"	Grab	"	"
ZINC TOTAL RECOVERABLE	mg/L	0.11 monthly avg. 0.20 daily max.	0.0702		"	Grab	"	"
CADMIUM, TOTAL RECOVERABLE	µg/L	52 daily max.	0.27		"	Grab	"	"
CHROMIUM, TOTAL RECOVERABLE	µg/L	62 daily max.	2.5		"	Grab	"	"

(continue)

PARAMETERS	UNITS	PERMITTED FINAL LIMITS	RECORD ACTUAL RESULTS OF ANALYSIS - DO NOT AVERAGE	SAMPLE DATE	SAMPLE TIME	SAMPLE TYPE	ANALYSIS DATE	ANALYTICAL METHOD
COPPER, TOTAL RECOVERABLE	µg/L	45 daily max.	2.5	3-8-11	9:30	Grab	3-17-11	EPA 200.8
AMMONIA AS N	mg/L	10 monthly avg. 4.9 weekly avg.	< 0.25		9:22	Grab	3-21-11	EPA 350.2
MERCURY, TOTAL RECOVERABLE	µg/L	2.4 daily max	< 0.20		9:30	Grab	3-17-11	EPA 245.1
ARSENIC, TOTAL RECOVERABLE	µg/L	40 daily max.	0.56		"	Grab	"	EPA 200.8
LEAD, TOTAL RECOVERABLE	µg/L	130 daily max.	5.5		"	Grab	"	"
SELENIUM, TOTAL RECOVERABLE	µg/L	20 daily max.	< 0.50		"	Grab	"	"

Facility Contact:

Gail Francis

Phone:

417-624-3615

Operator:

Owner Approval (printed):

Hyde J Edwards

Owner Approval (signature):

Hyde J Edwards

Date:

4/12/11

Comments (if violation occurred, please explain possible cause)

Conductivity: 117 µs/cm, collected 3-8-11 @ 9:29, analyzed 3-9-11, EPA 120.1

Return form to: Missouri Department of Natural Resources
Southwest Regional Office
2040 West Woodland
Springfield, MO 65807