

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT**

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

Permit No. MO-0110272

Owner: City of Lamar  
Address: 1104 Broadway, Lamar, MO 64759

Continuing Authority: Same as above  
Address: Same as above

Facility Name: Lamar Closed Sanitary Landfill  
Facility Address: 150 SW 10<sup>th</sup> Lane, Lamar, MO 64759

Legal Description: NW¼, SW¼, SW¼, Sec. 35, T32N, R31W, Barton County  
UTM Coordinates: X= 383507, Y= 4148485

Receiving Stream: Tributary to Dick's Fork (C)  
First Classified Stream and ID: 8-20-13 MUDD V1.0 (C) (3960) (Tributary to Dick's Fork)  
USGS Basin & Sub-watershed No.: (11070207-0205)

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 – Industrial Stormwater; SIC # 4953, NAICS # 562212  
Stormwater runoff from all areas of closed, capped landfill. No treatment. Site also contains a no discharge leachate storage pond.  
Design Flow: Flow in a 10 year, 24 hour storm event is approximately 1.0 MGD per event.  
Actual Flow: Dependent on Precipitation

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

July 1, 2016  
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

September 30, 2017  
Expiration Date

John Madras, Director, Water Protection Program

<b>OUTFALL #001</b> <i>main outfall</i>		<b>TABLE A-1</b> <b>FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>			
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on <b>July 1, 2016</b> , and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:					
EFFLUENT PARAMETERS	UNITS	MAXIMUM DAILY LIMITS	BENCHMARKS	MONITORING REQUIREMENTS <sup>o</sup>	
				MEASUREMENT FREQUENCY	SAMPLE TYPE
<b>PHYSICAL</b>					
Flow	MGD	*	-	once/quarter	measured
Precipitation***	Inches	*	-	once/quarter	measured
<b>CONVENTIONAL</b>					
Chemical Oxygen Demand	mg/L	**	120	once/quarter	grab
Oil & Grease	mg/L	**	10	once/quarter	grab
pH (Note A)	SU	6.5 to 9.0	-	once/quarter	grab
Total Suspended Solids	mg/L	80	-	once/quarter	grab
<b>INORGANICS</b>					
Chloride	mg/L	*	-	once/quarter	grab
Chloride + Sulfate	mg/L	*	-	once/quarter	grab
Fluoride	mg/L	*	-	once/quarter	grab
<b>METALS</b>					
Total Hardness as CaCO <sub>3</sub>	mg/L	*	-	once/quarter	grab
Aluminum, Total Recoverable	µg/L	750	-	once/quarter	grab
Arsenic, Total Recoverable	µg/L	*	-	once/quarter	grab
Beryllium, Total Recoverable	µg/L	*	-	once/quarter	grab
Chromium (VI), Dissolved	µg/L	*	-	once/quarter	grab
Copper, Total Recoverable	µg/L	**	26	once/quarter	grab
Iron, Total Recoverable	µg/L	**	4000	once/quarter	grab
Lead, Total Recoverable	µg/L	*	-	once/quarter	grab
Mercury, Total Recoverable	µg/L	*	-	once/quarter	grab
Nickel, Total Recoverable	µg/L	*	-	once/quarter	grab
Selenium, Total Recoverable	µg/L	*	-	once/quarter	grab
Silver, Total Recoverable	µg/L	*	-	once/quarter	grab
Thallium, Total Recoverable	µg/L	*	-	once/quarter	grab
<b>OTHER</b>					
Benzene	µg/L	*	-	once/quarter	grab
Phenol	µg/L	*	-	once/quarter	grab
<b>NUTRIENTS</b>					
Ammonia	mg/L	**	12.1	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2016</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.					

(See notes on page 2)

**Quarterly Sampling Table**

<b>MINIMUM QUARTERLY SAMPLING REQUIREMENTS</b>			
QUARTER	MONTHS	EFFLUENT PARAMETERS	REPORT IS DUE
First	January, February, March	Sample at least once during any month of the quarter	April 28 <sup>th</sup>
Second	April, May, June	Sample at least once during any month of the quarter	July 28 <sup>th</sup>
Third	July, August, September	Sample at least once during any month of the quarter	October 28 <sup>th</sup>
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 <sup>th</sup>

- \* Monitoring requirement only.
- \*\* This parameter incorporates a Benchmark Value associated with Best Management Practices (BMPs). See Special Condition #12 for more information.
- \*\*\* Precipitation will be measured on the date of sampling other parameters. Due to the easily available data for precipitation online, this parameter will not need to be sampled daily.
- ∞ All samples shall be collected from a discharge resulting from a precipitation event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable precipitation event. If a discharge does not occur within the reporting period, report as no discharge. The total amount of precipitation should be noted from the event from which the samples were collected.

Note A The facility will report the minimum and maximum values. pH is not to be averaged.

## B. STANDARD CONDITIONS

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

## C. SPECIAL CONDITIONS

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

C. SPECIAL CONDITIONS, CONTINUED

- (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
  - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
5. Changes in Discharges of Toxic Pollutant
- In addition to the reporting requirements under §122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:
- (a) That an activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
    - (1) One hundred micrograms per liter (100 µg/L);
    - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
    - (3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
    - (4) One milligram per liter (1 mg/L) for antimony;
    - (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
    - (6) The notification level established by the department in accordance with 40 CFR 122.44(f).
  - (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
    - (1) Five hundred micrograms per liter (500 µg/l);
    - (2) One milligram per liter (1 mg/l) for antimony;
    - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with §122.21(g)(7).
    - (4) The level established by the Director in accordance with §122.44(f).
6. Report as no-discharge when a discharge does not occur during the report period.
7. Reporting of Non-Detects
- (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
  - (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non-Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
  - (c) The permittee shall report the "Non-Detect" result using the less than sign and the minimum detection limit (e.g. <10).
  - (d) The permittee shall use one-half (½) of the detection limit for the non-detect result when calculating and reporting monthly averages.
  - (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
8. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
9. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 ET. SEQ.) and the use of such pesticides shall be in a manner consistent with its label.
10. The purpose of the 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.
11. The permittee shall implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be prepared and implemented upon permit issuance. The SWPPP must be kept on-site and should not be sent to the department unless specifically requested. The SWPPP must be reviewed and updated, 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:
- (a) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter 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.

C. SPECIAL CONDITIONS, CONTINUED

- (b) The SWPPP must include a schedule for once per month site inspections and brief written reports. The inspection report must include precipitation information for the entire period since last inspection, as well as observations and evaluations of BMP effectiveness. 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. 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.
  - (c) A provision for designating an individual to be responsible for environmental matters.
  - (d) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of the department.
12. This permit stipulates pollutant benchmarks applicable to your discharge. The benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation. Benchmark monitoring and visual inspections shall be used to determine the overall effectiveness of SWPPP and to assist you in knowing when additional corrective action may be necessary to protect water quality. If a sample exceeds a benchmark concentration you must review your SWPPP and your BMPs to determine what improvements or additional controls are needed to reduce that pollutant in your stormwater discharge(s).
- Any time a benchmark exceedance occurs a Corrective Action Report (CAR) must be completed. A CAR is a document that records the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. CARs must be retained with the SWPPP and available to the department upon request. If the efforts taken by the facility are not sufficient and subsequent exceedances of a benchmark occur, the facility must contact the department if a benchmark value cannot be achieved. Failure to take corrective action to address a benchmark exceedance and failure to make measureable progress towards achieving the benchmarks is a permit violation.
13. Permittee shall adhere to the following minimum Best Management Practices (BMPs):
- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of stormwater from these substances.
  - (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
  - (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
  - (d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
  - (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits or benchmarks.
  - (f) Ensure that adequate provisions are provided to prevent surface water intrusion into the storage basin, to divert stormwater runoff around the storage basin, and to protect embankments from erosion.
14. Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the SWPPP and made available to the department upon request.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FACT SHEET  
FOR THE PURPOSE OF RENEWAL  
OF  
MO-0110272  
LAMAR CLOSED SANITARY LANDFILL**

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified for less.

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

**Part I. FACILITY INFORMATION**

Facility Type: Industrial  
 Facility SIC Code(s): 4953  
 Facility NAICS Code: 562212  
 Application Date: 11/06/2012  
 Expiration Date: 06/19/2013  
 Last Inspection: 12/28/2012 In Compliance

**FACILITY DESCRIPTION:**

Lamar Sanitary landfill has been closed for use since 1984. It is an unlined landfill with a natural clay cap. It has one no-discharge leachate holding pond and one stormwater outfall.

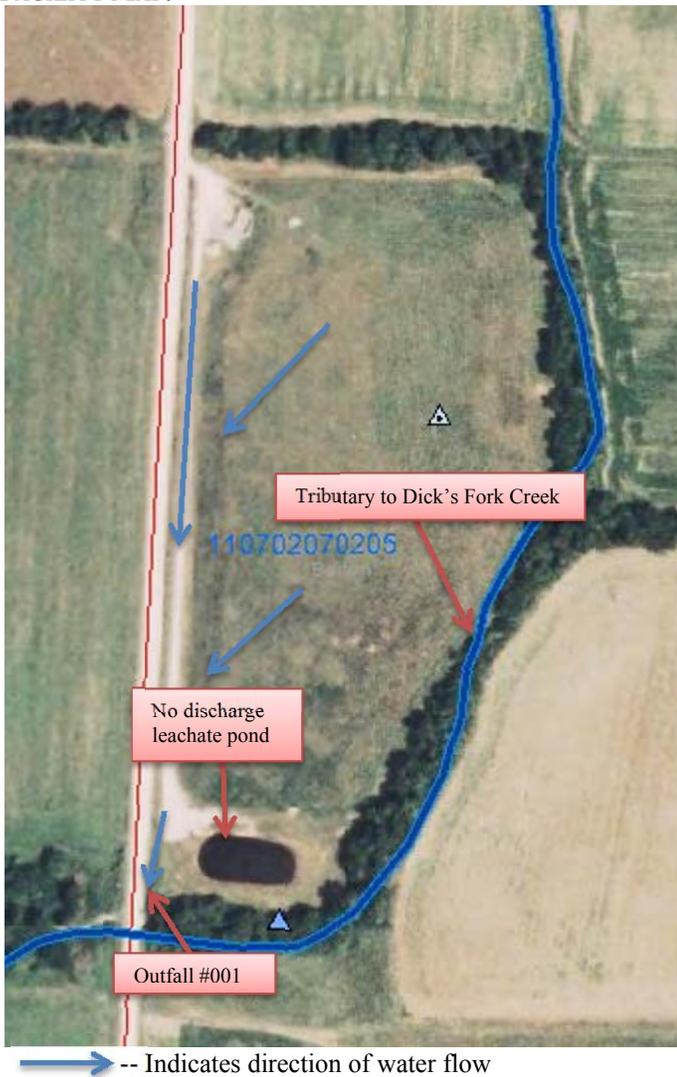
**PERMITTED FEATURES TABLE:**

OUTFALL	AVERAGE FLOW (MGD)	DESIGN FLOW (MGD)	TREATMENT LEVEL	EFFLUENT TYPE
#001	Dependent on precipitation	1.0MGD	BMPs	Industrial Stormwater

**FACILITY PERFORMANCE HISTORY & COMMENTS:**

The electronic discharge monitoring reports were reviewed for the last five years. A variety of violations included TSS, Iron, Aluminum, Copper, COD, and Ammonia were reported; the COD and ammonia exceedances appear to be anomalies and be connected to nearby farming operations applying fertilizers, as discussed in the report of the last inspection conducted by MDNR personnel. Facility was found to be in compliance at last inspection in 2012.

**FACILITY MAP:**



**Part II. RECEIVING STREAM INFORMATION**

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

The receiving stream, Tributary to Dick's Creek, has no concurrent water quality data available. The EPA has approved the Department's new stream classifications; therefore, the Tributary to Dick's Creek (C) (3960) is now classified whereas it was not classified in the previous permit. Lamar closed sanitary landfill is approximately five miles from North Fork Spring Creek, which is under a TMDL from 2006 for sediment from agricultural non-point sources. The Lamar Closed Sanitary Landfill is specifically mentioned in the TMDL and is given a waste-load allocation for sediment discharges, set at the previous permit limits for TSS. This parameter is unchanged in this permit, and meets the TMDL requirements.

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

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

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

Classes [10 CSR 20-7.031(1)(F)1. to 8.] of water bodies which may be found in the receiving streams table below are:

Lakes: L1 = drinking supply lakes; L2 = major reservoirs; L3 = other

Streams: P = permanent streams; P1 = standing water of P streams; C = may cease flow in droughts but maintains permanent pools; E = ephemeral; W = natural wetlands

- ✓ As per 10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission's water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and 1<sup>st</sup> classified receiving stream's beneficial water uses to be maintained are in the following receiving stream table in accordance with [10 CSR 20-7.031(1)(C)]. Uses which may be found in the following receiving streams table:
  - 10 CSR 20-7.031(1)(C)1.: Protection and propagation of fish, shellfish, and wildlife (formerly AQL; this permit uses AQL effluent limitations in 10 CSR 20-7.031 Table A for all habitat temperature designations unless otherwise specified)  
WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat
  - 10 CSR 20-7.031(1)(C)2.: Recreation in and on the water  
WBC = Whole Body Contact; WBC-A = public swimming; WBC-B = swimming  
SCR = Secondary Contact Recreation (like fishing, wading, and boating)
  - 10 CSR 20-7.031(1)(C)3. to 7.: HHP (formerly HHP) = Human Health Protection (fish consumption); IRR = irrigation; LWP (formerly LWL) = Livestock And Wildlife Protection; DWS = Drinking Water Supply;  
IND = industrial water supply
  - 10 CSR 20-7.031(6): GRW = Groundwater
- ✓ As per Missouri's stormwater regulations [10 CSR 20.6.200(6)(B)2.] and federal regulations [40 CFR 122.26(b)(14)], the department shall establish limits necessary to protect waters of the state. Effluent limitations or benchmarks for stormwater are established using best professional judgment based on the category, impairments, technology available, and designated uses of the receiving stream.

**RECEIVING STREAMS TABLE:**

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES	DISTANCE TO CLASSIFIED SEGMENT	12-DIGIT HUC
#001	Tributary to Dick's Fork Creek 8-20-13 MUDD V1.0	C	3960	AQL-WWH,IRR, LWL, SCR, WBC-B,HHP	0.01 mi	11070207-0205 West Fork Spring River
#001	Dick's Fork Creek	C	3197	AQL-WWH, IRR, LWL, SCR, WBC-B, HHP	1.00 mi	

WBID = Waterbody ID: Missouri Use Designation Dataset 8-20-13 MUDD V1.0 data can be found as an ArcGIS shapefile on MSDIS at [ftp://msdis.missouri.edu/pub/Inland\\_Water\\_Resources/MO\\_2014\\_WQS\\_Stream\\_Classifications\\_and\\_Use\\_shp.zip](ftp://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_shp.zip)

**MIXING CONSIDERATIONS:**

Mixing Zone: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)].

Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

**RECEIVING STREAM MONITORING REQUIREMENTS:**

No receiving water monitoring requirements are recommended at this time.

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

**ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:**

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

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

**ANTI-BACKSLIDING:**

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

- ✓ Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.
  - ✓ Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. Outfall monitoring data for five years is available that was not previously available to permit writers.
  - ✓ 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 limits for outfall #001 were established in error, based on limits for wastewater, however, this facility has only stormwater outfalls. This renewal establishes limits and benchmarks appropriate for stormwater discharges. This includes the removal of Monthly Average limits. Due to the intermittent nature of stormwater and quarterly sampling requirements, a monthly average cannot be reliably calculated. There will be no changes to industrial activities onsite or the composition of the stormwater discharge as a result of this renewal. The benchmark concentrations,

daily maximum limits, and required corrective actions are protective of the receiving stream's uses. The previous permit writer used an inappropriate water hardness for metals calculations. 66.7 mg/L was used in the previous permit, a default value for stormwater of 193 mg/L was used for this permit.

**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.

**BENCHMARKS:**

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

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

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

✓ Applicable; this facility has stormwater-only outfalls with benchmark constraints. The benchmarks listed in the derivation discussion have been determined to be feasible, affordable, and protective of water quality and aquatic life.

**BIOSOLIDS & SEWAGE SLUDGE:**

Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address:

<http://extension.missouri.edu/main/DisplayCategory.aspx?C=74>, items WQ422 through WQ449.

✓ Not applicable; this condition is not applicable to the permittee for this facility.

**COMPLIANCE AND ENFORCEMENT:**

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

✓ Not applicable; the permittee/facility is not currently under Water Protection Program enforcement action.

**GROUNDWATER MONITORING:**

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

✓ This facility is not required to monitor groundwater.

**INDUSTRIAL SLUDGE:**

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

✓ Not applicable; this condition is not applicable to the permittee for this facility.

**REASONABLE POTENTIAL ANALYSIS (RPA):**

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard. In accordance with [40 CFR Part 122.44(d)(1)(iii)] if the permit writer determines that any give pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

✓ Not applicable; a RPA was not conducted for this facility.

**SCHEDULE OF COMPLIANCE (SOC):**

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

✓ Not applicable, no schedule of compliance is assigned to this facility.

**SPILL REPORTING:**

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

**STORMWATER POLLUTION PREVENTION PLAN (SWPPP):**

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (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 storm water discharges.

The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate pollution of stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged with during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values discussed in Part V above. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure that will assist in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit. Additional information can be found in EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009].

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures that have been determined to be adequate to achieve the benchmark values discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.

If failures continue to occur and the permittee feels there are no practicable or cost-effective BMPs that will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the department to conduct a cost analysis on control

measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification; the application is found at: <http://dnr.mo.gov/forms/index.html>.

- ✓ Applicable; a SWPPP shall be developed and implemented for each area 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.

**303(d) LIST:**

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

- ✓ Not applicable; this facility does not discharge to an impaired segment of a 303(d) listed stream. However, this facility is located in the Spring River watershed, which is on the 2010 303d list for E. coli contamination. The impaired segment of Spring River is located approximately 5 miles from the facility, and it is in the permit writer’s best professional judgment that this facility does not contribute to the E. coli load of Spring River.

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

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

- ✓ This facility is approximately five miles from the North Fork of Spring Creek. It is subject to the 2006 TMDL for sediment discharges to Spring River. The TMDL lists this facility’s WLA as the previous permit’s limit and conditions as related to sediment. These limits are unchanged in this permit, and therefore conform to the TMDL limits.

**VARIANCE:**

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

- ✓ Not applicable; this operating permit is not drafted under premises of a petition for variance.

**WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:**

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

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

$$C = \frac{(Cs \times Qs) + (Ce \times Qe)}{(Qe + Qs)} \quad \text{(EPA/505/2-90-001, Section 4.5.5)}$$

Where C = downstream concentration  
Cs = upstream concentration  
Qs = upstream flow  
Ce = effluent concentration  
Qe = effluent flow

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

**WLA MODELING:**

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

**WATER QUALITY STANDARDS:**

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

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

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

✓ Not applicable; at this time, the permittee is not required to conduct WET test for this facility. Stormwater is not routinely monitored for whole effluent toxicity because of the fleeting and irreproducible nature of precipitation events.

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

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

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

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

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

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

Ammonia toxicity varies by temperature and by pH of the water. Assuming a stable pH value, but taking into account winter and summer temperatures; Missouri includes two seasons of ammonia effluent limitations. Current effluent limitations in this permit are:

Monthly monitoring with a benchmark set at 12.1 mg/L, in effect at all times.

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

Summer – 1.7 mg/L daily maximum

Winter – 5.6 mg/L daily maximum

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

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

## **Part V. EFFLUENT LIMITS DETERMINATION**

### **OUTFALL #001 –INDUSTRIAL STORMWATER**

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

PARAMETERS OUTFALL #001	UNIT	BASIS FOR LIMITS	DAILY MAX	BENCHMARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
<b>PHYSICAL</b>								
FLOW	MGD	1	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	MEASURE
PRECIPITATION	INCHES	6	*	-	SAME	ONCE/QUARTER***	ONCE/QUARTER	MEASURE
<b>CONVENTIONAL</b>								
COD	MG/L	6	**	120	120/90	ONCE/QUARTER	ONCE/QUARTER	GRAB
OIL & GREASE	MG/L	1, 3,6	**	10	15/10	ONCE/QUARTER	ONCE/QUARTER	GRAB
pH †	SU	1, 3	6.5 TO 9.0	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
TSS	MG/L	1, 4, 7	80	-	80/60	ONCE/QUARTER	ONCE/QUARTER	GRAB
<b>METALS</b>								
TOTAL HARDNESS AS CaCO <sub>3</sub>	mg/L	6	*	-	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
ARSENIC, TR	µg/L	2,3,6	*	-	339/169	ONCE/QUARTER	ONCE/QUARTER	GRAB
ALUMINUM, TR	µg/L	2, 3, 6	750	-	750/374	ONCE/QUARTER	ONCE/QUARTER	GRAB
BERYLLIUM, TR	µg/L	2,3,6	*	-	39/19	ONCE/QUARTER	ONCE/QUARTER	GRAB
CHROMIUM (VI), DISSOLVED	µg/L	2, 3, 6	*	-	15.3/7.6	ONCE/QUARTER	ONCE/QUARTER	GRAB
COPPER, TR	µg/L	2, 3, 6	**	26	9.6/4.8	ONCE/QUARTER	ONCE/QUARTER	GRAB
IRON, TR	µg/L	2, 3, 6	**	4000	1643/819	ONCE/QUARTER	ONCE/QUARTER	GRAB
LEAD, TR	µg/L	2, 3, 6	*	-	48/24	ONCE/QUARTER	ONCE/QUARTER	GRAB
MERCURY, TR	µg/L	2,3,6	*	-	2.8/1.4	ONCE/QUARTER	ONCE/QUARTER	GRAB
NICKEL, TR	µg/L	2, 3, 6	*	-	334/166	ONCE/QUARTER	ONCE/QUARTER	GRAB
SELENIUM, TR	µg/L	2,3,6	*	-	7.5/3.7	ONCE/QUARTER	ONCE/QUARTER	GRAB
SILVER, TR	µg/L	2, 3, 6	*	-	1.9/0.94	ONCE/QUARTER	ONCE/QUARTER	GRAB
<b>NUTRIENTS</b>								
AMMONIA AS N (APR 1 – SEPT 30)	MG/L	2, 3, 6	**	12.1	12.1/4.6	ONCE/MONTH	ONCE/MONTH	GRAB
AMMONIA AS N (OCT 1 – MARCH 31)	MG/L	2, 3, 6	**	12.1	12.1/4.6	ONCE/MONTH	ONCE/MONTH	GRAB
<b>INORGANIC</b>								
CHLORIDE	mg/L	6	*	-	860/429	ONCE/QUARTER	ONCE/QUARTER	GRAB
CHLORIDE + SULFATE	mg/L	6	*	-	1000 LIMIT	ONCE/QUARTER	ONCE/QUARTER	GRAB
FLUORIDE	mg/L	1,6	*	-	54/27	ONCE/QUARTER	ONCE/QUARTER	GRAB
<b>OTHER</b>								
BENZENE	µg/L	6	*	-	1587/791	ONCE/QUARTER	ONCE/QUARTER	GRAB
PHENOL	µg/L	6	*	-	3055/1523	ONCE/QUARTER	ONCE/QUARTER	GRAB

#### **NOTES:**

\* - Monitoring requirement only

\*\* - Monitoring associated with a benchmark

† The facility will report the minimum and maximum pH values; pH is not to be averaged.

\*\*\* Precipitation will be measured on the date of sampling other parameters. Due to the easily available data for precipitation online, this parameter will not need to be sampled daily.

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                |

## DERIVATION AND DISCUSSION OF LIMITS:

### PHYSICAL:

#### Flow

In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD).

#### Precipitation

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

### CONVENTIONAL:

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

BOD monitoring will be removed from this permit. The DMR data for the last five years indicated that BOD is not a pollutant of concern at this site. The Landfill effluent limitation guideline identifies BOD as a pollutant of concern with landfill wastewater discharges; however, this site discharges stormwater only. DMR data also shows that this facility remained far below the ELG BOD limit of 140 mg/L, with the highest reported value being 20mg/L in 09/2011. COD monitoring is required for this permit, and is a better indicator of the types of pollutants that are found in this facility's effluent.

#### Chemical Oxygen Demand (COD)

Monitoring with a benchmark of 120 mg/L as a daily maximum is applicable to this facility. The previous permit had a daily maximum limit of 120mg/L and a monthly average limit of 90mg/L. The DMR data for this facility shows that this facility consistently met these limits, with one outlier point from 09/2011. An inspection occurring shortly after this submitted data noted that it is believed the elevated levels of ammonia and COD at this time were due to land application of fertilizers from the surrounding farm fields. This exceedance was taken into consideration when determining to maintain a benchmark as opposed to reducing this requirement to monitoring only. A benchmark with continued monitoring will help to protect the general criteria of the receiving stream. Landfills receive, as part of their business, various types of material that can have potential to cause pollution of the receiving water body. COD limits ensure that the oxygen consumption of organic matter and the oxidation of inorganic chemicals are not causing negative effects to the water quality of the receiving water body.

#### Oil & Grease

Monitoring only with a benchmark set at 10 mg/L. The previous permit had a daily maximum limit of 15mg/L and a monthly average limit of 10 mg/L. In accordance with 10 CSR 20-7.031 Table A: *Criteria for Designated Uses*, a 10 mg/L maximum applies at all times. 10 mg/L is the level above which a sheen is expected to form on a water body and above which narrative criteria violations are anticipated to occur. Benchmarks fixed at this concentration are expected to also be protective of the general criteria [10 CSR 20-7.031(4)], which are applicable to all waters of the state at all times, and all designated uses [10 CSR 20-7.031(1)(C)] to be maintained for the receiving stream.

#### pH

Effluent limitation range is from 6.5 to 9.0 Standard pH Units (SU), as per [10 CSR 20-7.031(5)(E)]. The Water Quality Standards [10 CSR 20-7.031(5)(E)], state water contaminants shall not cause pH to be outside the range of 6.5 to 9.0 SU. pH is not to be averaged.

#### Settleable Solids (SS)

This parameter will be removed from this permit. The previous permit established daily limits of 1.5 mL/L/hr and a monthly average limit of 1.0 mL/L/hr. After reviewing five years of DMR data, with 8 available data points and several non-detects, it is in the best professional judgment of the permit writer that this parameter is not a pollutant of concern for this facility. Solids monitoring for BMP effectiveness will be continued in this permit through the total suspended solids parameter.

**Total Suspended Solids (TSS)**

Daily maximum limit of 80 mg/L. This is consistent with the previous operating permit, and permits of other landfills. This permit applies only the Daily Maximum limit rather than a Daily and Monthly Average limit. It is in the permit writer’s best professional judgment that monthly average limits were applied in error in the previous permit. Due to the intermittent flow nature of stormwater and quarterly sampling, a monthly average cannot be obtained reliably. This facility had a few violations for this parameter, but these limits have been found to be achievable using BMP measures; therefore there is no justification under anti-backsliding regulations to remove these limitations. There is no water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. Increased suspended solids in runoff can lead to decreased available oxygen for aquatic life and an increase of surface water temperatures in a receiving stream. TSS is also a valuable indicator parameter. Suspended solids are carriers of toxins, which can cling to the suspended particles. Therefore, less suspended solids will also indicate less overall pollution of the receiving stream. TSS monitoring allows the permittee to identify increases in TSS that may indicate uncontrolled materials leaving the site. This limit will also assure compliance with the TMDL associated with the Spring River watershed.

**INORGANICS:**

**Chlorides**

Monitoring only. The previous permit had a daily maximum limit of 860mg/L and a monthly average limit of 429 mg/L. This facility remained below these levels during the last five years, according to DMR data, which indicates little future potential to violate WQS. However, due to the limited amount of data available, it is in the permit writer’s best professional judgment to continue to monitor and collect data for this parameter. Chlorides are a pollutant of concern for facilities that discharge to receiving water bodies that have a designated use of AQL.

**Chlorides + Sulfates**

Monitoring only. The previous permit had a daily maximum limit of 1000 mg/L. This facility remained below these levels during the last five years, according to DMR data, which indicates little future potential to violate WQS. However, due to the limited amount of data available, it is in the permit writer’s best professional judgment to continue to monitor and collect data for this parameter.

**Fluoride**

Monitoring only. The previous permit had limits set at 54 mg/L daily maximum and 27 mg/L monthly average; however, Tributary to Dick’s Fork creek has a designated use of LWW. Per 10 CSR 20-7.031 Table A, 4.0mg/L is protective of the LWW use designation of the receiving stream. Fluoride levels at this facility, according to the last five years of DMR data, have been well below the 4 mg/L threshold. Therefore, it is in the permit writer’s best professional judgment to require monitoring only for this parameter for this permit cycle to collect more data to determine if there is reasonable potential for this facility to exceed water quality standards.

**METALS:**

**Metals**

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in the *Technical Support Document For Water Quality-based Toxic Controls* (EPA/505/2-90-001) and *The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion* (EPA 823-B-96-007). General warm-water habitat criteria apply (WWH) designated as AQL in 10 CSR 20-7.031 Table A; and a water hardness of 193 for stormwater is used in the conversion below.

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

METAL	CONVERSION FACTORS	
	ACUTE	CHRONIC
Arsenic	1	1
Cadmium	0.916	0.881
Copper	0.960	0.960
Lead	0.695	0.695
Mercury	0.85	N/A
Nickel	0.998	0.997
Silver	0.850	N/A
Zinc	0.980	0.980

Conversion factors for Cd and Pb are hardness dependent. N/A = not applicable.  
Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 193 mg/L.

**Total Hardness as CaCO<sub>3</sub>**

Monitoring only. The previous permit also required monitoring. The toxicity of certain metals are hardness dependent. Continuing to monitor this parameter is necessary for limit calculations of these metals.

**Arsenic, Total Recoverable**

Monitoring only. The previous permit had limits of 339µg/L as a daily maximum and 169µg/L as a monthly average. DMR data does not show an exceedance of chronic aquatic life criteria (20µg/L) at this outfall; however, the permit writer is unable to make the determination of potential to violate water quality standards due to only five data points being available. Because there were no violations of state water quality standards in the previous permit cycle, it is in the permit writer's best professional judgment require monitoring only for the duration of this permit cycle to gather more data on the facility's compliance with state and federal regulations.

**Aluminum, Total Recoverable**

750 µg/L daily maximum limit. The previous permit required limits of a 750 µg/L daily maximum, and a monthly average of 374 µg/L. The DMR data shows values which are much higher than the AQL standard. It is the permit writer's best professional judgment that there is a high future potential for violations of state water quality standards, and therefore a limit will be maintained on this parameter. This permit applies only the daily maximum limit rather than a daily and monthly Average limit. It is in the permit writer's best professional judgment that monthly average limits were applied in error in the previous permit. Due to the intermittent flow nature of stormwater and quarterly sampling, a monthly average cannot be obtained reliably. Calculations were performed using a default CV value of 0.6 due to limited data on this parameter for this outfall.

Acute WQS = 750µg/L

Acute WLA:  $C_e = ((\text{Design Flow} + 0.0)750 - (0.0 * 0.0))/\text{Design Flow}$   $C_e = 750 \mu\text{g/L}$  (No mixing)

LTAa = 750 (0.321) = 240.8 µg/L=241 µg/L [CV = 0.6, 99th Percentile]

MDL = 241 (3.11) = 749.5 µg/L=750µg/L [CV = 0.6, 99th Percentile]

**Beryllium, Total Recoverable**

Monitoring only. The previous permit had limits of 39µg/L as a daily maximum and 19 µg/L as a monthly average. This facility has only reported five data points for this parameter, all below detection. It is in the permit writer's best professional judgment to continuing monitoring on this parameter to collect more data on this facility's potential to exceed water quality standards for this parameter.

**Cadmium, Total Recoverable**

This parameter will be removed from this permit. The previous permit had limits of 3.3µg/L as a daily maximum and 1.7µg/L as a monthly average. It is in the best professional judgment of the permit writer that the previous acute limits were established at 3.3 µg/L in error due to an incorrect value used for water hardness (previous permit writer used 66.7 mg/L; a default of 193 mg/L hardness is used in this permit for stormwater). Cadmium is a hardness dependent metal, and at a hardness of 193 mg/L, the aquatic life protection criteria would be set at 9.8µg/L. The permittee reported eight data points well below this standard as well as multiple non-detects. It is in the permit writer's best professional judgment that this facility does not have a reasonable potential to exceed water quality standards for this parameter, therefore it will be removed from this permit.

**Chromium (VI), Total Recoverable**

Monitoring only. The previous permit had limits of 15.3µg/L as a daily maximum and 7.6µg/L as a monthly average. This facility had no exceedances of this parameter. Due to the limited amount of data available, it is in the permit writer's best professional judgment to continue monitoring this parameter to evaluate this facility's potential to exceed water quality standards for this parameter.

**Copper, Total Recoverable**

Monitoring with a benchmark set at 26 µg/L. The previous permit had limits of 9.6µg/L as a daily maximum and 4.8µg/L as a monthly average. This facility showed one exceedance of this parameter during the previous permit cycle; however, it is in the best professional judgment of the permit writer that the previous acute limits were established at 9.6µg/L in error due to an incorrect value used for water hardness (previous permit writer used 66.7mg/L; a default of 193 mg/L hardness is used in this permit for stormwater). Copper is a hardness dependent metal, and at a hardness of 193:

*Determination of base WQ criteria:* Acute AQL criteria:  $e^{((0.9422 * \ln(193) - 1.700300))} * (0.96) = 25 \mu\text{g/L}$

*Conversion factor for Copper applied*

$25 \mu\text{g/L} / 0.96 = 26 \mu\text{g/L}$

The previous violation did not exceed this re-calculated standard, and therefore a benchmark will be placed for this parameter rather than a limit.

### **Iron, Total Recoverable**

Monitoring, with a benchmark set at 4000µg/L. The chronic water quality standard for iron is 1000 µg/L. Due to the sporadic nature of stormwater discharges, the Department, under the direction of EPA guidance, has determined chronic standards are capricious measures of stormwater discharges. Chronic effluent limitations are based on the organism's ability to survive within the designated concentration for seven days. Stormwater is rarely discharged continuously for seven days. Conversely, acute water quality standards are applicable, but are non-existent for iron. After reviewing other sources of data, it is in the permit writer's best professional judgment to adopt Kentucky's iron surface water quality standard for warm water aquatic habitat as a benchmark for this facility. 40 CFR 122.44(k) indicates that a BMP-based approach is appropriate (see Stormwater Pollution Prevention Plan). In accordance with the department's current stormwater permitting, under the direction of EPA guidance, it is the permit writer's best professional judgment that an iron benchmark of 4000 µg/L is both feasible and protective of water quality at this facility. This benchmark is accompanied by a TSS benchmark of 80 mg/L. It is the permit writer's best professional judgment that this combination of parameters is protective of all numeric and general criteria.

### **Lead, Total Recoverable**

Monitoring only. The previous permit had limits of 48µg/L as a daily maximum and 24µg/L as a monthly average. It is in the best professional judgment of the permit writer that the previous acute limits were established at 48 µg/L in error due to an incorrect value used for water hardness (previous permit writer used 66.7 mg/L; a default of 193 mg/L hardness is used in this permit for stormwater). Lead is a hardness dependent metal, and at a hardness of 193 with no mixing, 188µg/L is protective of aquatic life. This facility reported no exceedances of this parameter for the last permit cycle. Due to the limited amount of data available for this parameter it is in the permit writer's best professional judgment to continue monitoring on this parameter to collect more data on its potential to exceed WQS.

### **Mercury, Total Recoverable**

Monitoring only. The previous permit had limits of 2.8µg/L as a daily maximum and 1.4µg/L as a monthly average. This facility reported no exceedances of this parameter in the last permit cycle; however, there is limited data available to the permit writer to make determinations about reasonable potential to exceed water quality standards in the future. It is in the permit writer's best professional judgment to continue to monitor this parameter to collect more data to determine reasonable potential in future permit cycles.

### **Nickel, Total Recoverable**

Monitoring only. The previous permit had limits of 334µg/L as a daily maximum and 166µg/L as a monthly average. It is in the best professional judgment of the permit writer that the previous acute limits were established at 334 µg/L in error due to an incorrect value used for water hardness (previous permit writer used 66.7mg/L; a default of 193 mg/L hardness is used in this permit for stormwater). Per correct calculations made using 10 CSR 20-7.031 Table A, at a hardness of 193 mg/L, an acute limit of 819µg/L is protective of aquatic life. After the conversion factor is applied the limit becomes 817µg/L. This facility had no reported exceedances for this parameter during the last permit cycle; however, there is limited data available to the permit writer to make determinations about reasonable potential to exceed water quality standards in the future. It is in the permit writer's best professional judgment to continue to monitor to collect additional data to determine reasonable potential in future permit cycles.

### **Selenium, Total Recoverable**

Monitoring only. The previous permit had limits of 7.5µg/L as a daily maximum and 3.7µg/L as a monthly average. There were no exceedances of the previous limits or the more stringent 5 µg/L aquatic life limit in the previous permit cycle; however, due to the limited amount of data available on this parameter, it is in the best professional judgment of the permit writer to continue monitoring this parameter to collect additional data to determine reasonable potential to exceed water quality standards in future permit cycles.

### **Silver, Total Recoverable**

Monitoring only. The previous permit had limits of 1.9µg/L as a daily maximum and 0.94µg/L as a monthly average. It is in the best professional judgment of the permit writer that the previous acute limits were established at 1.9 µg/L in error due to an incorrect value used for water hardness (previous permit writer used 66.7 mg/L; a default of 193 mg/L hardness is used in this permit for stormwater). Per 10 CSR 20-7.031 Table A, at a default hardness of 193mg/L, the limit protective of the AQL standard of a stream is 11.7µg/L. There were no exceedances of this parameter in the previous permit cycle; however, there is little data available for the permit writer to determine reasonable potential to exceed water quality standards. It is in the permit writer's best professional judgment to continue to monitor this parameter to collect data on this facility's potential to exceed water quality standards.

### **Thallium, Total Recoverable**

Monitoring only. The previous permit had limits of 419µg/L as a daily maximum and 209µg/L as a monthly average. There were no exceedances for this parameter during the previous permit cycle; however, there is little data available to allow the permit writer to assess reasonable potential for this facility to exceed water quality standards for this parameter. It is in the permit writer's best professional judgment to require monitoring on this parameter to collect data for future permit cycles.

**Zinc, Total Recoverable**

This parameter will be removed from this permit. The previous permit had limits of 85µg/L as a daily maximum and 42µg/L as a monthly average. There were no exceedances of this parameter in the previous permit cycle. It is in the best professional judgment of the permit writer that the previous acute limits were established at 85 µg/L in error due to an incorrect value used for water hardness (previous permit writer used 66.7 mg/L; a default of 193 mg/L hardness is used for stormwater). Per 10 CSR 20-7.031 Table A, at a default hardness of 193 mg/L, the limit protective of the AQL standard of a stream is 209µg/L. The reported values for this facility were well below this standard with 11 data points and 7 non-detects. It is in the best professional judgment of the permit writer that this facility does not have a reasonable potential to exceed water quality standards for this parameter, therefore it will be removed from this permit.

**NUTRIENTS:**

**Ammonia, Total as Nitrogen**

Monitoring only with a benchmark set at 12.1 mg/L. This parameter had limits in the previous permit of 12.1 mg/L daily maximum limit and 4.6 mg/L monthly average. It is in the permit writer’s best professional judgment, after viewing the collected DMR data, to remove limits for this parameter and establish a benchmark. The data shows consistently low levels of ammonia at this facility, with one outlier point in 09/2011. An inspection occurring shortly after this submitted data noted that it is believed the elevated levels of ammonia and COD at this time were due to land application of fertilizers from the surrounding farm fields. This data was taken into consideration when determining to maintain a benchmark as opposed to reducing this requirement to monitoring only. A benchmark with continued monitoring will help to protect the AQL-WWH use designation of the Tributary of Dick’s Fork Creek, as well as the AQL use of Dick’s Fork Creek. The acute criteria of 12.1 mg/L was used for this benchmark. Sampling for this parameter was increased from quarterly to monthly. Levels of ammonia have consistently remained low for this facility; however, to make a determination to remove this parameter from this facility, more data points are required in a permit cycle. If, after at least 10 data points are collected for each season with no exceedances, the facility wishes to request a review of their permit, they may do so. With the amount of data currently available and the unusually high reading in 2011, it is in the permit writer’s best professional judgment to not remove this parameter from the permit or switch to monitoring only at this time.

Season	Temp (°C)	pH (SU)	Total Ammonia Nitrogen CCC (mg/L)	Total Ammonia Nitrogen CMC (mg/L)
Summer	26	7.8	1.5	12.1
Winter	6	7.8	3.1	12.1

Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3] default pH 7.8 SU No mixing considerations allowed; therefore, WLA = appropriate criterion.

*Summer: April 1 – September 30*

Acute WLA:  $C_e = ((\text{design flow} + 0.0)12.1 - (0.0 * 0.01))/\text{design flow}$   $C_e = 12.1 \text{ mg/L (no mixing)}$   
 LTA<sub>a</sub> = 12.1 mg/L (0.321) = 3.9 mg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
 MDL = 3.9 mg/L (3.11) = **12.1 mg/L** [CV = 0.6, 99<sup>th</sup> Percentile]

*Winter: October 1 – March 31*

Acute WLA:  $C_e = ((\text{design flow} + 0.0)12.1 - (0.0 * 0.01))/\text{design flow}$   $C_e = 12.1 \text{ mg/L (no mixing)}$   
 LTA<sub>a</sub> = 12.1 mg/L (0.321) = 3.9 mg/L [CV = 0.6, 99<sup>th</sup> Percentile]  
 MDL = 3.9 mg/L (3.11) = **12.1 mg/L** [CV = 0.6, 99<sup>th</sup> Percentile]

**BTEX:**

**Benzene**

Monitoring only. The previous permit had a 1587 mg/L daily maximum limit and a 791 mg/L monthly average limit, with yearly sampling. The past five years of DMR data show a consistent amount below detection for this parameter; however, there is little data available to allow the permit writer to assess reasonable potential for this facility to exceed water quality standards for this parameter. It is in the permit writer’s best professional judgment to require monitoring on this parameter to collect data for future permit cycles.

**OTHER:**

**Phenol**

Monitoring only. The previous permit had limits of 3055 µg/L as a daily maximum and 1523 µg/L as a monthly average. The previous permit writer did not have an acute limit available, and therefore used calculations to determine a limit based on the chronic criteria. It is in this permit writer’s best professional judgment that due to the nature of stormwater, chronic limits are unable to be applied to stormwater parameters, and the previous limits were applied in error. There were no exceedances for this parameter in the last permit cycle; however, there is little data available to allow the permit writer to assess reasonable potential for this facility to exceed water quality standards for this parameter. It is in the permit writer’s best professional judgment to require monitoring on this parameter to collect data for future permit cycles.

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

### **ELECTRONIC DISCHARGE MONITORING REPORTING:**

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

### **SAMPLING FREQUENCY JUSTIFICATION:**

Sampling and reporting frequency was largely changed from the last permit. Previous permit required yearly sampling on many parameters. Yearly sampling supplies too few data points to determine limits scientifically. With monitoring increased to quarterly, for most parameters, and monthly for ammonia, a more complete characterization of the stormwater discharge is obtained for this site. Sampling frequency for stormwater-only outfalls is typically quarterly even though BMP inspection occurs monthly. The facility may sample more frequently if they need additional data to determine if their best management technology is performing as expected.

### **SAMPLING TYPE JUSTIFICATION:**

Sampling type was continued from the previous permit. The sampling types are representative of the discharges, and are protective of water quality. Grab samples are usually appropriate for stormwater.

## **Part VII. 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 **publicly-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 A – Cost Analysis for Compliance**

## **Part VIII. ADMINISTRATIVE REQUIREMENTS**

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

### **PERMIT SYNCHRONIZATION:**

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. <http://dnr.mo.gov/env/wpp/cpp/docs/watershed-based-management.pdf>. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than three years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit. *This permit will become synchronized by expiring end of 3rd quarter, 2017.*

**PUBLIC NOTICE:**

The Department shall give public notice that a draft permit has been prepared and its issuance is pending.

<http://dnr.mo.gov/env/wpp/permits/pn/index.html> Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

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

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

- The Public Notice period for this operating permit was from 01/22/2016 to 02/22/2016. No responses were received.

**DATE OF FACT SHEET:** (12/01/2015)

**COMPLETED BY:**

AMBERLY SCHULZ, ENVIRONMENTAL SPECIALIST  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
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**Appendix A:**

**Missouri Department of Natural Resources  
Water Protection Program  
Cost Analysis for Compliance  
(In accordance with RSMo 644.145)**

**Lamar Closed Sanitary Landfill, Permit Renewal  
City of Lamar, Missouri  
Missouri State Operating Permit #MO-0110272**

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 this analysis 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 of Lamar’s financial and socioeconomic situation. The financial questionnaire available to permittees on the DNR website (<http://dnr.mo.gov/forms/780-2511-f.pdf>) should have been submitted with the permit renewal application. If it was not received with the renewal application, the Department sent a request to complete it. City of Lamar did not respond to requests for information for this CAFCom. Lamar did indicate in other communications that they do not charge a user fee for trash services in the city, and this landfill is closed. This CAFCom was not completed in a complete manner due to lack of supplied information from the municipality. The below information was completed minimally only to inform the reader of possible costs for sampling and upgrades to BMPs.

**Facility Description:**

Residential Connections:	<u>0</u>
Commercial Connections:	<u>0</u>
Industrial Connections:	<u>0</u>
Total Connections for this facility:	<u>0</u>

**New Permit Requirements:**

Testing was increased to monthly for ammonia. Testing for chlorides+sulfates, oil and grease, chloride, benzene, fluoride, chromium (VI), aluminum, arsenic, copper, lead, selenium, silver, beryllium, thallium, nickel, mercury, and phenol were increased to quarterly. Additionally, the limit for aluminum was not met in the previous permit cycle reliably, and must be met; therefore, BMPs will need to be amended accordingly.

**Anticipated Costs Associated with Complying with the New Requirements:**

The total cost estimated for new quarterly and monthly monitoring requirements is approximately \$1700 annually. It is unable to be determined what the cost would be to community users due to lack of available data. The city funding that is available to cover new debt is unknown to the Department. The cost of new BMPs can range from \$100-multiple thousands of dollars, depending on BMP choice. An inexpensive and effective BMP measure of a heavy metal filter sock placed before the outfall will cost approximately \$300 annually. Total annual cost is estimated to be approximately \$2000 for new permit and BMP requirements.

**(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 City of Lamar has the means to raise \$2000 annually.

**(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 quarterly monitoring requirements is \$2000 annually. The cost for each household in the community is unable to be calculated due to lack of available financial information.

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

**Increased parameter Monitoring**

Parameter sampling was increased from annually to quarterly to provide data at the next permit cycle. The city of Lamar indicated it wished to have parameters removed from their permit due to their good compliance record. It does appear that Lamar Closed Sanitary Landfill is consistently below water quality limits on many parameters, but additional monitoring data is required to ensure protection of state water quality standards. Previous annual sampling did not provide enough data points to make determinations as to the facility's discharge being consistently safe for human and aquatic life.

**BMP Amendments**

BMP amendments are required to remain compliant with water quality limits for parameters in this permit. This facility had multiple exceedances of the state water quality standards for Aluminum. Upgrades to their BMPs will most likely be required to meet permit limits. These upgrades will protect aquatic life in the receiving stream.

**(4) Inclusion of ongoing costs of operating and maintaining the existing Landfill system:**

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<sup>3-6:</sup>**

Potentially Distressed Populations – City of Lamar	
Unemployment	6.5%
Adjusted Median Household Income (MHI)	\$44698
Percent Change in MHI (1990-2012)	+52.6%
Percent Population Growth/Decline (1990-2012)	+1.5%
Change in Median Age in Years (1990-2012)	+2.5
Percent of Households in Poverty	22.5%
Percent of Households Relying on Food Stamps	17.0%

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

The community did not respond to requests to 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 new sampling requirements associated with this permit will not impose a financial burden on the community, nor will the new requirements require the City of Lamar to seek funding from an outside source.

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

The community did not respond to requests to 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 increase monitoring and amend BMPs. The Department identified the actions for which cost analysis for compliance is required under Section 644.145 RSMo.

The Department estimates the cost for increasing sampling for multiple parameters from annually to quarterly, increasing sampling for ammonia to monthly from quarterly, and amending BMPs to meet permit limits is approximately \$2000 per year. No determination was able to be made relating to cost to households in Lamar due to lack of provided data.

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. Unemployment data was obtained from Missouri Department of Economic Development (July 2014) – <http://www.missourieconomy.org/pdfs/urel1407.pdf>
2. 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](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?_afpt=table)
3. 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](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>
4. 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;
    - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
  - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
  - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



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

## Section C – Bypass/Upset Requirements

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

## Section D – Administrative Requirements

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



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



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

# City of Lamar

1104 BROADWAY LAMAR, MO 64759

Phone: 417-682-5554

Fax: 417-682-3288

*o/s-123*  
AUG 24 2015

RECEIVED

AUG 20 2015

Water Protection Program



*Birthplace of Harry S. Truman*

August 14, 2015

Amberly Schulz  
Environmental Specialist  
Missouri Dept. of Natural Resources  
Water Protection Program  
Operating Permits Section-Industrial Unit  
PO Box 176  
Jefferson City, MO 65102-0176

RE: OPERATING PERMIT MO-0110272

Dear Mr. Schulz

Enclosed per your request is Form C - Application for Discharge Permit. Let me know if you have any questions.

Yours truly,

CITY OF LAMAR

Lynn B. Calton, P.E., L.S.

LBC/cf

KENT M. HARRIS  
MAYOR

LYNN CALTON, City Administrator  
STEVEN KADERLY, City Attorney  
TRACI COX, City Clerk

MUNICIPALLY OWNED ELECTRIC,  
WATER AND SEWAGE SYSTEMS

RECEIVED

AUG 20 2015



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
**FORM C - APPLICATION FOR DISCHARGE PERMIT** - Water Protection Program  
MANUFACTURING, COMMERCIAL, MINING,  
SILVICULTURE OPERATIONS, PROCESS AND STORMWATER

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED
8/20/15	EOB

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

1.00 NAME OF FACILITY LAMAR CLOSED SANITARY LANDFILL

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER MO-0110272

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). N/A

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

A. FIRST 4953 B. SECOND \_\_\_\_\_

C. THIRD \_\_\_\_\_ D. FOURTH \_\_\_\_\_

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) SW 1/4 SW 1/4 SEC 35 T 32 R 31 BARTON COUNTY

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST) # 001 UNNAMED TRIBUTARY TO DICK'S CREEK RECEIVING WATER

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

CITY OF LAMAR - MUNICIPAL GOVERNMENT



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

**2.50 MAXIMUM PRODUCTION**

A. DOES AN EFFLUENT GUIDELINE LIMITATION PROMULGATED BY EPA UNDER SECTION 304 OF THE CLEAN WATER ACT APPLY TO YOUR FACILITY?

YES (COMPLETE B.)

NO (GO TO SECTION 2.60)

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINES EXPRESSED IN TERMS OF PRODUCTION (OF OTHER MEASURE OF OPERATION)?

YES (COMPLETE C.)

NO (GO TO SECTION 2.60)

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

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

**2.60 IMPROVEMENTS**

A. ARE YOU NOW REQUIRED BY ANY FEDERAL, STATE OR LOCAL AUTHORITY TO MEET, ANY IMPLEMENTATION SCHEDULE FOR THE CONSTRUCTION, UPGRADING OR OPERATION OF WASTEWATER TREATMENT EQUIPMENT OR PRACTICES OR ANY OTHER ENVIRONMENTAL PROGRAMS THAT MAY AFFECT THE DISCHARGES DESCRIBED IN THIS APPLICATION? THIS INCLUDES, BUT IS NOT LIMITED TO, PERMIT CONDITIONS, ADMINISTRATIVE OR ENFORCEMENT ORDERS, ENFORCEMENT COMPLIANCE SCHEDULE LETTERS, STIPULATIONS, COURT ORDERS AND GRANT OR LOAN CONDITIONS.

YES (COMPLETE THE FOLLOWING TABLE)

NO (GO TO 3.00)

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

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

MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED.



3.10 BIOLOGICAL TOXICITY TESTING DATA

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

YES (IDENTIFY THE TEST(S) AND DESCRIBE THEIR PURPOSES BELOW.)  NO (GO TO 3.20)

3.20 CONTRACT ANALYSIS INFORMATION

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

YES (LIST THE NAME, ADDRESS AND TELEPHONE NUMBER OF AND POLLUTANTS ANALYZED BY EACH SUCH LABORATORY OR FIRM BELOW.)  NO (GO TO 3.30)

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

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)

*LYNN CALTON, CITY ADMINISTRATOR*

TELEPHONE NUMBER WITH AREA CODE

*417-682-5554*

SIGNATURE (SEE INSTRUCTIONS)

*Lynn Calton*

DATE SIGNED

*8-14-15*

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

FORM C  
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO.

INTAKE AND EFFLUENT CHARACTERISTICS

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify if blank)				4. INTAKE (optional)	
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	60 ppm		45 ppm		1/QTR					
B. Chemical Oxygen Demand (COD)	120 ppm		90 ppm		1/QTR					
C. Total organic Carbon (TOC)	N/A									
D. Total Suspended Solids (TSS)	80 ppm		60 ppm		1/QTR					
E. Ammonia (as N)	12.1 ppm		4.6 ppm		1/QTR					
F. Flow	VALUE	MONITOR	VALUE	VALUE	1/QTR			VALUE		
G. Temperature (winter)	VALUE	MONITOR	VALUE	VALUE	1/QTR			VALUE		°C
H. Temperature (summer)	VALUE	MONITOR	VALUE	VALUE	1/QTR			VALUE		°C
I. pH	MINIMUM 6.5	MAXIMUM 9.0	MINIMUM 6.5	MAXIMUM 9.0	1/QTR					STANDARD UNITS

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

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE (if available)	B. MAXIMUM 30 DAY VALUE (if available)	C. LONG TERM AVRG. VALUE (if available)	D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE	B. NO. OF ANALYSES		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
A. Bromide (24959-87-9)	X		N/A									
B. Chlorine, Total Residual	X		N/A									
C. Color	X		N/A									
D. Fecal Coliform	X		N/A									
E. Fluoride (16984-48-8)	X		54 ppm	27 ppm								
F. Nitrate - Nitrate (as N)	X		N/A									

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		6. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE (if available)		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS						
G. Nitrogen, Total Organic (as N)	X		12.1 ppm		4.6 ppm				1/9TR					
H. Oil and Grease		X	15 ppm		10 ppm				1/9TR					
I. Phosphorus (as P), Total (7723-14-0)		X	N/A											
J. Sulfate (as SO <sub>4</sub> ) (14808-79-8)		X	N/A											
K. Sulfide (as S)		X	N/A											
L. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X	N/A											
M. Surfactants		X	N/A											
N. Aluminum, Total (7429-90-5)		X	750 ppb		374 ppb				1/4R					
O. Barium, Total (7440-39-3)		X	N/A											
P. Boron, Total (7440-42-8)		X	N/A											
Q. Cobalt, Total (7440-48-4)		X	N/A											
R. Iron, Total (7439-89-6)	X		1643 ppb		319 ppb				1/9TR					
S. Magnesium, Total (7439-95-4)	X		N/A											
T. Molybdenum, Total (7439-98-7)		X	N/A											
U. Manganese, Total (7439-96-5)		X	N/A											
V. Tin, Total (7440-31-5)		X	N/A											
W. Titanium, Total (7440-32-6)		X	N/A											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE (if available)		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS						
<b>METALS, AND TOTAL PHENOLS</b>														
1M. Antimony, Total (7440-36-9)		X	N/A											
2M. Arsenic, Total (7440-38-2)		X	N/A											
3M. Beryllium, Total (7440-41-7)	X		39 ppb		19 ppb				1/yr					
4M. Cadmium, Total (7440-43-9)		X	N/A											
5M. Chromium III (16065-83-1)		X	N/A											
6M. Chromium VI (18540-29-9)		X	N/A											
7M. Copper, Total (7440-50-8)		X	N/A											
8M. Lead, Total (7439-92-1)		X	N/A											
9M. Mercury, Total (7439-97-6)		X	2.3 ppb		1.4 ppb				1/yr					
10M. Nickel, Total (7440-02-0)		X	N/A											
11M. Selenium, Total (7782-49-2)		X	7.5 ppb		3.7 ppb				1/yr					
12M. Silver, Total (7440-22-4)		X	N/A											
13M. Thallium, Total (7440-28-0)		X	419 ppb		209 ppb				1/yr					
14M. Zinc, Total (7440-66-6)		X	N/A											
15M. Cyanide, Amenable to Chlorination		X	N/A											
16M. Phenols, Total		X	3055 ppb		1523 ppb				1/yr					
<b>RADIOACTIVITY</b>														
(1) Alpha Total		X	N/A											
(2) Beta Total		X	N/A											
(3) Radium Total		X	N/A											
(4) Radium 226 Total		X	N/A											