

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-0107701

Owner: U.S. Department of Energy (USDOE)  
Address: 7295 Highway 94 South, Weldon Spring, MO 63304

Continuing Authority: Same as above  
Address: Same as above

Facility Name: USDOE, Weldon Spring Site  
Facility Address: 7295 Highway 94 South, Weldon Spring, MO 63304

Legal Description: Landgrant 1798  
UTM Coordinates: X=698192, Y=4282734

Receiving Stream: Missouri River (P)  
First Classified Stream and ID: Missouri River (P) (#1604), 303(d) List  
USGS Basin & Sub-watershed No.: (10300200-0607)

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 #007** - Radioactive waste disposal facilities, SIC #4953  
Leachate Collection and Removal System for Disposal Facility Leachate and monitoring well purge water. Disposal Facility Leachate is filtered and passed through an Ion Exchange Resin. Monitoring Well Purge water is passed through a carbon absorption system prior to placement in the Disposal Facility Leachate Collection and Retention System. Leachate is currently being hauled to the Metropolitan St. Louis Sewer District's Bissell Point Treatment Plant.

Design flow is 25,000 gallons per day.  
Actual flow is 90 gallons per day.

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

June 1, 2014  
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

June 30, 2016  
Expiration Date

John Madras, Director, Water Protection Program

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 2 of 5	
					PERMIT NUMBER MO-0107701	
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 <b>June 1, 2014</b> , and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #007						
Flow	MGD	*		*	Once/Discharge Event	24 hr. Est.
pH – Units	SU	**		**	Once/Discharge Event	Grab
Cyanide, Amenable to Chlorination	µg/L	188		93	Once/Discharge Event	Grab
Gross Alpha	pCi/L	167		80	Once/Discharge Event	Grab
MONITORING REPORTS SHALL BE SUBMITTED <u>YEARLY</u> ; THE FIRST REPORT IS DUE JANUARY 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Whole Effluent Toxicity (WET) test	TU <sub>a</sub>	See Special Conditions			once/year	24 hr. composite***
MONITORING REPORTS SHALL BE SUBMITTED <u>YEARLY</u> ; THE FIRST REPORT IS DUE JANUARY 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

\* Monitoring requirement only.

\*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units

\*\*\* A 24-hour composite sample is composed of 48 aliquots (subsamples) collected at 30 minute intervals by an automatic sampling device. / A composite sample made up from a minimum of four/six grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.

#### B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Part I standard conditions dated November 1, 2013, and hereby incorporated as though fully set forth herein.

C. SPECIAL CONDITIONS

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

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

2. All outfalls must be clearly marked in the field.

3. Water Quality Standards

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

4. Changes in Discharges of Toxic Substances

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

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
  - (1) One hundred micrograms per liter (100 µg/L);
  - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
  - (4) The level established in Part A of the permit by the Director.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

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

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

C. SPECIAL CONDITIONS (continued)

7. Whole Effluent Toxicity (WET) Test shall be conducted only if the facility is discharging as follows:

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT				
OUTFALL	AEC	FREQUENCY	SAMPLE TYPE	MONTH
#007	9.09%	Once/year	24 hr. composite*	Any

\* A 24-hour composite sample is composed of 48 aliquots (subsamples) collected at 30 minute intervals by an automatic sampler.

Dilution Series							
AEC%	36.36% effluent	18.18% effluent	9.09% effluent	4.54% effluent	2.27% effluent	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

(a) Test Schedule and Follow-Up Requirements

- (1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
  - (i) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.
  - (ii) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analysis performed upon any other effluent concentration.
  - (iii) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
- (2) The WET test will be considered a failure if mortality observed in effluent concentrations for either specie, equal to or less than the AEC, is significantly different (at the 95% confidence level;  $p = 0.05$ ) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available, synthetic laboratory control water may be used.
- (3) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (4) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.
- (4) If the effluent fails the test for BOTH test species, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) until one of the following conditions are met: Note: Written request regarding single species multiple dilution accelerated testing will be address by THE WATER PROTECTION PROGRAM on a case by case basis.
  - (i) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
  - (ii) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.
- (5) Follow-up tests do not negate an initial failed test.
- (6) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the third failed test.
- (7) Additionally, the following shall apply upon failure of the third follow up MULTIPLE DILUTION test The permittee should contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. If the permittee does not contact THE WATER PROTECTION PROGRAM upon the third follow up test failure, a toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of the automatic trigger or DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.

C. SPECIAL CONDITIONS (continued)

- (8) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.
  - (9) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
  - (10) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.
  - (11) Submit a concise summary in tabular format of all WET test results with the annual report.
- (b) Test Conditions
- (1) Test Type: Acute Static non-renewal
  - (2) All tests, including repeat tests for previous failures, shall include both test species listed below unless approved by the department on a case by case basis.
  - (3) Test species: *Ceriodaphnia dubia* and *Pimephales promelas* (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.
  - (4) Test period: 48 hours at the "Allowable Effluent Concentration" (AEC) specified above.
  - (5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.
  - (6) Tests will be run with 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent, and reconstituted water.
  - (7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
  - (8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.
  - (9) Whole-effluent-toxicity test shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms

**Missouri Department of Natural Resources**  
**FACT SHEET**  
**FOR THE PURPOSE OF RENEWAL,**  
**OF**  
**MO-0107701**  
**USDOE, WELDON SPRING SITE**

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

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a 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 (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for an Industrial Facility.

**Part I – Facility Information**

Facility Type: Radioactive waste disposal facilities  
Facility SIC Code(s): 4953

**Facility Description:**

Leachate Collection and Removal System for Disposal Facility Leachate and monitoring well purge water. Disposal Facility Leachate is filtered and passed through an Ion Exchange Resin. Monitoring Well Purge water is passed through a carbon absorption system prior to placement in the disposal facility. Approximately 90 gallons per day of Leachate is generated and being hauled to the Metropolitan St. Louis Sewer District's Bissell Point Treatment Plant.

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?

- Yes; (please provide simple description or reference appropriate location in the Fact Sheet.)  
 - No.

Application Date: 10/18/12  
Expiration Date: 4/24/13  
Last Inspection: 12/15/2006 In Compliance ; Non-Compliance

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#007	0.04	Advanced	Leachate

Comments: Outfalls #001, #002, #003, #004, #005, #008, and #009 were land disturbance stormwater outfalls and have been eliminated.  
Outfall #006. Lift Station/ extended aeration treatment plant/sock filtration and chlorination/sludge disposal is by contract hauler. Operation of this outfall was transferred to Lindenwood University and is covered by NPDES Permit Number MO-0129917.  
Outfall #007. Leachate Collection and Retention System. Leachate is currently being hauled to the Metropolitan St. Louis Sewer District's Bissell Point Treatment Plant.

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**Part II – Receiving Stream Information**

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

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

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

**RECEIVING STREAM(S) TABLE:**

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	DISTANCE TO CLASSIFIED SEGMENT	12-DIGIT HUC**
Missouri River, Mouth To Gasconade River	P	1604	IRR, LWW, AQL, SCR, DWS, IND, WBC***	0.0	10300200-0607

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

**RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:**

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)
	7Q10
Missouri River, Mouth To Gasconade River	16,140

**MIXING CONSIDERATIONS TABLE:**

MIXING ZONE (CFS) [10 CSR 20-7.031(4)(A)...]	ZONE OF INITIAL DILUTION (CFS) [10 CSR 20-7.031(4)(A)...]	
7Q10	1Q10	7Q10
4,035	0.4*	0.4*

\*Since the 7Q10 flow at the ZID is greater than 10 times the effluent design, the ZID values will equal 10 times the design flow.... In accordance with Missouri Clean Water Commission Regulations 10 CSR 20-7031(4)4b

**RECEIVING STREAM MONITORING REQUIREMENTS:**

No receiving water monitoring requirements 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.

- All limits in this operating permit are at least as protective as those previously established; therefore, backsliding does not apply. Phenole and Antimony, Total were removed because they were not detected and taking into consideration the fact is there is only 90 gpd generated from this facility which is collected and sent for treatment at the St. Louis Metropolitan Sewer District. .

**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.

**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://dnr.mo.gov/env/wpp/pub/index.html>, 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.

**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)(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, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Not Applicable; This permit does not contain a SOC.

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

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

In accordance with the EPA's *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 Storm Water Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of storm water discharges.

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

**SPILL REPORTING:**

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

**VARIANCE:**

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

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

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

As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department 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 applicable using water quality criteria or water quality model results and the dilution equation below:

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

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

Chronic wasteload allocations 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). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

Number of Samples “n”:

Additionally, 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, be 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:**

There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

Not Applicable; A WLA study was either not submitted or determined not applicable by Department staff.

**WATER QUALITY STANDARDS:**

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

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

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

Applicable;

Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(3)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by all facilities meeting the following criteria:

- Facility is a designated Major.
- Facility continuously or routinely exceeds its design flow.
- Facility (industrial) that alters its production process throughout the year.
- Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH<sub>3</sub>)
- Facility is a municipality or domestic discharger with a Design Flow ≥ 22,500 gpd.
- Other – please justify.

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

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

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

The Missouri River (St. Louis/St. Charles County) with HUC # 10300200 is listed on the 2008 Missouri 303(d) List for E.Coli

– This facility is not considered to be a source of the above listed pollutant(s) or considered to contribute to the impairment of the Missouri River.

**Part IV – Effluent Limits Determination**

**Outfall #007 – Main Facility Outfall**

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

**EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	SAME
pH (S.U.)	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6.0 - 9.0
CYANIDE, AMENABLE TO CHLORINATION	µg/L	2/3	188		93	NO	SAME
GROSS ALPHA	pCi/L	2/3	167		80	NO	SAME
WHOLE EFFLUENT TOXICITY (WET) TEST	TU <sub>a</sub>	*				NO	PASS/FAIL
	Please see WET Test in the Derivation and Discussion Section below.						
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only.

**OUTFALL #007 – DERIVATION AND DISCUSSION OF LIMITS:**

- **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.
- **pH.** Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **Cyanide, Amenable to Chlorination.** Retained from the previous permit. Protection of Aquatic Life CCC = 5 µg/L, CMC = 22 µg/L, Background CN = 0 µg/L

Chronic WLA:  $C_e = ((4,035 + 0.04)5 - (0.0 * 4,035))/0.04$

$C_e = 504,380 \text{ µg/L}$

Acute WLA:  $C_e = ((0.4 + 0.04)22 - (0.0 * 0.4))/0.04$

$C_e = 242 \text{ µg/L}$

$LTA_c = 504,380 (0.440) = 221,927 \text{ µg/L}$

[CV = 0.6, 99<sup>th</sup> Percentile]

$LTA_a = 242 (0.249) = 60.3 \text{ µg/L}$

[CV = 0.6, 99<sup>th</sup> Percentile]

Use most protective number of LTA<sub>c</sub> or LTA<sub>a</sub>.

MDL = 60.3 (3.11) = 188 µg/L

[CV = 0.6, 99<sup>th</sup> Percentile]

AML = 60.3 (1.55) = 93 µg/L

[CV = 0.6, 95<sup>th</sup> Percentile, n = 4]

- **Gross Alpha.** Retained from the previous permit. Protection of Drinking Water = 15 pCi/L, Background Gross Alpha = 0 pCi/L. The site specific Coefficient of Variation calculated in the Reasonable Potential Analysis is 0.7

Chronic WLA:  $C_e = ((4,035 + 0.04)15 - (0.0 * 4,035))/0.04$   
 $C_e = 1,513,140$  pCi/L

Acute WLA:  $C_e = ((0.4 + 0.04)15 - (0.0 * 0.4))/0.04$   
 $C_e = 165$  pCi/L

$LTA_c = 1,513,140 (0.503) = 761,109$  pCi/L

[CV = 0.7, 99<sup>th</sup> Percentile]

$LTA_a = 165 (0.300) = 50$  pCi/L

[CV = 0.7, 99<sup>th</sup> Percentile]

Use most protective number of  $LTA_c$  or  $LTA_a$ .

MDL = 50(3.34) = 167 pCi/L

[CV = 0.7, 99<sup>th</sup> Percentile]

AML = 50(1.60) = 80 pCi/L

[CV = 0.7, 95<sup>th</sup> Percentile, n = 4]

- **Phenol.** was removed from the permit because it was not detected in the analytical data of form C.
- **Antimony, Total** was removed from the permit because it was not detected, in the analytical data of form C.
- **WET Test.** WET Testing schedules and intervals are established in accordance with the Department's Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow.

Acute

**No less than ONCE/YEAR:**

Facility is designated as a Major facility or has a design flow  $\geq 1.0$  MGD.

Facility continuously or routinely exceeds their design flow.

Facility exceeds its design population equivalent (PE) for BOD<sub>5</sub> whether or not its design flow is being exceeded.

Facility has Water Quality-based effluent limitations for toxic substances (other than NH<sub>3</sub>).

Acute AEC% =  $((\text{design flow}_{\text{cfs}} + \text{ZID}_{7\text{Q}10}) / \text{design flow}_{\text{cfs}})^{-1} \times 100 = 9.09\%$

## **Part V – Administrative Requirements**

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

### **PERMIT SYNCHRONIZATION:**

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

### **PUBLIC NOTICE:**

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

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

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

– The Public Notice period for this operating permit was from March 21, 2014 to April 21, 2014. Comments were received from the facility during the 15 days review period. These comments were addressed via E-mail.

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

- The Public Notice period for this operating permit was from (DATE) to (DATE). No responses were received.

**DATE OF FACT SHEET:** DECEMBER 10, 2013

### **COMPLETED BY:**

Thabit H. Hamoud, P.E, EE III  
Missouri Department of Natural Resources  
Water Protection Section  
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REVISED  
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These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

## Part I – General Conditions

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

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

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

### Section B – Reporting Requirements

1. **Planned Changes.**
  - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
    - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
    - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1);
    - iii. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
    - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Twenty-Four Hour 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. **Sanitary Sewer Overflow Reporting.** The following requirements solely reflect reporting obligations, and reporting does not necessarily reflect noncompliance, which may depend on the circumstances of the incident reported.
- a. **Twenty-Four Hour (24-Hour) Reporting.** The permittee or owner shall report any incident in which wastewater escapes the collection system such that it reaches waters of the state or it may pose an imminent or substantial endangerment to the health or welfare of persons. 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 incident. A written submission shall also be provided within five (5) business days of the time the permittee or owner becomes aware of the incident. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The five (5) day reports may be provided via the current electronic method approved by the Department.
  - b. **Incidents Reported via Discharge Monitoring Reports (DMRs).** The permittee or owner shall report any event in which wastewater escapes the collection system, which does not enter waters of the state and is not expected to pose an imminent or substantial endangerment to the health or welfare of persons, which occur typically during wet weather events. Relevant information shall be provided with the permittee's or owner's DMRs.
4. **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.
5. **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.
6. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, 4, and 7 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
7. **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.
8. **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.

## Section C – Bypass/Upset Requirements

1. **Definitions.**
  - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility.
  - 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.
  - 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.



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Section D – Administrative Requirements

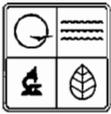
1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; 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 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.



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NOVEMBER 1, 2013

7. **Permit Transfer.**
- 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.
  - 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.
  - 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.
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:
- 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;
  - Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - 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.**
- 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.
  - 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.**
- 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)
  - 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.
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.

C10300  
AP13427



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

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED 10/18/12	FEE SUBMITTED \$ 8B

**Note** ▶ PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:

- An operating permit and antidegradation review public notice
- A construction permit following an appropriate operating permit and antidegradation review public notice
- A construction permit and concurrent operating permit and antidegradation review public notice
- A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)
- An operating permit for a new or unpermitted facility Construction Permit # \_\_\_\_\_
- An operating permit renewal: permit # MO- 0107701 Expiration Date April 24, 2013
- An operating permit modification: permit # MO- \_\_\_\_\_ Reason: \_\_\_\_\_

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

**2. FACILITY**

NAME Weldon Spring Site		TELEPHONE WITH AREA CODE (636) 300-2630	
		FAX (636) 300-2626	
ADDRESS (PHYSICAL) 7295 Hwy 94 South	CITY St. Charles	STATE MO	ZIP CODE 63304

**3. OWNER**

NAME U.S. Department of Energy Ken.Starr@lm.doe.gov		E-MAIL ADDRESS	TELEPHONE WITH AREA CODE (303) 410-4801
			FAX
ADDRESS (MAILING) 7295 Hwy 94 South	CITY St. Charles	STATE MO	ZIP CODE 63304

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

**4. CONTINUING AUTHORITY**

NAME U.S. Department of Energy		TELEPHONE WITH AREA CODE (303) 410-4801	
		FAX	
ADDRESS (MAILING) 7295 Hwy 94 South	CITY St. Charles	STATE MO	ZIP CODE 63304

**5. OPERATOR**

NAME Not required per 10CSR 20-9.020(2)(A)	CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE
		FAX
ADDRESS (MAILING)	CITY	STATE ZIP CODE

**6. FACILITY CONTACT**

NAME J. Randy Thompson Randy.Thompson@lm.doe.gov	TITLE Site Lead	TELEPHONE WITH AREA CODE (636) 300-2640
		FAX (636) 300-2626

**7. ADDITIONAL FACILITY INFORMATION**

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

001 SW 1/4 NW 1/4 Sec 8 Proj T 45 N R 3 E St. C County  
 UTM Coordinates Easting (X): \_\_\_\_\_ Northing (Y): \_\_\_\_\_  
*For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)*

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

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

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

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

001 - SIC 4953 and NAICS \_\_\_\_\_ 002 - SIC \_\_\_\_\_ and NAICS \_\_\_\_\_  
 003 - SIC \_\_\_\_\_ and NAICS \_\_\_\_\_ 004 - SIC \_\_\_\_\_ and NAICS \_\_\_\_\_

MO 780-1479 (01-09)

OCT 18 2012

WATER PROTECTION PROGRAM

OCT 10 2012

MO DEPT NATURAL RESOURCES  
ST. LOUIS REGIONAL OFFICE

<b>8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION</b> (Complete all forms that are applicable.)			
A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below).	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
B.	Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C and D.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
C.	Is application for storm water discharges only? If yes, complete EPA Form 2F.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
D.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.		
E.	Is wastewater land applied? If yes, complete Form I.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
F.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
<b>9. DOWNSTREAM LANDOWNER(S)</b> Attach additional sheets as necessary. See Instructions. (PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE).			
NAME Missouri Department of Conservation			
ADDRESS P.O. Box 180		CITY Jefferson City	STATE ZIP CODE MO 65102
<b>10.</b> I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law to the Missouri Clean Water Commission.			
NAME AND OFFICIAL TITLE (TYPE OR PRINT) Kenneth I Starr, P.E.		TELEPHONE WITH AREA CODE DOE Weldon Spring Site Manager (303) 410-4801	
SIGNATURE <i>Kenneth I. Starr</i>		DATE SIGNED 10/8/12	

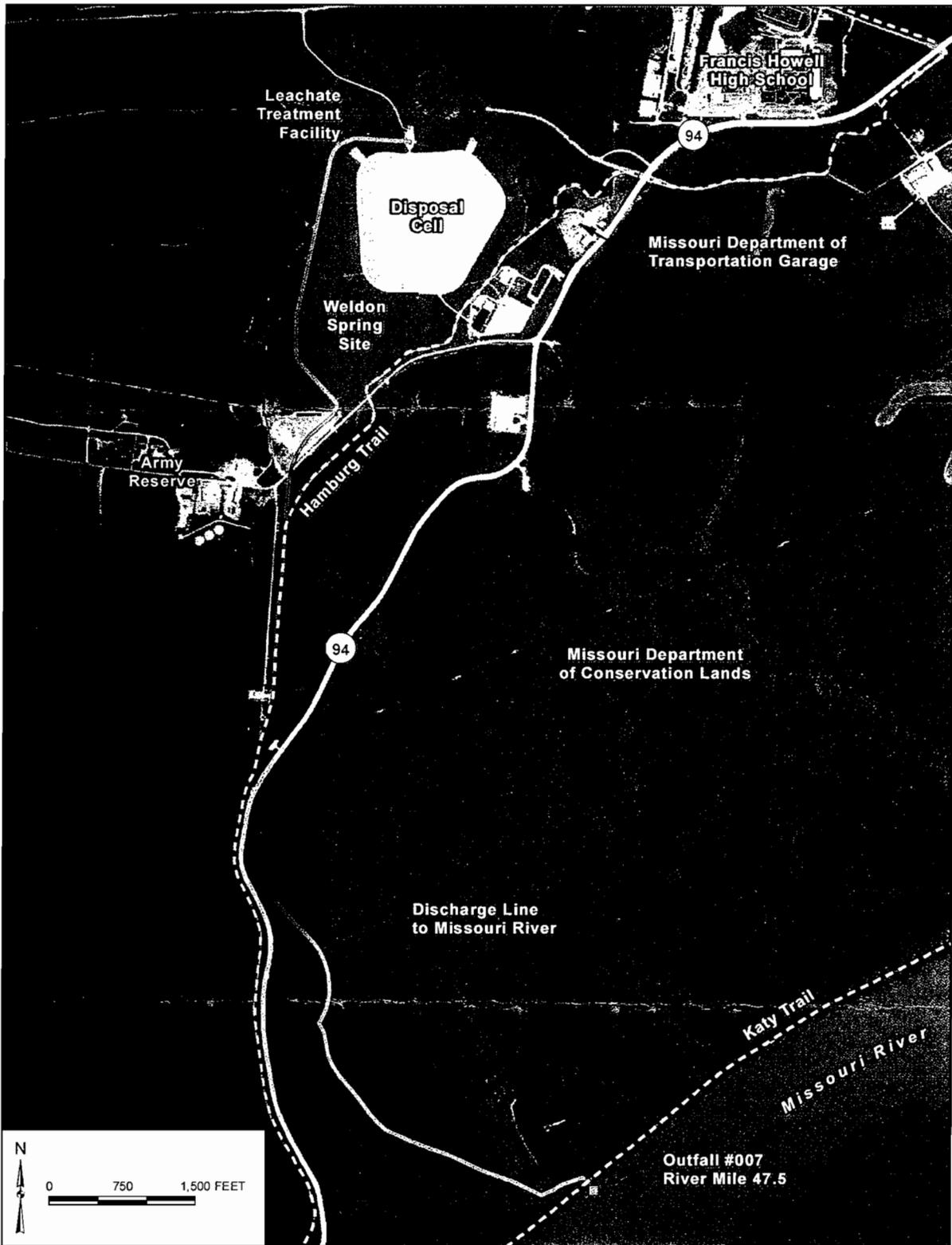
MO 780-1479 (01-09)

**BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.**

Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

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



M:\LTS\1110047\031001\IS09391\IS0939100.mxd coatesc 09/24/2012 3 35 37 PM

OCT 10 2012

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		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												
H. Oil and Grease		X												
I. Phosphorus (as P) Total (7723-14-0)	X		50.6				6.397		8	mg/L				
J. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X		70.0				54.9		9	mg/L				
K. Sulfide (as S)		X												
L. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum Total (7429-90-5)		X												
O. Barium Total (7440-39-3)	X		0.843					0.639	9	mg/L				
P. Boron Total (7440-42-8)		X												
Q. Cobalt Total (7440-48-4)		X												
R. Iron Total (7439-89-6)	X		8.96					3.407	9	mg/L				
S. Magnesium Total (7439-95-4)	X		60.9					55.45	2	mg/L				
T. Molybdenum Total (7439-98-7)		X												
U. Manganese Total (7439-96-5)	X		0.896					0.573	9	mg/L				
V. Tin Total (7440-31-5)		X												
W. Titanium Total (7440-32-6)		X												

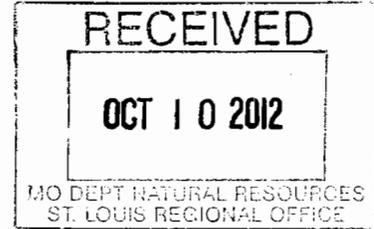
1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS			5. INTAKE (optional)				
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>METALS, AND TOTAL PHENOLS</b>														
1M. Antimony, Total (7440-36-9)		X												
2M. Beryllium, Total (7440-41-7)		X												
3M. Magnesium, Total (7439-95-4)	X		60.9			55.45			2	mg/L				
4M. Molybdenum, Total (7439-98-7)		X												
5M. Tin, Total (7440-31-5)		X												
6M. Titanium, Total (7440-32-6)		X												
7M. Mercury, Total (7439-97-6)		X												
8M. Selenium, Total (7782-49-2)		X												
9M. Thallium, Total (7440-28-0)		X												
10M. Phenols, Total		X												
<b>RADIOACTIVITY</b>														
(1) Alpha Total	X		23.3			19.12			5	pCi/L				
(2) Beta Total	X		13.3			9.78			5	pCi/L				
(3) Radium Total	X		2.369			1.392			9	pCi/L				
(4) Radium 226 Total	X		0.859			0.504			9	pCi/L				



**Department of Energy**

Washington, DC 20585

October 3, 2012



Ms. Dorothy Franklin  
Missouri Department of Natural Resources  
St. Louis Regional Office  
7545 S. Lindbergh, Suite 210  
St. Louis, MO 63125

Dear Ms. Franklin:

**NPDES PERMIT MO-0107701 RENEWAL APPLICATION**

The application to renew NPDES permit MO-0107701 for the U.S. Department of Energy's Weldon Spring site is enclosed. The permit is due for renewal on April 24, 2013. Wastewater at the site consists almost entirely of leachate from the closed, onsite disposal cell. The water is currently pretreated prior to transportation to the Metropolitan St. Louis Sewer District (MSD) Bissell Point Sewage Treatment Plant under a special approval from MSD. There have been no discharges to the receiving stream, and no discharge is expected in the foreseeable future.

The currently permitted design flow rate is 25,000 gallons per day based on the maximum storage volume available onsite to store leachate that could be discharged in one day. The actual flow from the disposal cell to the storage sump has decreased from an average of 120 gallons per day for 2008, the first year of the current permit, to 93 gallons per day for 2011. The flow averaged approximately 91 gallons per day for September 2011 through August 2012 and is expected to continue to decrease.

The enclosed analytical data on Form C is from analysis of raw, untreated leachate.

If you have any questions, please contact me at (303) 410-4801 or at [ken.starr@lm.doe.gov](mailto:ken.starr@lm.doe.gov), or Randy Thompson at (636)300-2640 or [randy.thompson@lm.doe.gov](mailto:randy.thompson@lm.doe.gov), if you have any questions. Send any correspondence to:

U.S. Department of Energy  
Office of Legacy Management  
11025 Dover Street, Suite 1000  
Westminster, CO 80021-5573

Sincerely,

Kenneth I. Starr, PE  
DOE Weldon Spring  
Site Manager



Ms. Dorothy Franklin

Page 2

cc:

M. Lutz, Stoller

T. Uhlmeyer, Stoller

T. Welton, Stoller

P. Anderson, MDNR

File: WEL 1415.10(B)