STATE OF MISSOURI

# DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

# MISSOURI STATE OPERATING PERMIT

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

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|---|---|
| Permit No. | MO-0133221 |
| Owner: | The Doe Run Resources Corporation d/b/a The Doe Run Company |
| Address: | Iron County Road #1, Building 1, Viburnum, MO 65566 |
| Continuing Authority: | Same as above |
| Address: | Same as above |
| Facility Name: | Indian Creek Mine Tailings Site |
| Facility Address: | Highway 185 (8.5 Miles NW of), Potosi, MO 63664 |
| Legal Description: | NW ¼, SW ¼, Sec. 27, T39N, R01W, Washington County |
| UTM Coordinates: | Outfall #003: X= 682566, Y= 4215451 |
| Receiving Stream: | Tributary to Pinery Creek |
| First Classified Stream and ID: | 8-20-13 MUDD V1.0 (C) WBID #3960 |
| USGS Basin & Sub-watershed No.: | USGS HUC12 # Upper Indian Creek 07140102-0601 |

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

## FACILITY DESCRIPTION

Inactive mine, SIC# 1031, inactive lead mine and mill with residual mine tailings on the site exposed to stormwater. This permit does not authorize discharges from active mining activities.

Outfall #002 – Removed. The compliance point for this permit is now outfall #003, as the receiving stream is now classified.

Outfall #003 – Remediation activities being performed by EPA include placing soil removed from residential yards which exceed the residential lead standard, to cover the mine tailings. The topography and grading is such that all stormwater is routed to outfall #003. This permit merges with permit MO-0136654, which is now terminated. The flow from outfall #001 of that permit now flows to outfall #003 in this permit.

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.

August 1, 2018
Effective Date

Edward B. Galbraith, Director, Division of Environmental Quality

June 30, 2023
Expiration Date

Chris Wieberg, Director, Water Protection Program

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

**OUTFALL #003**
*Stormwater Only*

**TABLE A-1**
**INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective on **August 1, 2018** and remain in effect through **July 31, 2020**. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

| EFFLUENT PARAMETERS | UNITS | INTERIM LIMITATIONS | | BENCH-MARKS | MONITORING REQUIREMENTS | |
|---|---|---|---|---|---|---|
| | | DAILY MAXIMUM | MONTHLY AVERAGE | | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| PHYSICAL | | | | | | |
| Flow | MGD | * | | - | once/quarter ◊ | 24 hr. estimate |
| Precipitation | inches | * | | - | once/quarter ◊ | measured |
| CONVENTIONAL | | | | | | |
| pH Ω | SU | 6.5 to 9.0 | | - | once/quarter ◊ | grab ∞ |
| Settleable Solids | mL/L/hr | 2.5 | | - | once/quarter ◊ | grab ∞ |
| Total Suspended Solids | mg/L | * | | - | once/quarter ◊ | grab ∞ |
| METALS | | | | | | |
| Cadmium, Total Recoverable | µg/L | 12.5 | | - | once/quarter ◊ | grab ∞ |
| Copper, Total Recoverable | µg/L | * | | - | once/quarter ◊ | grab ∞ |
| Lead, Total Recoverable | µg/L | 253 | | - | once/quarter ◊ | grab ∞ |
| Zinc, Total Recoverable | µg/L | 255 | | - | once/quarter ◊ | grab ∞ |
| MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2018. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS. | | | | | | |
| OTHER | | | | | | |
| Whole Effluent Toxicity, Acute Φ | $TU_a$ | 1.0 | | | once/year | grab ∞ |
| MONITORING REPORTS SHALL BE SUBMITTED YEARLY; THE FIRST REPORT IS DUE JANUARY 28, 2020. | | | | | | |

**OUTFALL #003**
*Stormwater Only*

**TABLE A-2**
**FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

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 **August 1, 2020** 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 | FINAL LIMITATIONS | | BENCH-MARKS | MONITORING REQUIREMENTS | |
|---|---|---|---|---|---|---|
| | | DAILY MAXIMUM | MONTHLY AVERAGE | | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| PHYSICAL | | | | | | |
| Flow | MGD | * | | - | once/quarter ◊ | 24 hr. estimate |
| Precipitation | inches | * | | - | once/quarter ◊ | measured |
| CONVENTIONAL | | | | | | |
| pH Ω | SU | 6.5 to 9.0 | | - | once/quarter ◊ | grab ∞ |
| Settleable Solids | mL/L/hr | 2.5 | | - | once/quarter ◊ | grab ∞ |
| Total Suspended Solids | mg/L | * | | - | once/quarter ◊ | grab ∞ |
| METALS | | | | | | |
| Cadmium, Total Recoverable | µg/L | 12.5 | | - | once/quarter ◊ | grab ∞ |
| Copper, Total Recoverable | µg/L | 32.3 | | - | once/quarter ◊ | grab ∞ |
| Lead, Total Recoverable | µg/L | 253 | | - | once/quarter ◊ | grab ∞ |
| Zinc, Total Recoverable | µg/L | 255 | | - | once/quarter ◊ | grab ∞ |
| MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2020. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS. | | | | | | |
| OTHER | | | | | | |
| Whole Effluent Toxicity, Acute Φ | $TU_a$ | 1.0 | | | once/year | grab ∞ |
| MONITORING REPORTS SHALL BE SUBMITTED YEARLY; THE FIRST REPORT IS DUE JANUARY 28, 2021. | | | | | | |

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

* Monitoring requirement only.

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

∞ 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.

Φ See Special Condition #1

◊ Quarterly sampling

**MINIMUM QUARTERLY SAMPLING REQUIREMENTS**

| QUARTER | MONTHS | QUARTERLY EFFLUENT PARAMETERS | REPORT IS DUE |
|---|---|---|---|
| First | January, February, March | Sample at least once during any month of the quarter | April 28th |
| Second | April, May, June | Sample at least once during any month of the quarter | July 28th |
| Third | July, August, September | Sample at least once during any month of the quarter | October 28th |
| Fourth | October, November, December | Sample at least once during any month of the quarter | January 28th |

B. SCHEDULE OF COMPLIANCE

Schedules of compliance are allowed per 40 CFR 122.47. The facility shall attain compliance with final effluent limitations established in this permit as soon as reasonably achievable:

1. Within six months of the effective date of this permit, the permittee shall report progress made in attaining compliance with the final effluent limits.

2. The permittee shall submit interim progress reports detailing progress made in attaining compliance with the final effluent limits every 12 months from effective date. The first report is due August 1, 2019.

3. Within 2 years of the effective date of this permit, the permittee shall attain compliance with the final effluent limits at outfall #003, for total recoverable copper.

Please submit progress reports via the electronic reporting system.

C. 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.

D. SPECIAL CONDITIONS

1. Acute Whole Effluent Toxicity (WET) tests shall be conducted as follows:
   (a) Freshwater Species and Test Methods: Species and short-term test methods for estimating the acute toxicity of NPDES effluents are found in the most recent edition of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012; Table IA, 40 CFR Part 136). The permittee shall concurrently conduct 48-hour, static, non-renewal toxicity tests with the following species:
      - The fathead minnow, *Pimephales promelas* (Acute Toxicity EPA Test Method 2000.0).
      - The daphnid, *Ceriodaphnia dubia* (Acute Toxicity EPA Test Method 2002.0).
   (b) Chemical and physical analysis of the upstream control sample 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. Where upstream receiving water is not available or known to be toxic, other approved control water may be used.
   (c) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.
   (d) The Allowable Effluent Concentration (AEC) is 100% with; the dilution series is: 100%, 50%, 25%, 12.5%, and 6.25%.
   (e) All chemical and physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% effluent concentration.

D. SPECIAL CONDITIONS (CONTINUED)

(f) The facility must submit a full laboratory report for all toxicity testing. The report must include a quantification of acute toxic units ($TU_a = 100/LC_{50}$) reported according to the test methods manual chapter on report preparation and test review. The Lethal Concentration 50 Percent ($LC_{50}$) is the effluent concentration that would cause death in 50 percent of the test organisms at a specific time.

(g) Accelerated Testing Trigger: If the regularly scheduled acute WET test exceeds the $TU_a$ limit, the permittee shall conduct accelerated follow-up WET testing as prescribed in the following conditions. Results of the follow-up accelerated WET testing shall be reported in $TU_a$. This permit requires the following additional toxicity testing if any one test result exceeds a $TU_a$ limit.

(1) A multiple dilution test shall be performed for both test species within 60 calendar days of becoming aware the regularly scheduled WET test exceeded a $TU_a$ limit, and each dischcarge event thereafter until one of the following conditions are met:

i. Three consecutive multiple-dilution tests are below the $TU_a$ limit. No further tests need to be performed until next regularly scheduled test period.

ii. A total of three multiple-dilution tests exceed the $TU_a$ limit.

(2) Follow-up tests do not negate an initial test result.

(3) The permittee shall submit a summary of all accelerated WET test results for the test series along with complete copies of the laboratory reports as received from the laboratory within 14 calendar days of the availability of the third test exceeding a $TU_a$ limit.

(h) TIE/TRE Trigger: The following shall apply upon the exceedance of the $TU_a$ limit in three accelerated follow-up WET tests. The permittee should contact the Department 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 Department upon the third follow up test exceeding a $TU_a$ limit, 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 within 60 calendar days of the date of the automatic trigger or the Department's direction to perform either a TIE or TRE. The plan shall be based on EPA Methods and include a schedule for completion. This plan must be approved by the Department before the TIE or TRE is begun.

2. Electronic Discharge Monitoring Report (eDMR) Submission System

(a) Discharge Monitoring Reporting Requirements. The permittee must electronically submit compliance monitoring data via the eDMR system. In regards to Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit.

(b) Programmatic Reporting Requirements. The following reports (if required by this permit) must be electronically submitted as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data:

Any additional report required by the permit excluding bypass reporting.

After such a system has been made available by the Department, required data shall be directly input into the system by the next report due date.

(c) Other actions. The following shall be submitted electronically after such a system has been made available by the Department:

(1) General Permit Applications/Notices of Intent to discharge (NOIs);

(2) Notices of Termination (NOTs);

(3) No Exposure Certifications (NOEs);

(4) Low Erosivity Waivers and Other Waivers from Stormwater Controls (LEWs); and

(5) Bypass reporting.

(d) Electronic Submissions. To access the eDMR system, use the following link in your web browser: https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx.

(e) Waivers from Electronic Reporting. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the department in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: http://dnr.mo.gov/forms/780-2692-f.pdf. The Department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period that the approved electronic reporting waiver is effective.

3. The purpose of the Stormwater Pollution Prevention Plan (SWPPP) and the Best Management Practices (BMPs) listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective 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.

D. SPECIAL CONDITIONS (CONTINUED)

4. The facility's SIC code(s) or description is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2) hence shall implement a SWPPP which 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 every five years or as site conditions change (see Part III: Antidegradation Analysis and SWPPP sections in the fact sheet). 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: *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in February 2009 (www.epa.gov/npdes/pubs/industrial_swppp_guide.pdf). The SWPPP must include:
   (a) A listing of specific contaminants and their control measures (or BMPs) and a narrative explaining how BMPs are implemented to control and minimize the amount of contaminants potentially entering stormwater.
   (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. Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
      i. Operational deficiencies must be corrected within seven (7) calendar days.
      ii. Minor structural deficiencies must be corrected within fourteen (14) calendar days.
      iii. Major structural deficiencies must be reported to the regional office within seven (7) days of discovery. The initial report shall consist of the deficiency noted, the proposed remedies, the interim or temporary remedies (including the general timing of the placement of the interim measures), and an estimate of the timeframe needed to wholly complete the repairs or construction. The permittee will work with the regional office to determine the best course of action, including but not limited to temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
      iv. All actions taken to correct the deficiencies shall be included with the written report, including photographs.
      v. 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 and EPA 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.

5. 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. Any spills should be noted in the SWPPP if a SWPPP is required.
   (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
   (f) Ensure adequate provisions are provided to prevent and to protect embankments from erosion.

6. To protect the general criteria found at 10 CSR 20-7.031(4), before releasing water accumulated in secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen. If the presence of odor or sheen is indicated, the water shall be treated using an appropriate method or disposed of in accordance with legally approved methods, such as being sent to a wastewater treatment facility. Following treatment, the water shall be tested for oil and grease, benzene, toluene, ethylbenzene, and xylene using 40 CFR part 136 methods. All pollutant levels must be below the most protective, applicable standards for the receiving stream, found in 10 CSR 20-7.031 Table A. Records of all testing and treatment of water accumulated in secondary containment shall be stored in the SWPPP to be available on demand to Department and EPA personnel.

7. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with §644.051.16, RSMo, and the CWA section 402(k); however, this permit may be reopened and modified, or alternatively revoked and reissued to 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 contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or controls any pollutant not limited in the permit.

D. SPECIAL CONDITIONS (CONTINUED)

8. All outfalls and permitted features must be clearly marked in the field.

9. 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).

10. Report as no-discharge when a discharge does not occur during the report period. It is a violation of this permit to report no-discharge when a discharge has occurred.

11. 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) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for that parameter.
   (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
   (f) When calculating monthly averages, one-half of the minimum detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the "<MDL" shall be reported as indicated in item (C).

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

# MISSOURI DEPARTMENT OF NATURAL RESOURCES
# FACT SHEET
# FOR THE PURPOSE OF RENEWAL
# OF
# MO-0133221
# INDIAN CREEK MINE TAILINGS 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 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)(A)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: Categorical Industrial
Facility SIC Code(s): 1031
Facility NAICS Code: 212230 – copper, nickel, lead, and zinc mining
Application Date: 08/07/2013
Modification Date: 08/19/2011
Expiration Date: 02/12/2014
Inspection: 06/06/2013

**FACILITY DESCRIPTION:**
Inactive mine, SIC# 1031, inactive lead mine and mill with residual mine tailings on the site exposed to stormwater. Remediation activities being performed by EPA include placing soil removed from residential yards which exceed the residential lead standard, to cover the mine tailings. The topography and grading is such that all stormwater is routed to outfall #003. This permit includes stormwater form outfall #001 from MO-0136654. The previous permit's outfall #002 was removed as the stream is now classified, outfall #002 was 0.9 miles downstream of new outfall #003; this outfall is located just before it enters the newly classified stream.

**PERMITTED FEATURES TABLE:**

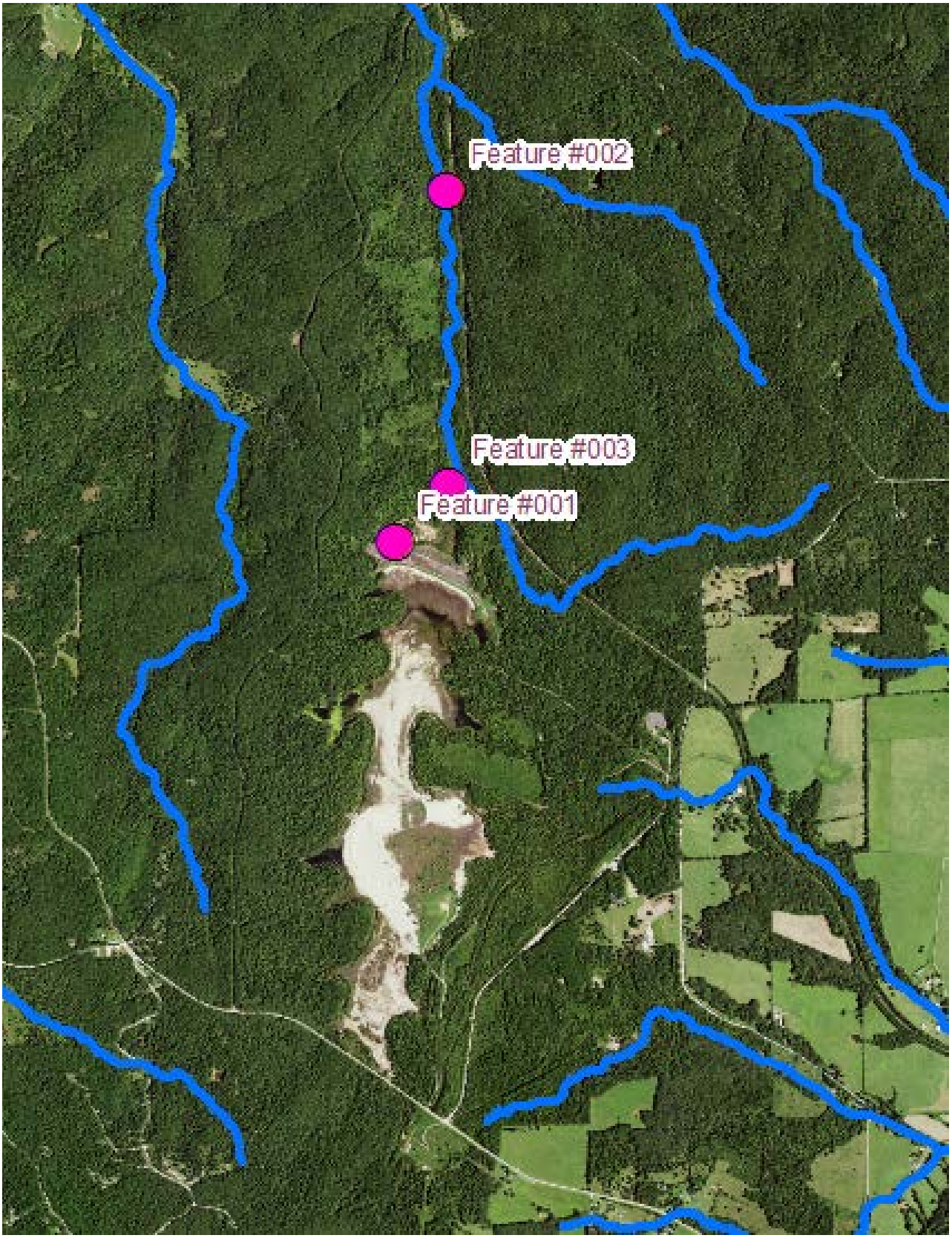
| OUTFALL | AVERAGE FLOW | MAXIMUM FLOW | TREATMENT LEVEL | EFFLUENT TYPE |
|---|---|---|---|---|
| #003 | 0.8 MGD | 9.5 MGD | Best Management Practices | Stormwater |

Average flows estimated based on flows reported from outfall #002. Maximum flow was obtained from the second quarter 2013 event at outfall #002.

**FACILITY PERFORMANCE HISTORY & COMMENTS:**
The electronic discharge monitoring reports were reviewed for the last five years for both permits. There were no permit limit exceedances except for WET tests at outfall #001 in permit MO-0136654. However, the permit writer has noted that the outfall #002 received significant dilution from the stream. The facility was inspected in June of 2013; and the facility was in compliance.

**MAJOR WATER USER:**
Any surface or groundwater user with a water source and the equipment necessary to withdraw or divert 100,000 gallons (or 70 gallons per minute) or more per day combined from all sources from any stream, river, lake, well, spring, or other water source is considered a major water user in Missouri. All major water users are required by law to register water use annually (Missouri Revised Statues Chapter 256.400 Geology, Water Resources and Geodetic Survey Section). https://dnr.mo.gov/pubs/pub2337.htm
✓ Not applicable; this permittee cannot withdraw water from the state in excess of 70 gpm/0.1 MGD.

**FACILITY MAP:**



## Part II. RECEIVING WATERBODY INFORMATION

**RECEIVING WATER BODY'S WATER QUALITY:**
The receiving waterbody has no concurrent water quality data available

**303(D) LIST:**
Section 303(d) of the federal Clean Water Act requires each state identify waters 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 impaired waters 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.

**TOTAL MAXIMUM DAILY LOAD (TMDL):**
A TMDL is a calculation of the maximum amount of a given pollutant that a water body 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 or TMDL may be developed. The TMDL shall include the WLA calculation. http://dnr.mo.gov/env/wpp/tmdl/
✓ Not applicable; this facility is not associated with a TMDL.

**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: ☒

- The previous permit placed the main compliance point for the permit at outfall #002 which was 0.9 miles downstream of the new outfall #003 which is the current compliance point in this permit. The compliance point therefore monitored the stream concentrations of the pollutants contained in this permit. Because this is a newly classified stream, the compliance point for the mine tailings discharge must be before the discharge enters a classified stream.

**RECEIVING WATERBODY TABLE:**

| OUTFALL | WATERBODY NAME | CLASS | WBID | DESIGNATED USES* | DISTANCE TO SEGMENT | 12-DIGIT HUC |
|---|---|---|---|---|---|---|
| #003 | Tributary to Pinery Creek 8-20-13 MUDD V1.0 | C | 3960 | HHP, IRR, LWW, SCR, WBC-B, WWH (AQL) | 0 mi | Upper Indian Creek 07140102-0601 |

n/a not applicable
WBID = Waterbody IDentification: 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
* 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 1st classified receiving stream's beneficial water uses to be maintained are in the receiving stream table in accordance with [10 CSR 20-7.031(1)(C)].

Uses which may be found in the receiving streams table, above:
10 CSR 20-7.031(1)(C)1.:
**AQL** = Protection of aquatic life (Current narrative use(s) are defined to ensure the protection and propagation of fish shellfish and wildlife, which is further subcategorized as: WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat. This permit uses AQL effluent limitations in 10 CSR 20-7.031 Table A for all habitat designations unless otherwise specified.)
10 CSR 20-7.031(1)(C)2.: Recreation in and on the water
WBC = Whole Body Contact recreation where the entire body is capable of being submerged;
**WBC-A** = Whole body contact recreation supporting swimming uses and has public access;
**WBC-B** = Whole body contact recreation supporting swimming;
**SCR** = Secondary Contact Recreation (like fishing, wading, and boating).
10 CSR 20-7.031(1)(C)3. to 7.:
**HHP** (formerly HHF) = Human Health Protection as it relates to the consumption of fish;
**IRR** = Irrigation for use on crops utilized for human or livestock consumption;
**LWW =** Livestock and wildlife watering (Current narrative use is defined as LWP = Livestock and Wildlife Protection);
**DWS** = Drinking Water Supply;
**IND** = Industrial water supply

10 CSR 20-7.031(1)(C)8-11.: Wetlands (10 CSR 20-7.031 Table A currently does not have corresponding habitat use criteria for these defined uses)
WSA = Storm- and flood-water storage and attenuation; WHP = Habitat for resident and migratory wildlife species;
WRC = Recreational, cultural, educational, scientific, and natural aesthetic values and uses; WHC = Hydrologic cycle maintenance.
10 CSR 20-7.031(6): GRW = Groundwater

**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:**
Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(l)] require a reissued permit to be as stringent as the previous permit with some exceptions. Backsliding (a less stringent permit limitation) is only allowed under certain conditions.

- ✓ Limitations in this operating permit for the reissuance conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.
  - ✓ The Department determined 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 #002 were established in error, based on limits process wastewater, however, outfall #003 (the new compliance point for this facility) is a stormwater-only outfall. This renewal establishes limits and benchmarks appropriate for stormwater discharges. 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 and required corrective actions within this permit are protective of the receiving stream's uses to be maintained. Monthly averages were not implemented for outfall #003 in this permit as the discharge consists of only stormwater which is not continuous pursuant to 40 CFR 122.45(d). Further, average monthly limitations are impracticable measures of non-continuous stormwater discharges because they vary widely in frequency, magnitude, and duration. This permit applies only acute short-term or daily maximum measures which represent stormwater discharges which are acute and sporadic in nature. Discharges of industrial stormwater rarely persist for long durations, making them impracticable to assess using measures with long term exposures or averaging periods. Last, the instream water quality target remains unchanged and the conditions of this permit are protective of both narrative and numeric water quality criteria.
    - The previous permit contained a specific set of prohibitions related to general criteria found in 10 CSR 20-7.031(4); however, there was no determination as to whether the discharges have reasonable potential to cause or contribute to excursion of those general water quality standards in the previous permit. Federal regulations 40 CFR 122.44(d)(1)(iii) requires that in instances were reasonable potential (RP) to cause or contribute to an exceedance of a water quality standard exists, a numeric limitation must be included in the permit. Rather than conducting the appropriate RP determination and establishing numeric effluent limitations for specific pollutant parameters, the previous permit simply placed the prohibitions in the permit. These conditions were removed from the permit. Appropriate reasonable potential determinations were conducted for each general criterion listed in 10 CSR 20-7.031(4) and effluent limitations were placed in the permit for those general criteria where it was determined the discharge had reasonable potential to cause or contribute to excursions of the general criteria. Specific effluent limitations were not included for those general criteria where it was determined that the discharges will not cause or contribute to excursions of general criteria. Removal of the prohibitions does not reduce the protections of the permit or allow for impairment of the receiving stream. The permit maintains sufficient effluent limitations, monitoring requirements and best management practices to protect water quality.
  - ✓ Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) which would have justified the application of a less stringent effluent limitation.
    - Five years of data were available to the permit writer and support elevated effluent limitations. When calculating site specific limitations for outfall #003 for hardness dependent metals (cadmium, lead, and zinc) were recalculated based on in-stream data supplied with outfall #002 data. The hardness data show the 25$^{th}$ percentile of the stream is 243 mg/L whereas 198 mg/L was used in the last permit.

**ANTIDEGRADATION REVIEW:**
For process water discharge with new, altered, or expanding discharges, the Department is to document, by means of antidegradation review, if the use of a water body's available assimilative capacity is justified. In accordance with Missouri's water quality regulations for antidegradation [10 CSR 20-7.031(3)], degradation may be justified by documenting the socio-economic importance of a discharge after determining the necessity of the discharge. Facilities must submit the antidegradation review request to the Department prior to establishing, altering, or expanding discharges. See http://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm

✓ Not applicable; the facility has not submitted information proposing expanded or altered process water discharge; no further degradation proposed therefore no further review necessary.

For stormwater discharges with new, altered, or expanding discharges, the stormwater BMP chosen for the facility, through the antidegradation analysis performed by the facility, must be implemented and maintained at the facility. Failure to implement and maintain the chosen BMP alternative is a permit violation; see SWPPP.

✓ Applicable; the facility must review and maintain stormwater BMPs as appropriate.

**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 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 limitations of the permit.

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 only outfalls will generally 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 inspections of the stormwater BMPs occur monthly, facilities with no compliance issues are usually expected to sample stormwater quarterly.

Numeric benchmark values are based on water quality standards or other stormwater permits including guidance forming the basis of Environmental Protection Agency's (EPA's) *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* (MSGP). 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.

✓ Not applicable.

**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.

**EFFLUENT LIMITATION GUIDELINE:**
Effluent Limitation Guidelines, or ELGs, are found at 40 CFR 400-499. These are limitations established by the EPA based on the SIC code and the type of work a facility is conducting. Most ELGs are for process wastewater and some address stormwater. All are technology based limitations which must be met by the applicable facility at all times.

✓ The facility would have an associated ELG (40 CFR 440) but is not currently operating an active mine therefore this ELG does not apply.

**GROUNDWATER MONITORING:**
Groundwater is a water of the state according to 10 CSR 20-7.015(1)11, and is subject to regulations at 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 for the water protection program.

**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 causing or have the reasonable potential to cause (or contribute to) an in-stream excursion above narrative or numeric water

quality standards. If the permit writer determines any given 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 [40 CFR Part 122.44(d)(1)(iii)].

- ✓ Not applicable; an RPA was not conducted for this facility. This permit establishes permit limits for stormwater. The Department has determined stormwater is not a continuous discharge and is therefore not necessarily dependent on mathematical RPAs. However, the permit writer completed an RPD, a reasonable potential determination, using best professional judgment for all of the appropriate parameters in this permit. An RPD consists of reviewing application data and/or discharge monitoring data for the last five years and comparing those data to narrative or numeric water quality criteria.
- ✓ The RPD consisted of examining the sampling performed in the newly classified stream at outfall #002 and comparing each data point to the discharge from outfall #001. The data show some dilution occurs during small storm events but storm events causing high flows from the site do not provide enough dilution in-stream where standard CCC of the metals are then exceeded. At this time, until discharges at outfall #003 have been established as not toxic to the stream at all flows, the permit writer has determined limits are appropriate. This permit continues whole effluent toxicity testing at outfall #003 to better classify the stormwater from the site.
- ✓ Permit writers use the Department's permit writer's manual (http://dnr.mo.gov/env/wpp/permits/manual/permit-manual.htm), the EPA's permit writer's manual (https://www.epa.gov/npdes/npdes-permit-writers-manual), program policies, and best professional judgment. For each parameter in each permit, the permit writer carefully considers all applicable information regarding: technology based effluent limitations, effluent limitation guidelines, water quality standards, stream flows and uses, and all applicable site specific information and data gathered by the permittee through discharge monitoring reports and renewal (or new) application sampling. Best professional judgment is based on the experience of the permit writer, cohorts in the Department and resources at the EPA, research, and maintaining continuity of permits if necessary. For stormwater permits, the permit writer is required per 10 CSR 6.200(6)(B)2 to consider: A. application and other information supplied by the permittee; B. effluent guidelines; C. best professional judgment of the permit writer; D. water quality; and E. BMPs. Part V provides specific decisions related to this permit.

**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.

- ✓ Applicable; the time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(12)]. The facility has been given a schedule of compliance to meet final effluent limits for total recoverable copper at outfall #003. Time is required to monitor the parameter at the new location and determine what Best Management Practices will mitigate the discharge.

**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

**SLUDGE – DOMESTIC BIOSOLIDS:**

Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for beneficial use (i.e. fertilizer). Sewage sludge is solid, semi-solid, 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 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: http://extension.missouri.edu/main/DisplayCategory.aspx?C=74 (WQ422 through WQ449).

- ✓ Not applicable; the permittee did not demonstrate this condition was applicable to this permit.

**SLUDGE – INDUSTRIAL:**

Industrial sludge is solid, semi-solid, 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; the permittee did not demonstrate this condition was applicable to this permit.

**STORMWATER PERMITTING:**

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

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

Sufficient rainfall to cause a discharge for one hour or more from a facility would not necessarily cause significant flow in a receiving stream. Acute WQSs are based on a one hour of exposure, and must be protected at all times in unclassified streams, and within mixing zones of class P streams [10 CSR 20-7.031(4) and (5)(4)4.B.]. Therefore, industrial stormwater facilities with toxic contaminants do have the potential to cause a violation of acute WQSs if those toxic contaminants occur in sufficient amounts.

It is due to the items stated above staff are unable to perform statistical Reasonable Potential Analysis (RPA). However, staff will use their best professional judgment in determining if a facility has a potential to violate Missouri's Water Quality Standards.

**STORMWATER POLLUTION PREVENTION PLAN (SWPPP):**
In accordance with 40 CFR 122.44(k), Best Management Practices (BMPs) must be used 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 waters of the state from a permitted facility. 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.

A SWPPP must be prepared by the permittee if the SIC code is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2). A SWPPP may be required of other facilities where stormwater has been identified as necessitating better management. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream pollution from stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged 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 or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

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 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.

For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. For further guidance, consult the antidegradation implementation procedure (http://dnr.mo.gov/env/wpp/docs/AIP050212.pdf).

Alternative Analysis (AA) evaluation of the BMPs is a structured evaluation of BMPs that are reasonable and cost effective. The AA evaluation should include practices that are designed to be: 1) non-degrading; 2) less degrading; or 3) degrading water quality. The glossary of AIP defines these three terms. The chosen BMP will be the most reasonable and effective management strategy while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The AA evaluation must demonstrate why "no discharge" or "no exposure" is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and *Antidegradation Implementation Procedure* (AIP), Section II.B.

If parameter-specific numeric exceedances continue to occur and the permittee feels there are no practicable or cost-effective BMPs which 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 this facility.

**TECHNOLOGY-BASED EFFLUENT LIMITATIONS (TBEL):**

One of the major strategies of the Clean Water Act (CWA) in making "reasonable further progress toward the national goal of eliminating the discharge of all pollutants" is to require effluent limitations based on the capabilities of the technologies available to control those discharges. Technology-based effluent limitations (TBELs) aim to prevent pollution by requiring a minimum level of effluent quality attainable using demonstrated technologies for reducing discharges of pollutants or pollution into the waters of the United States. TBELs are developed independently of the potential impact of a discharge on the receiving water, which is addressed through water quality standards and water quality-based effluent limitations (WQBELs).

✓ Not applicable; this facility does not discharge process wastewater therefore is not subject to TBEL POC analysis.

**VARIANCE:**

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 permit is not drafted under premise 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 discharge into the receiving stream without endangering water quality. Two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs) are reviewed. If one limit does not provide adequate protection for the receiving waters, then the other must be used.

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

$$C = \frac{(Cs \times Qs) + (Ce \times Qe)}{(Qe + Qs)}$$ (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 designated as daily maximum limits (MDL) 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 designated as monthly average limits (AML) 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 MDL and AML 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; 3/1991.
- 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 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 to determine discharges from the facility cause 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 the provisions in 10 CSR 20-6 and the Water Quality Standards in 10 CSR 20-7 are being met. Under 10 CSR 20-6.010(8)(A)4, the Department may require other terms and conditions it deems necessary to assure compliance with the CWA and related regulations of the Missouri Clean Water Commission. The following Missouri Clean Water Laws (MCWL) apply: §644.051.3. requires the Department to set permit conditions complying 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); and §644.051.5. is the basic authority to require testing conditions. WET tests are required by all facilities meeting the following criteria:

- ☐ Facility is a designated a Major
- ☐ Facility continuously or routinely exceeds its design flow
- ☐ Facility that exceeds its design population equivalent (PE) for $BOD_5$ whether or not its design flow is being exceeded
- ☐ Facility (whether primarily domestic or 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 $NH_3$)
- ☐ Facility is a municipality with a Design Flow ≥ 22,500 GPD
- ☒ Other – this facility has demonstrated the stormwater coming from this site has toxic characteristics.

## Part IV. EFFLUENT LIMITS DETERMINATION

Effluent limitations derived and established for this permit are based on current operations of the facility. Effluent means both process water and stormwater. Any flow through the outfall is considered a discharge and must be sampled and reported as provided below. 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. Daily maximums and monthly averages are required under 40 CFR 122.45(d)(1) for continuous discharges not from a POTW.

**GENERAL CRITERIA CONSIDERATIONS:**

In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into permits for pollutants which have been determined to cause, have the reasonable potential to cause, or to contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The rule further states pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above a narrative criterion within an applicable State water quality standard, the permit shall contain a numeric effluent limitation to protect that narrative criterion. The previous permit included the narrative criteria as specific prohibitions placed upon the discharge. These prohibitions were included in the permit absent any discussion of the discharge's reasonable potential to cause or contribute to an excursion of the criterion. In order to comply with this regulation, the permit writer has completed a reasonable potential determination on whether the discharge has reasonable potential to cause, or contribute to an excursion of the general criteria listed in 10 CSR 20-7.031(4). These specific requirements are listed below followed by derivation and discussion (the lettering matches that of the rule itself, under 10 CSR 20-7.031(4)). In instances where reasonable potential exists, the permit includes numeric limitations to address the reasonable potential. In instances where reasonable potential does not exist the permit includes monitoring of the discharges potential to impact the receiving stream's narrative criteria. Finally, all of the previous permit narrative criteria prohibitions have been removed from the permit given they are addressed by numeric limits where reasonable potential exists. It should also be noted that Section 644.076.1, RSMo as well as Section D – Administrative Requirements of Standard Conditions Part I of this permit state that it shall be unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri that is 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.

(A) 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.

- For all outfalls, there is no RP for putrescent bottom deposits preventing full maintenance of beneficial uses because nothing disclosed by the permittee at renewal for these outfalls indicates putrescent wastewater would be discharged from the facility.

- For outfall #003, there is RP for unsightly or harmful bottom deposits preventing full maintenance of beneficial uses because the permit writer has determined there is RP per PRD and included limitations for settleable solids.

(B) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses.
- For all outfalls, there is no RP for oil in sufficient amounts to be unsightly preventing full maintenance of beneficial uses because nothing disclosed by the permittee at renewal or during prior sampling for DMR requirements for these outfalls indicates oil will be present in sufficient amounts to impair beneficial uses.
- For all outfalls, there is RP for scum and floating debris in sufficient amounts to be unsightly preventing full maintenance of beneficial uses; see (A).

(C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.
- For all outfalls, there is no RP for unsightly color in sufficient amounts preventing full maintenance of beneficial uses because nothing disclosed by the permittee at renewal for these outfalls indicates unsightly color or turbidity will be present in sufficient amounts to impair beneficial uses.
- For all outfalls, there RP for unsightly turbidity in sufficient amounts preventing full maintenance of beneficial uses; see (A).
- For all outfalls, there is no RP for offensive odor in sufficient amounts preventing full maintenance of beneficial uses because nothing disclosed by the permittee at renewal for these outfalls indicates offensive odor will be present in sufficient amounts to impair beneficial uses.

(D) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life.
- The permit writer considered specific toxic pollutants when writing this permit. Numeric effluent limitations are included for those pollutants that could be discharged in toxic amounts. These effluent limitations are protective of human health, animals, and aquatic life.

(E) There shall be no significant human health hazard from incidental contact with the water.
- It is the permit writer’s opinion this criterion is the same as (D).

(F) There shall be no acute toxicity to livestock or wildlife watering.
- It is the permit writer’s opinion this criterion is the same as (D).

(G) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.
- For all outfalls, there is no RP for physical changes that would impair the natural biological community because nothing disclosed by the permittee at renewal for these outfalls indicates physical changes that would impair the natural biological community.
- For outfall #003, there is RP for chemical changes that would impair the natural biological community because DMR data and sampling for permit renewal show RPD for cadmium, copper, lead, and zinc therefore limits are imposed for these parameters; limitations on WET testing provide protection for any synergistic effects discharged pollutants may incur.
- For all outfalls, there is no RP for hydrologic changes that would impair the natural biological community because nothing disclosed by the permittee at renewal for these outfalls indicates hydrologic changes that would impair the natural biological community.

(H) 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.
- There are no solid waste disposal activities or any operation that has reasonable potential to cause or contribute to the materials listed above being discharged through any outfall.

## OUTFALL #003 – MAIN FACILITY OUTFALL – STORMWATER ONLY

**EFFLUENT LIMITATIONS TABLE:**

| PARAMETERS | UNIT | DAILY MAXIMUM LIMIT | BENCH-MARK | PREVIOUS PERMIT LIMITS | MINIMUM SAMPLING FREQUENCY | MINIMUM REPORTING FREQUENCY | SAMPLE TYPE |
|---|---|---|---|---|---|---|---|
| PHYSICAL | | | | | | | |
| FLOW | MGD | * | - | NEW | ONCE/QUARTER | ONCE/QUARTER | 24 HR. ESTIMATE |
| PRECIPITATION | inches | * | - | NEW | ONCE/QUARTER | ONCE/QUARTER | 24 HR. TOT |
| CONVENTIONAL | | | | | | | |
| pH ǂ | SU | 6.5 TO 9.0 | - | SAME | ONCE/QUARTER | ONCE/QUARTER | GRAB |
| SETTLEABLE SOLIDS | mL/L/hr | 2.5 | - | 2.5, * | ONCE/QUARTER | ONCE/QUARTER | GRAB |
| TSS | mg/L | * | - | NEW | ONCE/QUARTER | ONCE/QUARTER | GRAB |
| METALS | | | | | | | |
| CADMIUM, TR | µg/L | 12.5 | - | 10.6, 5.3 | ONCE/QUARTER | ONCE/QUARTER | GRAB |
| COPPER, TR | µg/L | * | - | I, NEW | ONCE/QUARTER | ONCE/QUARTER | GRAB |
| COPPER, TR | µg/L | 32.3 | - | F, NEW | ONCE/QUARTER | ONCE/QUARTER | GRAB |
| LEAD, TR | µg/L | 253 | - | 210.5, 104.9 | ONCE/QUARTER | ONCE/QUARTER | GRAB |
| ZINC, TR | µg/L | 255 | - | 225.5, 112.4 | ONCE/QUARTER | ONCE/QUARTER | GRAB |
| OTHER | | | | | | | |
| WET, ACUTE | TUa | 1.0 | - | PASS/FAIL | ONCE/YEAR | ONCE/YEAR | GRAB |

| | |
|---|---|
| * | Monitoring requirement only |
| ** | Monitoring with associated benchmark |
| ǂ | Report the minimum and maximum pH values; pH is not to be averaged. |
| NEW | Parameter not established in previous state operating permit. |
| TR | Total Recoverable |
| I | interim limits |
| F | final limits |

**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 estimated flow in millions of gallons per day (MGD).

**Hardness**
Previous permits at outfalls #001 and #002 required hardness monitoring. Requirement not continued per best professional judgment.

**Precipitation**
Monitoring only requirement (new); 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. The facility will provide the 24 hour accumulation value of precipitation from the day of sampling the other parameters. It is not necessary to report all days of precipitation during the quarter because of the readily available on-line data.

**CONVENTIONAL:**

**pH**
6.5 to 9.0 SU. The Water Quality Standard at 10 CSR 20-7.031(5)(E) states water contaminants shall not cause pH to be outside the range of 6.5 to 9.0 standard pH units. Limits continued from previous permit at outfall #002.

**Settleable Solids (SS)**
Monitoring, with a daily maximum limit continued from the previous permit of 2.5 mL/L/hr. The previous permit required a daily maximum limit of 2.5 mL/L/hr and a monthly average of monitoring only at outfall #002. The EPA reported 1 mL/L/hr for all reports, and the permittee reported between 0.1 and 0.2 mL/L/hr for outfall #002. There were no exceedances of this parameter in the previous permit cycle. There is no water quality standard for SS; however, sediment discharges can negatively impact aquatic life. Increased settleable solids are known to interfere with multiple stages of the life cycle in many benthic organisms. For example, they can smother eggs and young or clog the crevasses that benthic organisms use for habitat. Settleable solids are also a valuable indicator parameter. Solids monitoring allows the permittee to identify increases in sediment and solids that may indicate uncontrolled materials leaving the site.

**Total Suspended Solids (TSS)**
Monitoring required; new parameter. There is no water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the permittee to identify increases in TSS that may indicate uncontrolled materials leaving the site. 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. Suspended solids can also be carriers of toxins, which can adsorb to the suspended particles; therefore, total suspended solids are a valuable indicator parameter for other pollution.

**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. Additional use criterion (HHP, DWS, GRW, IRR, or LWW) may also be used as applicable to determine the most protective effluent limit for the stream class and uses. The permit writer used 243 mg/L for hardness which was collected at outfall #002 during the last permit cycle as this represents the 25$^{th}$ percentile of hardness data in the first classified receiving stream.

**Cadmium, Total Recoverable**
Quarterly monitoring continued with daily maximum limits only; previous permit limits at outfall #002 were 10.6 µg/L daily maximum and 5.3 µg/L monthly average. See Part II APPLICABLE DESIGNATIONS OF WATERS OF THE STATE and Part III ANTIBACKSLIDING sections for further information. The facility reported between 1 and 1.4 µg/L at outfall #001, and the permittee reported between 0.1 and 2 µg/L at outfall #002.

| | | |
|---|---|---|
| Acute AQL WQS: | $e^{(1.0166 * \ln 243 - 3.062490)} * (1.136672 - \ln 198 * 0.041838) = 11.291$ | [at Hardness 243] |
| Acute TR WQS: | $11.291 \div 0.907 = 12.450$ | [Total Recoverable Conversion] |
| Acute WLA: | 12.5 µg/L | [WLA=WQS when no mixing] |

**Copper, Total Recoverable**
Quarterly monitoring continued with daily maximum limits only; previous permit was monitoring only. The EPA reported between 2 and 36.1 µg/L at outfall #001, and the permittee reported between 0.86 and 14 µg/L at outfall #002. The permit writer has determined this parameter has RP per RPD; see Part III, REASONABLE POTENTIAL ANALYSIS. A schedule of compliance is allowed; see Part III, SCHEDULE OF COMPLIANCE. Sampling at outfall #002 shows how the facility's stormwater interacts with the receiving stream. While the values at outfall #002 show some dilution further down the stream, the facility is not meeting in-stream water quality standard at the time the stormwater enters the stream, where new outfall #003 is located just at the new "C" stream, therefore the facility has RP for this parameter.

| | | |
|---|---|---|
| Acute AQL WQS: | $e^{(0.9422 * \ln 243 - 1.7003)} * 0.960 = 31.014$ | [at Hardness 243] |
| Acute TR WQS: | $31.014 \div 0.960 = 32.306$ | [Total Recoverable Conversion] |
| Acute WLA: | 32.3 µg/L | [WLA=WQS when no mixing] |

**Lead, Total Recoverable**
Quarterly monitoring continued with daily maximum limits only; previous permit limits at outfall #002 were 210.5 µg/L daily maximum and 104.9 µg/L monthly average. See Part II APPLICABLE DESIGNATIONS OF WATERS OF THE STATE and Part III ANTIBACKSLIDING sections for further information. The EPA reported between 1.2 and 64 µg/L at outfall #001, and the permittee reported between 0.18 and 28.7 µg/L at outfall #002.

| | | |
|---|---|---|
| Acute AQL WQS: | $e^{(1.273 * \ln 243 - 1.460448)} * (1.46203 - \ln 243 * 0.145712) = 167.195$ | [at Hardness 243] |
| Acute TR WQS: | $167.195 \div 0.662 = 252.707$ | [Total Recoverable Conversion] |
| Acute WLA: | 253 µg/L | [WLA=WQS when no mixing] |

**Zinc, Total Recoverable**

Quarterly monitoring continued with daily maximum limits only; previous permit limits at outfall #002 were 225.5 µg/L daily maximum and 112.4 µg/L monthly average. See Part II APPLICABLE DESIGNATIONS OF WATERS OF THE STATE and Part III ANTIBACKSLIDING sections for further information. The EPA reported between 10.8 and 386 µg/L at outfall #001, and the permittee reported between 9.3 and 94.4 µg/L at outfall #002.

| | | |
|---|---|---|
| Acute AQL WQS: | $e^{(0.8473 * \ln 243 + 0.884)} * 0.98 = 249.153$ | [at Hardness 243] |
| Acute TR WQS: | 249.153 ÷ 0.978 = 254.758 | [Total Recoverable Conversion] |
| Acute WLA: | 255 µg/L | [WLA=WQS when no mixing] |

**OTHER:**

**Whole Effluent Toxicity (WET) Test, Acute**

Annual monitoring with 1.0 TUa limit. The permit writer has determined this facility has reasonable potential to cause toxicity in the receiving stream as past WET tests have shown toxicity. The previous permit's toxicity endpoint of mortality is maintained at LC50, however, the permittee will now report in Toxic Units.

WQS: no toxics in toxic amounts [10 CSR 20-7.031(4)(I)2.B.] = 0.3 TUa

Acute WLA: $C_e = ((DF_{cfs} + ZID_{7Q10})\ 0.3 - (ZID_{7Q10} * \text{Background}))/\ DF_{cfs}$

$C_e$ = 0.3 TUa *(no mixing)*

| | | |
|---|---|---|
| $LTA_a$: | 0.3 TUa (0.321) = 0.0963 TUa | [CV = 0.6, 99th Percentile] |
| MDL: | 0.0963 TUa (3.11) = 0.3 TUa | [CV = 0.6, 99th Percentile] |

Where no mixing is allowed the acute criterion must be met at the end of the pipe. However, when using an $LC_{50}$ as the test endpoint, the acute toxicity test has an upper sensitivity level of 100% effluent, or 1.0 TUa. If less than 50% of the test organisms die at 100% effluent, the true $LC_{50}$ value for the effluent cannot be measured, effectively acting as a detection limit. Therefore, when the allowable effluent concentration is 100% a limit of **1.0 TUa** will apply.

The standard Allowable Effluent Concentration (AEC) for facilities discharging to unclassified, Class C, Class P (with default mixing considerations), or lakes [10 CSR 20-7.031(4)(A)4.B.(IV)(b)] is 100%.

The standard dilution series for facilities discharging to unclassified, Class C, Class P (with default mixing considerations), or lakes [10 CSR 20-7.031(4)(A)4.B.(IV)(b)] is 100%, 50%, 25%, 12.5%, & 6.25%.

## Part V. SAMPLING AND REPORTING REQUIREMENTS:

Refer to each outfall's derivation and discussion of limits section to review individual sampling and reporting frequencies and sampling type. Additionally, see Standard Conditions Part I attached at the end of this permit and fully incorporated within.

**ELECTRONIC DISCHARGE MONITORING REPORT (EDMR) SUBMISSION SYSTEM:**
The U.S. Environmental Protection Agency (EPA) promulgated a final rule on October 22, 2015, to modernize Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. This final rule requires regulated entities and state and federal regulators to use information technology to electronically report data required by the National Pollutant Discharge Elimination System (NPDES) permit program instead of filing paper reports. To comply with the federal rule, the Department is requiring all permittees to begin submitting discharge monitoring data and reports online.

Per 40 CFR 127.15 and 127.24, permitted facilities may request a temporary waiver for up to 5 years or a permanent waiver from electronic reporting from the Department. To obtain an electronic reporting waiver, a permittee must first submit an eDMR Waiver Request Form: http://dnr.mo.gov/forms/780-2692-f.pdf. A request must be made for each facility. If more than one facility is owned or operated by a single entity, then the entity must submit a separate request for each facility based on its specific circumstances. An approved waiver is non-transferable.

The Department must review and notify the facility within 120 calendar days of receipt if the waiver request has been approved or rejected [40 CFR 124.27(a)]. During the Department review period as well as after a waiver is granted, the facility must continue submitting a hard-copy of any reports required by their permit. The Department will enter data submitted in hard-copy from those facilities allowed to do so and electronically submit the data to the EPA on behalf of the facility.

✓ The permittee/facility is currently using the eDMR data reporting system.

**SAMPLING FREQUENCY JUSTIFICATION:**
Sampling and reporting frequency was generally retained from previous permit. 40 CFR 122.45(d)(1) indicates all continuous discharges shall be permitted with daily maximum and monthly average limits. Sampling frequency for stormwater-only outfalls is typically quarterly even though BMP inspection occurs monthly. The facility may sample more frequently if additional data is required to determine if best management operations and technology are 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. Discharges with altering effluent should have composite sampling; discharges with uniform effluent can have grab samples. Grab samples are usually appropriate for stormwater. Parameters which must have grab sampling are: pH, ammonia, *E. coli*, total residual chlorine, free available chlorine, hexavalent chromium, dissolved oxygen, total phosphorus, and volatile organic samples.

**SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:**
Please review Standard Conditions Part 1, section A, number 4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 and/or 40 CFR 136 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 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 quantifies the pollutant below the level of the applicable water quality criterion 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 and or 40 CFR 136. These methods are also required for parameters listed as monitoring only, as the data collected may be used to determine if numeric limitations need to be established. A permittee is responsible for working with their contractors to ensure the analysis performed is sufficiently sensitive. 40 CFR 136 lists the approved methods accepted by the Department. Table A at 10 CSR 20-7.031 shows water quality standards.

## Part VI. 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 the end of the 2nd quarter, 2023.*

**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 6/15/2018 to 7/15/2018; no comments were received.

**Date of Fact Sheet**: July 19, 2018

**Completed By:**
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# 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.

b. The following shall be included as information which must be reported within 24 hours under this paragraph.
   i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
   ii. Any upset which exceeds any effluent limitation in the permit.
   iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.

c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.

3. **Anticipated Noncompliance**. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.

4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.

5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.

6. **Other Information**. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

7. **Discharge Monitoring Reports.**
   a. Monitoring results shall be reported at the intervals specified in the permit.
   b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
   c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.

## 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.
   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 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.

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.

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.

-0-
AP16103 C11908

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**

AUG 7 2013

| FOR AGENCY USE ONLY | |
|---|---|
| CHECK NUMBER | |
| DATE RECEIVED 8-7-13 | FEE SUBMITTED -0- |

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

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- 0133221 — Expiration Date 2/12/2014
- ☐ 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 | | TELEPHONE WITH AREA CODE | |
|---|---|---|---|
| Indian Creek Mine Tailings Site | | (573) 2[illegible]4-8152<br>FAX (573) 2[illegible]4-8624 | |
| ADDRESS (PHYSICAL) | CITY | STATE | ZIP CODE |
| 8.5 miles NW of Potosi on Highway 185 | Potosi | MO | 63664 |

**3. OWNER**

| NAME | E-MAIL ADDRESS | TELEPHONE WITH AREA CODE | |
|---|---|---|---|
| The Doe Run Resources Corporation d/b/a The Doe Run Company | mcummings@doerun.com | (573) 2[illegible]4-8152<br>FAX (573) 2[illegible]4-8624 | |
| ADDRESS (MAILING) | CITY | STATE | ZIP CODE |
| Iron County Road #1, Building 1 | Viburnum | MO | 65566 |

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

**4. CONTINUING AUTHORITY**

| NAME | | TELEPHONE WITH AREA CODE | |
|---|---|---|---|
| The Doe Run Resources Corporation d/b/a The Doe Run Company | | (573) 2[illegible]4-8152<br>FAX (573) 2[illegible]4-8624 | |
| ADDRESS (MAILING) | CITY | STATE | ZIP CODE |
| Iron County Road #1, Building 1 | Viburnum | MO | 65566 |

**5. OPERATOR**

| NAME | CERTIFICATE NUMBER | TELEPHONE WITH AREA CODE | |
|---|---|---|---|
| The Doe Run Resources Corporation d/b/a The Doe Run Company | | (573) 2[illegible]4-8152<br>FAX (573) 2[illegible]4-8624 | |
| ADDRESS (MAILING) | CITY | STATE | ZIP CODE |
| Iron County Road #1, Building 1 | Viburnum | MO | 65566 |

**6. FACILITY CONTACT**

| NAME | TITLE | TELEPHONE WITH AREA CODE |
|---|---|---|
| Mark Cummings | Environmental Manager | (573) 2[illegible]4-8152<br>FAX (573) 2[illegible]4-8624 |

**7. ADDITIONAL FACILITY INFORMATION**

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

001 NA ¼ NA ¼ Sec NA T NA R NA NA County
UTM Coordinates Easting (X): NA Northing (Y): NA
*For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)*

002 NW ¼ SW ¼ Sec 27 T 39N R 1E Washington County
UTM Coordinates Easting (X): 682559 Northing (Y): 4216707

003 ____ ¼ ____ ¼ Sec ____ T ____ R ____ ____ County
UTM Coordinates Easting (X): ____ Northing (Y): ____

004 ____ ¼ ____ ¼ 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 NA and NAICS _____ 002 – SIC 1031 and NAICS _____
003 – SIC _____ and NAICS _____ 004 – SIC _____ and NAICS _____

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

| | | | |
|---|---|---|---|
| A. | Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below). | YES ☑ | NO ☐ |
| B. | Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C and D. | YES ☐ | NO ☑ |
| C. | Is application for storm water discharges only? If yes, complete EPA Form 2F. | YES ☑ | NO ☐ |
| 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 ☐ | NO ☑ |
| F. | Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R. | YES ☐ | NO ☑ |

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

| NAME | | | |
|---|---|---|---|
| Richard J. and Susan J. Davis | | | |
| **ADDRESS** | **CITY** | **STATE** | **ZIP CODE** |
| 10833 Forest Circle Drive | St. Louis | MO | 63128 |

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

| NAME AND OFFICIAL TITLE (TYPE OR PRINT) | TELEPHONE WITH AREA CODE |
|---|---|
| Mark Cummings, Environmental Manager | (573) 224-8152 |
| **SIGNATURE** | **DATE SIGNED** |
| Mark W. Cummings | 8-5-2013 |

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?

THE
DOE RUN
COMPANY

AUG - 7 2013

SOUTHEAST MISSOURI
MINING AND MILLING DIVISION
Viburnum, MO 65566

August 5, 2013

Mr. Chris Wieberg
Water Pollution Permits Section Chief
Water Protection Program
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102-0176

Re: Doe Run – Indian Creek Mine Tailing Site (MO-0133221)

Dear Mr. Wieberg:

Enclosed with this letter are the necessary forms for the renewal of Missouri State Operating Permit (MSOP) for the Indian Creek Mine Tailings Site (Permit No. MO-0133221). The site is owned by The Doe Run Resources Corporation (d/b/a The Doe Run Company) and located on a tract of property that operated as a lead mine and mill. The site is no longer in operation and discharges stormwater from two outfalls. Outfall 002 under this MSOP receives stormwater discharge from the entire site and is the responsibility of Doe Run. Outfall 001, at the tailings dam overflow structure is the responsibility of the U.S. EPA under MSOP MO-0136654.

Please note that although the site is no longer operational, Forms A and C have been completed for the Standard Industrial Classification code "1031 – Lead and Zinc Ores". Site-specific hardness data have been provided to assist in calculating hardness-dependent effluent limitations for cadmium, lead and zinc.

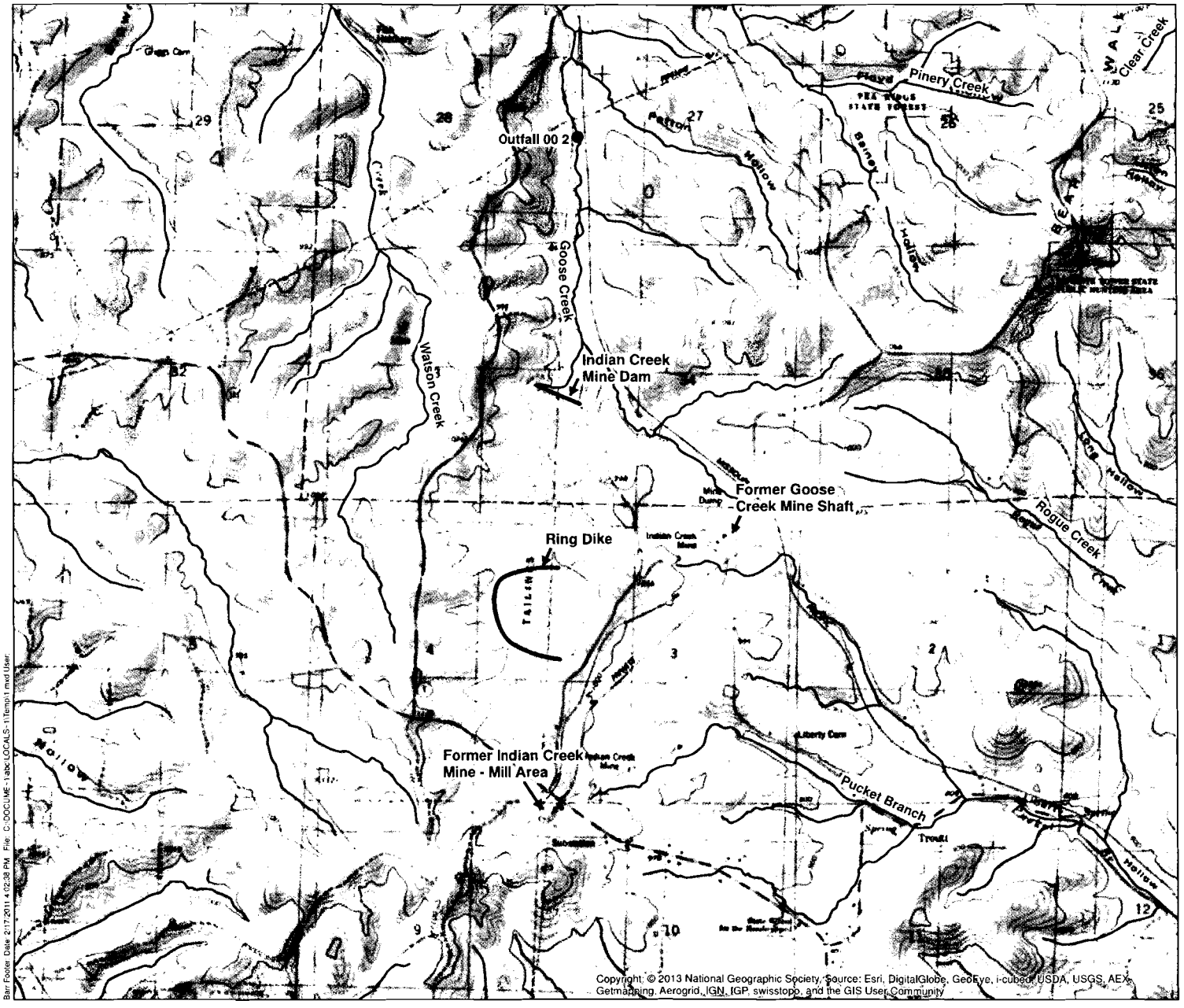
Should you have any questions or need any further information from Doe Run, please do not hesitate to contact me.

Sincerely,

Mark Cummings

Enclosure

c: Robert Brundage (w/encl.)
Barr Engineering (w/encl.)




## Legend

- Outfall 002

**NHDFlowline**

- StreamRiver

Miles
0.25 0 0.25 0.5 0.75

Feet
2,000 0 2,000

BARR

Site Location Map

Indian Creek Mine Tailings Site
NPDES Permit Renewal
The Doe Run Company
Washington County, Missouri

Barr Footer Date 2/17/2011 4:02:38 PM File: C:\DOCUME~1\abc\LOCALS~1\Temp\1.mxd User

MISSOURI DEPARTMENT OF NATURAL RESOURCES AUG - 7 2013
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

# FORM C – APPLICATION FOR DISCHARGE PERMIT – MANUFACTURING, COMMERCIAL, MINING, SILVICULTURE OPERATIONS, PROCESS AND STORMWATER

| FOR AGENCY USE ONLY | |
|---|---|
| CHECK NO. | |
| DATE RECEIVED | FEE SUBMITTED |

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

1.00 NAME OF FACILITY

Indian Creek Mine Tailings Site

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

MO-0133221

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 1031 B. SECOND _____

C. THIRD _____ D. FOURTH _____

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) 002 NW 1/4 SW 1/4 SEC 27 T NA R NA Washington COUNTY

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

| OUTFALL NUMBER (LIST) | RECEIVING WATER |
|---|---|
| 002 | Unnamed tributary to Goose Creek |

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

This site is a closed lead mine/mill. Mine tailings remain on the site and are located upstream of a dam regulated by the Dam Safety Program (Permit #R105) (Dam #30717). The U.S. EPA is conducting residential soil removal activities under a removal action work plan. As part of these activities, EPA will place these soils on a portion of the site that has been designated as a repository and will be permitted under a separate Missouri State Operating Permit. The EPA repository is about 228 acres in size and will be surrounded by a 35-45-foot high berm. On August 5, 2011, responsibility for Outfall 001 was transfered to EPA under MSOP MO-0136654.

Doe Run's activities will be limited to repair and maintenance work on the tailings dam and work to manage stormwater flows from other formerly used areas.

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent and treatment units labeled to correspond to the more detailed descriptions in item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, public sewers and outfalls. If a water balance cannot by determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

Site is not currently operational. Discharge is stormwater only, therefore this is not applicable.

B. For each outfall, provide a description of 1. All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water and storm water runoff. 2. The average flow contributed by each operation. 3. The treatment received by the wastewater. Continue on additional sheets if necessary.

| 1. OUTFALL NO. | 2. OPERATION(S) CONTRIBUTING FLOW | | 3. TREATMENT | |
|---|---|---|---|---|
| (LIST) | A. OPERATION (LIST) | B. AVERAGE FLOW (INCLUDE UNITS) (MAXIMUM FLOW) | A. DESCRIPTION | B. LIST CODES FROM TABLE A |
| 002 | Stormwater Runoff | 1yr, 24 hr storm: 214.5 cfs<br>10 yr, 24 hr storm: 354.3 cfs | Sedimentation | 1-U |
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**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. FLOW RATE *(in mgd)* | | B. TOTAL VOLUME (specify with units) | | |
| | | A. DAYS PER WEEK *(specify average)* | B. MONTHS PER YEAR *(specify average)* | 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.**

3.00 INTAKE AND EFFLUENT CHARACTERISTICS

A. & B. SEE INSTRUCTIONS BEFORE PROCEEDING – COMPLETE ONE TABLE FOR EACH OUTFALL – ANNOTATE THE OUTFALL NUMBER IN THE SPACE PROVIDED.
NOTE: TABLE 1 IS INCLUDED ON SEPARATE SHEETS NUMBERED FROM PAGE 6 TO PAGE 7.

C. USE THE SPACE BELOW TO LIST ANY OF THE POLLUTANTS LISTED IN PART B OF THE INSTRUCTIONS, WHICH YOU KNOW OR HAVE REASON TO BELIEVE IS DISCHARGED OR MAY BE DISCHARGED FROM ANY OUTFALL. FOR EVERY POLLUTANT YOU LIST, BRIEFLY DESCRIBE THE REASONS YOU BELIEVE IT TO BE PRESENT AND REPORT ANY ANALYTICAL DATA IN YOUR POSSESSION.

| 1. POLLUTANT | 2. SOURCE | 1. POLLUTANT | 2. SOURCE |
|---|---|---|---|
| Lead | Stormwater runoff from EPA repository and other formerly used mine areas. | | |
| Zinc | Stormwater runoff from EPA repository and other formerly used mine areas. | | |
| Cadmium | Stormwater runoff from EPA repository and other formerly used mine areas. | | |
| Solids, Total Suspended | Runoff from repository, formerly used mine areas, and dam repair work. | | |
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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)

WET testing performed 8/31/2010, 4/28/2011, and 7/11/2012 passed for both species.

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)* |
|---|---|---|---|
| Teklab, Inc. | 5445 Horseshoe Lake Road<br>Collinsville, IL 62234-7425 | (618) 344-1004 | pH<br>Hardness as CaCO3<br>Total Suspended Solids<br>Solids, Settleable<br>Total Organic Carbon<br>Mercury (total and dissolved)<br>Cadmium (total and dissolved)<br>Copper (total and dissolved)<br>Zinc (total and dissolved)<br>Lead (total and dissolved) |

3.30 CERTIFICATION

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

| NAME AND OFFICIAL TITLE (TYPE OR PRINT) | TELEPHONE NUMBER WITH AREA CODE |
|---|---|
| Mark Cummings, Environmental Manager | 573-244-8152 |
| SIGNATURE (SEE INSTRUCTIONS) | DATE SIGNED |
| Mark W. Cummings | 8-5-2013 |

**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**

## INTAKE AND EFFLUENT CHARACTERISTICS

OUTFALL NO. 002

PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

| 1. POLLUTANT | 2. EFFLUENT | | | | | | | 3. UNITS *(specify if blank)* | | 4. INTAKE *(optional)* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A. MAXIMUM DAILY VALUE | | B. MAXIMUM 30 DAY VALUE *(if available)* | | C. LONG TERM AVRG. VALUE *(if available)* | | D. NO. OF ANALYSES | A. CONCEN-TRATION | 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 | |
| A. Biochemical Oxygen Demand (BOD) | | | | | | | | | | | | |
| B. Chemical Oxygen Demand (COD) | | | | | | | | | | | | |
| C. Total organic Carbon (TOC) | 6.3 | | | | 2.31 | | 24 | mg/L | | | | |
| D. Total Suspended Solids (TSS) | 8 | | | | 3.67 | | 24 | mg/L | | | | |
| E. Ammonia *(as N)* | | | | | | | | | | | | |
| F. Flow | VALUE 9.41 | | VALUE | | VALUE 1.80 | | 23 | MGD | | VALUE | | |
| G. Temperature *(winter)* | VALUE 8.94 | | VALUE | | VALUE | | 9 | °C | | VALUE | | |
| H. Temperature *(summer)* | VALUE 22.7 | | VALUE | | VALUE | | 7 | °C | | VALUE | | |
| I. pH | MINIMUM 5.6 | MAXIMUM 8.7 | MINIMUM | MAXIMUM | | | 23 | 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 | | B. MAXIMUM 30 DAY VALUE *(if available)* | | C. LONG TERM AVRG. VALUE *(if available)* | | D. NO. OF ANALYSES | A. CONCEN-TRATION | 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 (24959-67-9) | | X | | | | | | | | | | | | |
| B. Chlorine, Total Residual | | X | | | | | | | | | | | | |
| C. Color | | X | | | | | | | | | | | | |
| D. Fecal Coliform | | X | | | | | | | | | | | | |
| E. Fluoride (16984-48-8) | | X | | | | | | | | | | | | |
| F. Nitrate - Nitrate *(as N)* | | 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 *(if available)* | | C. LONG TERM AVRG. VALUE *(if available)* | | D. NO. OF ANALYSES | A. CONCEN-TRATION | 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 | |
| G. Nitrogen, Total Organic *(as N)* | | X | | | | | | | | | | | | |
| H. Oil and Grease | | X | | | | | | | | | | | | |
| I. Phosphorus *(as P)*, Total (7723-14-0) | | X | | | | | | | | | | | | |
| J. Sulfate *(as $SO^4$)* (14808-79-8) | | X | | | | | | | | | | | | |
| K. Sulfide *(as S)* | | X | | | | | | | | | | | | |
| L. Sulfite (as $SO^3$) (14265-45-3) | | X | | | | | | | | | | | | |
| M. Surfactants | | X | | | | | | | | | | | | |
| N. Aluminum, Total (7429-90-5) | | X | | | | | | | | | | | | |
| O. Barium, Total (7440-39-3) | | X | | | | | | | | | | | | |
| P. Boron, Total (7440-42-8) | | X | | | | | | | | | | | | |
| Q. Cobalt, Total (7440-48-4) | | X | | | | | | | | | | | | |
| R. Iron, Total (7439-89-6) | | X | | | | | | | | | | | | |
| S. Magnesium, Total (7439-95-4) | | X | | | | | | | | | | | | |
| T. Molybdenum, Total (7439-98-7) | | X | | | | | | | | | | | | |
| U. Manganese, Total (7439-96-5) | | X | | | | | | | | | | | | |
| 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 *(if available)* | | C. LONG TERM AVRG. VALUE *(if available)* | | D. NO. OF ANALYSES | A. CONCEN-TRATION | 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 | |
| **METALS, AND TOTAL PHENOLS** | | | | | | | | | | | | | | |
| 1M. Antimony, Total (7440-36-9) | | X | | | | | | | | | | | | |
| 2M. Arsenic, Total (7440-38-2) | | X | | | | | | | | | | | | |
| 3M. Beryllium, Total (7440-41-7) | | X | | | | | | | | | | | | |
| 4M. Cadmium, Total (7440-43-9) | X | | 1.0 | | | | 0.98 | | | | | ug/L | | 24 |
| 5M. Chromium III (16065-83-1) | | X | | | | | | | | | | | | |
| 6M. Chromium VI (18540-29-9) | | X | | | | | | | | | | | | |
| 7M. Copper, Total (7440-50-8) | X | | 11.1 | | | | 5.19 | | | | | ug/L | | 24 |
| 8M. Lead, Total (7439-92-1) | X | | 20 | | | | 11.84 | | | | | ug/L | | 24 |
| 9M. Mercury, Total (7439-97-6) | X | | 0.10 | | | | 0.10 | | | | | ug/L | | 24 |
| 10M. Nickel, Total (7440-02-0) | | X | | | | | | | | | | | | |
| 11M. Selenium, Total (7782-49-2) | | X | | | | | | | | | | | | |
| 12M. Silver, Total (7440-22-4) | | X | | | | | | | | | | | | |
| 13M. Thallium, Total (7440-28-0) | | X | | | | | | | | | | | | |
| 14M. Zinc, Total (7440-66-6) | X | | 90.9 | | | | 0.10 | | | | | ug/L | | 24 |
| 15M. Cyanide, Amenable to Chlorination | | X | | | | | | | | | | | | |
| 16M. Phenols, Total | | X | | | | | | | | | | | | |
| **RADIOACTIVITY** | | | | | | | | | | | | | | |
| (1) Alpha Total | | X | | | | | | | | | | | | |
| (2) Beta Total | | X | | | | | | | | | | | | |
| (3) Radium Total | | X | | | | | | | | | | | | |
| (4) Radium 226 Total | | X | | | | | | | | | | | | |

# Supplemental Permit Renewal Data
# Indian Creek Outfall 002

**Hardness Data IC-002 2009 to 2012**

| Date | Hardness, Total (mg/L) |
|---|---|
| Jan 2010 | 200 |
| Feb 2010 | 240 |
| Mar 2010 | 180 |
| Apr 2010 | 260 |
| May 2010 | 220 |
| Jun 2010 | 260 |
| Jul 2010 | 280 |
| Aug 2010 | 300 |
| Sep 2010 | 340 |
| Oct 2010 | 360 |
| Nov 2010 | 360 |
| Dec 2010 | 420 |
| Jan 2011 | 420 |
| Feb 2011 | 140 |
| Mar 2011 | 200 |
| Apr 2011 | 260 |
| May 2011 | 200 |
| Jun 2011 | 240 |
| Jul 2011 | 360 |
| Aug 2011 | - |
| Sep 2011 | |
| Oct 2011 | 340 |
| Nov 2011 | - |
| Dec 2011 | - |
| Jan 2012 | - |
| Feb 2012 | 380 |
| Mar 2012 | - |
| Apr 2012 | 340 |
| May 2012 | - |
| Jun 2012 | - |
| Jul 2012 | 300 |
| Aug 2012 | - |
| Sep 2012 | - |
| Oct 2012 | 500 |
| Nov 2012 | - |
| Dec 2012 | - |
| **AVG:** | 295.8 |

**Hardness Dependent Water Quality Based Criteria for Acute Aquatic Life Protection (10 CSR 20-7.031 Table A)**

| Parameter | Acute (ug/L) |
|---|---|
| Cadmium | 13.7 |
| Lead | 205.5 |
| Zinc | 294.3 |