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 RSMo, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.	MO-0000281
Owner:	The Doe Run Resources Corporation d/b/a The Doe Run Company
Address:	1801 Park 270, Suite 300, St. Louis, MO 63146
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	The Doe Run Company – Herculaneum
Facility Address:	881 Main Street, Herculaneum, MO 63048
Legal Description:	See following page(s)
UTM Coordinates:	See following page(s)
Receiving Stream:	See following page(s)
First Classified Stream and ID:	See following page(s)
USGS Basin & Sub-watershed No.:	See following page(s)

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

FACILITY DESCRIPTION

Industrial Wastewater Treatment Plant; SIC # 9999, Former refining and smelting facility, now in remediation. This facility does not require a certified wastewater operator per 10 CSR 20-9.030 as this facility is privately owned. Domestic wastewater is managed by sending to the city of Herculaneum for treatment.

This permit authorizes only wastewater and stormwater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas.

September 1, 2022
Effective Date

May 1, 2023
Modification Date

August 31, 2027
Expiration Date

John Hoke, Director, Water Protection Program

FACILITY DESCRIPTION (CONTINUED)

In 2023, Doe Run submitted a modification request to construct an Interim Treatment System (ITS), to continue to treat stormwater and wastewater at the Doe Run site in Herulaneum. Following construction and startup of the ITS, Doe Run will decommission and remove the existing wastewater treatment system as part of ongoing site remediation. The construction and operation of the ITS does not result in changes to the permitted design flow, the wastewater treatment process, or the location of Outfall #001.

OUTFALL #001 – Process Wastewater (Dust suppression from remediation and truck wash water), stormwater runoff and change-house laundry water.
Treatment consists of precipitation, coagulation, flocculation, and filtration.

Legal Description:	NE¼, SE¼, Sec.29, T41N, R6E, Jefferson County
UTM Coordinates:	X = 729862, Y = 4238134
Receiving Waterbody:	Mississippi River
First Classified Waterbody and ID:	Mississippi River (P) WBID# 1707.03
USGS Basin & Sub-watershed No.:	Cahokia-Joachim (07140101-0807)
Design Flow:	1.224 MGD
Average Flow:	0.43 MGD

OUTFALL #004 – Stormwater
Stormwater from slag storage area

Legal Description:	NE¼, SE¼, Sec.29, T41N, R6E, Jefferson County
UTM Coordinates:	X = 729573, Y = 4237215
Receiving Waterbody:	Joachim Creek
First Classified Waterbody and ID:	Joachim Creek (P) WBID# 1719
USGS Basin & Sub-watershed No.:	Sullivan River (07140101-0804)
Maximum Flow:	0.068 MGD

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL #001 *main outfall*	**TABLE A-1** **FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**				
The facility is authorized to discharge from outfall(s) as specified. The final effluent limitations shall become effective on **September 1, 2022** and remain in effect until expiration of the permit. Discharges shall be controlled, limited, and monitored by the facility as specified below:					
EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS		MONITORING REQUIREMENTS	
		DAILY MAXIMUM	MONTHLY AVERAGE	MINIMUM MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: M					
PHYSICAL					
Flow	MGD	*	*	once/month	24 hr. total
CONVENTIONAL					
pH †	SU	6.5 to 9.0	6.5 to 9.0	once/month	grab
Total Suspended Solids	mg/L	*	*	once/month	grab
METALS					
Arsenic, Total Recoverable	µg/L	*	*	once/month	grab
Cadmium, Total Recoverable	µg/L	118.1	45.7	once/month	grab
Copper, Total Recoverable	µg/L	*	*	once/month	grab
Lead, Total Recoverable	µg/L	*	*	once/month	grab
Zinc, Total Recoverable	µg/L	*	*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE OCTOBER 28, 2022. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.					
LIMIT SET: Q					
NUTRIENTS					
Phosphorus, Total (TP)	mg/L	*	*	once/quarter ◊	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE JANUARY 28, 2023. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.					

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

OUTFALL #004 *Stormwater Only*	**TABLE A-2 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**					
The facility is authorized to discharge from outfall(s) as specified. The final effluent limitations shall become effective on **September 1, 2022** and remain in effect until expiration of the permit. Discharges shall be controlled, limited and monitored by the facility as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL LIMITATIONS		BENCH-MARKS	MONITORING REQUIREMENTS	
		DAILY MAXIMUM	MONTHLY AVERAGE		MINIMUM MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: Q (NOTE1)						
PHYSICAL						
Flow	MGD	*		-	once/quarter ◊	24 Hr Est.
CONVENTIONAL						
pH †	SU	6.5 to 9.0		-	once/quarter ◊	grab
Total Suspended Solids	mg/L	*		-	once/quarter ◊	grab
METALS						
Cadmium, Total Recoverable	µg/L	**		21.5	once/quarter ◊	grab
Copper, Total Recoverable	µg/L	*		-	once/quarter ◊	grab
Lead, Total Recoverable	µg/L	*		-	once/quarter ◊	grab
Zinc, Total Recoverable	µg/L	**		451.9	once/quarter ◊	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE JANUARY 28, 2023. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

* Monitoring and reporting requirement only

** Monitoring and reporting requirement with benchmark. See Special Conditions for additional requirements.

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

Note 1 – Sampling at outfall 004 is not required when Mississippi River elevations cause Joachim Creek to back up into the outfall during the entire reporting period (quarter). Report on Discharge Monitoring Report why sampling was not conducted.

◊ 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. STANDARD CONDITIONS

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

C. SPECIAL CONDITIONS

1. Spills, Overflows, and Other Unauthorized Discharges.
   (a) Any spill, overflow, or other discharge(s) not specifically authorized are unauthorized discharges.
   (b) If an unauthorized discharge cause or permit any contaminants to discharge or enter waters of the state, the unauthorized discharge must be reported to the regional office as soon as practicable but no more than 24 hours after the discovery of the discharge. If the spill or overflow needs to be reported after normal business hours or on the weekend, the facility must call the Department's 24 hour spill line at 573-634-2436.

2. Any discharge not meeting permitted limits may be pumped and hauled to an accepting wastewater treatment facility, or otherwise properly disposed.

3. Electronic Discharge Monitoring Report (eDMR) Submission System. The NPDES Electronic Reporting Rule, 40 CFR Part 127, reporting of effluent monitoring data and any report required by the permit (unless specifically directed otherwise by the permit), shall be submitted via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data for the NPDES program. The eDMR system is currently the only Department-approved reporting method for this permit unless specified elsewhere in this permit, or a waiver is granted by the Department. The facility must register in the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before the first report is due. All reports uploaded into the system shall be reasonably named so they are easily identifiable, such as "WET Test Chronic Outfall 002 Jan 2023", or "Outfall004-DailyData-Mar2025".

4. Stormwater Pollution Prevention Plan (SWPPP).
   The facility's SIC code or description is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2) and hence shall implement a Stormwater Pollution Prevention Plan (SWPPP) which must be prepared and implemented upon permit effective date. The SWPPP must be kept on-site and not sent to the Department unless specifically requested. The SWPPP must be reviewed and updated annually or if site conditions affecting stormwater change. The facility 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 March 2021) https://www.epa.gov/sites/production/files/2021-03/documents/swppp_guide_industrial_2021_030121.pdf The purpose of the 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 ineffective at providing the necessary protections for which it was designed. Corrective action describes the steps the facility took to eliminate the deficiency.
   The SWPPP must include:
   (a) A listing of specific contaminants and their control measures (BMPs) and a narrative explaining how BMPs are implemented to control and minimize the amount of contaminants potentially entering stormwater.
   (b) A map with all outfalls and structural BMPs marked.
   (c) If within the boundaries of a regulated Municipal Separate Storm Sewer System (MS4s), list the name of the regulated MS4.
   (d) A schedule for at least 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. A BMP is considered to be disrupted if it is rendered ineffective as a result of damage or improper maintenance. Categorization of a deficiency is reliant on the length of time required to correct each disrupted BMP. Corrective action after discovering a disrupted BMP must be taken as soon as possible. Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
      (1) Operational deficiencies are disrupted BMPs which the facility is able to and must correct within 7 calendar days.
      (2) Minor structural deficiencies are disrupted BMPs which the facility is able to and must correct within 14 calendar days.
      (3) Major structural deficiencies (deficiencies projected to take longer than 14 days to correct) are disrupted BMPs which must be reported as an uploaded attachment through the eDMR system with the DMRs. The initial report shall consist of the deficiency noted, the proposed remedies, the interim or temporary remedies (including proposed timing of the placement of the interim measures), and an estimate of the timeframe needed to wholly complete the repairs or construction. If required by the Department, the facility shall work with the regional office to determine the best course of action. The facility may consider temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
      (4) All actions taken to correct the deficiencies shall be included with the written report, including photographs, and kept with the SWPPP. Additionally, corrective action of major structural deficiencies shall be reported as an uploaded attachment through the eDMR system with the DMRs.
      (5) BMP failure causing discharge through an unregistered outfall is considered an illicit discharge and must be reported in accordance with Standard Conditions Part I.
      (6) Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to Department personnel upon request. Electronic versions of the documents and photographs are acceptable.

C. SPECIAL CONDITIONS (CONTINUED)

(e) A provision for designating a responsible individual for environmental matters and a provision for providing training to all personnel involved in housekeeping, material handling (including but not limited to loading and unloading), storage, and staging of all operational, maintenance, storage, and cleaning areas. Proof of training shall be submitted upon request by the Department.

5. Site-wide minimum Best Management Practices (BMPs). At a minimum, the facility shall adhere to the following:
   (a) Provide good housekeeping practices on the site to keep trash from entry into waters of the state. Dumpsters must remain closed when not in use.
   (b) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, warehouse activities, and other areas, to prevent the contamination of stormwater from these substances.
   (c) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
   (d) Store all paint, solvents, petroleum products, petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so 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. Spill records shall be retained on-site or readily accessible electronically.
   (e) Provide sediment and erosion control sufficient to prevent or minimize sediment loss off of the property, and to protect embankments from erosion.
   (f) Wash water for vehicles, building(s), or pavement must be handled in a no-discharge manner (infiltration, hauled off-site, etc.). Describe the no-discharge method used and include all pertinent information (quantity/frequency, soap use, effluent destination, BMPs, etc.) in the application for renewal. If wash water is not produced, note this instead.

6. This permit stipulates numeric pollutant benchmarks applicable to the facility's stormwater discharges.
   (a) Benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation. Stormwater monitoring, numeric benchmark compliance, and visual inspections shall be used to determine the overall effectiveness of the BMPs identified in the SWPPP.
   (b) If a sample exceeds a benchmark concentration, the facility must review the SWPPP and BMPs to determine what practical improvements or additional controls are needed to reduce pollutant concentrations in future stormwater discharges.
   (c) Every time a numeric benchmark exceedance occurs, a Corrective Action Report (CAR) must be completed. A CAR is a document recording the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. CARs must be retained with the SWPPP and be available to the Department upon request. This permit may require CARs be submitted to the Department upon permit renewal; see Renewal Requirements section below.
   (d) Failure to take corrective action to address numeric benchmark exceedance, and failure to make measureable progress towards achieving the numeric benchmark(s), is a permit violation.
   (e) Stormwater benchmarks and required minimum BMPs as described in this permit are enforceable permit conditions. Any requested change(s) to numeric benchmark values or deviation from minimum BMP requirements must be established through the permitting process. Assessment, evaluation, and implementation of specific BMPs to meet numeric benchmarks or minimum BMP requirements, must be addressed through the SWPPPs and CARs.

7. Proper and continued operation and maintenance pursuant to 40 CFR 122.41(e). At all times the facility shall properly operate, maintain, and control all systems of treatment and control (and related appurtenances) which are installed or used by the facility 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 facility only when the operation is necessary to achieve compliance with the conditions of the permit.

8. 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 for permit shield, and the CWA §402(k) for toxic substances. 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 CWA §§301(b)(2)(C) and (D), §304(b)(2), and §307(a)(2), 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 already limited in the permit. This permit may be modified, revoked and reissued, or terminated for cause, including determination new pollutants found in the discharge not identified in the application for the new or revised permit. The filing of a request by the facility for a permit modification, termination, notice of planned changes, or anticipated non-compliance does not stay any permit condition.

C. SPECIAL CONDITIONS (CONTINUED)

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

10. Report 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) Compliance analysis conducted by the facility or any contracted laboratory shall be conducted in such a way the precision and accuracy of the analyzed result can be enumerated. See sufficiently sensitive test method requirements in Standard Conditions Part I, §A, No. 4 regarding proper testing and detection limits used for sample analysis. For the purposes of this permit, the definitions in 40 CFR 136 apply; method detection limit (MDL) and laboratory-established reporting limit (RL) are used interchangeably in this permit. The reporting limits established by the laboratory must be below the lowest effluent limits established for the specified parameter (including any parameter's future limit after an SOC) in the permit unless the permit provides for an ML.
    (b) The facility shall not report a sample result as "non-detect" without also reporting the MDL. Reporting "non-detect" without also including the MDL will be considered failure to report, which is a violation of this permit.
    (c) For the daily maximum, the facility shall report the highest value; if the highest value was a non-detect, use the less than "<" symbol and the laboratory's highest method detection limit (MDL) or the highest reporting limit (RL); whichever is higher (e.g. <6).
    (d) When calculating monthly averages, zero shall be used in place of any value(s) not detected. Where all data used in the average are below the MDL or RL, the highest MDL or RL shall be reported as "<#" for the average as indicated in item (c).

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

13. This permit does not apply to fertilizer products receiving a current exemption under the Missouri Clean Water Law and regulations in 10 CSR 20-6.015(3)(B)8, and are land applied in accordance with the exemption.

14. This permit does not allow stream channel or wetland alterations unless approved by Clean Water Act §404 permitting authorities.

15. This permit does not authorize in-stream treatment, the placement of fill materials in flood plains, placement of solid materials into any waterway, the obstruction of stream flow, or changing the channel of a defined drainage course.

16. All records required by this permit may be maintained electronically per 432.255 RSMo. These records can be maintained in a searchable format.

17. Changes in Discharges of Toxic Pollutant.
    In addition to the reporting requirements under 40 CFR 122.41, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director per 40 CFR 122.42(a)(1) and (2) as soon as recognizing:
    (a) 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) 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 the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
        (4) The level established by the Director in accordance with 40 CFR 122.44(f).
    (c) Authorization of new or expanded pollutant discharges may be required under a permit modification or renewal, and may require an antidegradation review.

C. SPECIAL CONDITIONS (CONTINUED)

18. This permit does not authorize the facility to accept, treat, or discharge wastewater from other sources unless explicitly authorized herein. If the facility would like to accept, treat, or discharge wastewater from another activity or facility, the permit must be modified to include external wastewater pollutant sources in the permit.

19. Any discharges (or qualified activities such as land application) not expressly authorized in this permit, and not clearly disclosed in the permit application, cannot become authorized or shielded from liability under CWA section 402(k) or Section 644.051.16, RSMo, by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including any other permit applications, funding applications, the SWPPP, discharge monitoring reporting, or during an inspection. Submit a permit modification application, as well as an antidegradation determination if appropriate, to request authorization of new or expanded discharges.

20. Renewal Application Requirements.
    (a) This facility shall submit an appropriate and complete application to the Department no less than 180 days prior to the expiration date listed on page 1 of the permit.
    (b) Application materials shall include complete Form A, and Form C, and Form D. If the form names have changed, the facility must ensure they are submitting the correct forms as required by regulation.
    (c) Sampling for all parameters on Form D is required by law for all process wastewater at this facility.
    (d) Sufficiently sensitive analytical methods must be used. A sufficiently sensitive method is one that can effectively describe the presence or absence of a pollutant at or below that pollutant's permit limit or water quality standard.
    (e) The facility may use the electronic submission system to submit the application to the Program, if available.
    (f) This facility must submit all corrective action reports completed for the last permit term if a benchmark exceedance occurred.

D. NOTICE OF RIGHT TO APPEAL

If you were adversely affected by this decision, you may be entitled to pursue an appeal before the administrative hearing commission (AHC) pursuant to 621.250 and 644.051.6 RSMo. To appeal, you must file a petition with the AHC within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC. Any appeal shall be directed to:

Administrative Hearing Commission
U.S. Post Office Building, Third Floor
131 West High Street, P.O. Box 1557
Jefferson City, MO 65102-1557
Phone: 573-751-2422
Fax: 573-751-5018
Website: https://ahc.mo.gov

MISSOURI DEPARTMENT OF NATURAL RESOURCES
MODIFICATION STATEMENT OF BASIS
FOR
MO-0000281
DOE RUN COMPANY – HERCULANEUM

This Statement of Basis (Statement) gives pertinent information regarding modification(s) to the above listed operating permit. A Statement is not an enforceable part of a Missouri State Operating Permit. Changes found here supersede previous fact sheet determinations. The permit was revised as appropriate to reflect changes enumerated in this modification.

PART I. FACILITY INFORMATION

The facility's basic information has not changed; see original fact sheet.

PART II. MODIFICATION RATIONALE

This operating permit is hereby modified to reflect the construction of an Interim Treatment System (ITS), which will continue to treat stormwater and wastewater at the Doe Run site in Herculaneum. Following construction and startup of the ITS, Doe Run will decommission and remove the existing wastewater treatment system as part of ongoing site remediation. The construction and operation of the ITS does not result in changes to the permitted design flow, the wastewater treatment process, or the location of Outfall #001. No other changes were made at this time.

DATE OF FACT SHEET: MARCH 15, 2023

COMPLETED BY:
KYLE O'ROURKE, ENVIRONMENTAL SCIENTIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - INDUSTRIAL UNIT
(573) 526-1289
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MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL OF
MO-0000281
DOE RUN COMPANY – HERCULANEUM

The Federal Water Pollution Control Act (Clean Water Act (CWA) §402 Public Law 92-500 as amended) established the National Pollutant 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 (§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 644 RSMo as amended). MSOPs may also cover underground injection, non-discharging facilities, and land application facilities. Permits 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 applicable regulations, rationale for the development of limitations and conditions, and the public participation process for the Missouri State Operating Permit (MSOP or permit) listed below. A factsheet is not an enforceable part of a permit.

PART I. FACILITY INFORMATION

Facility Type: Industrial: Major, Primary, Categorical; >1 MGD
SIC Code(s): 9999
Application Date: 06/28/2021
Expiration Date: 12/31/2021
Last Inspection: 10/19/2016

FACILITY DESCRIPTION

This facility was formerly a primary smelting furnace which processed lead from lead concentrate. This portion of the facility has been permanently shut down.

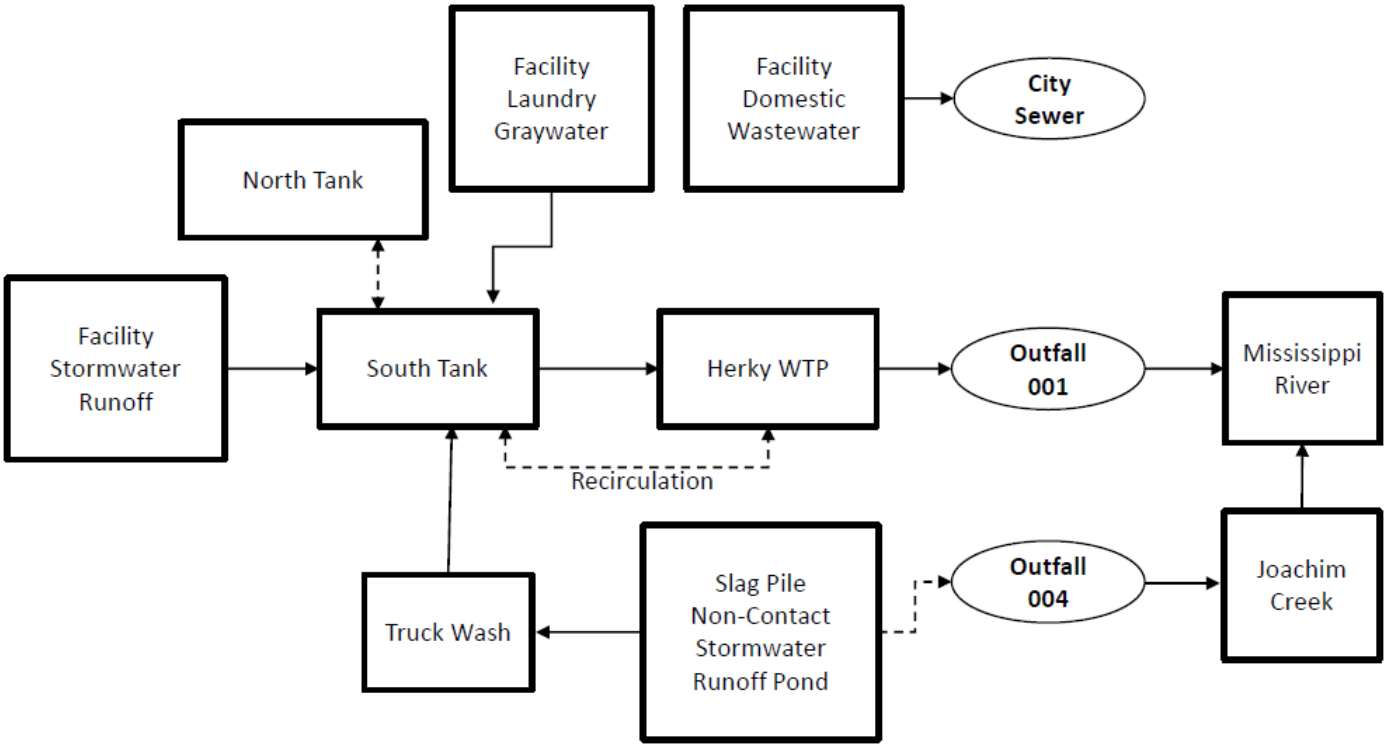
Items listed in the facility (or outfall) description, applicable to the operation, maintenance, control, and resultant effluent quality are required to be enumerated in the facility description. The facility description ensures the facility continues to operate the wastewater (or stormwater) controls listed in the permit to preserve and maintain the effluent quality pursuant to 40 CFR 122.21(e). Any planned changes to the facility (which changes the facility or outfall description) are required to be reported to the Department pursuant to 40 CFR 122.41(l)(1)(ii). If the facility does not or cannot use all of their disclosed treatment devices, this is considered bypassing pursuant to 40 CFR 122.41(m) in the case of wastewater, and BMP disruption in the case of stormwater.

PERMITTED FEATURES TABLE

OUTFALL	AVERAGE FLOW	DESIGN FLOW	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.43 MGD	1.224 MGD	Sludge thickening, pH reactor, clarification, settling, filtration	Process Wastewater
#004	0.068 MGD (Max. Flow)	Dependent upon precipitation	BMPs	Stormwater

FACILITY MAP

WATER FLOW DIAGRAM



FACILITY PERFORMANCE HISTORY & COMMENTS
The electronic discharge monitoring reports were reviewed for the last permit term. There were no exceedances of water quality standards.

CONTINUING AUTHORITY
Pursuant to 10 CSR 20-6.010(2)(A) and (E), the Department has received the appropriate continuing authority authorized signature from the facility. The Missouri Secretary of State continuing authority charter number for this facility is F00232995; this number was verified to be associated with the facility and precisely matches the continuing authority reported by the facility. The charter number is issued in perpetuity.

Pursuant to 10 CSR 20-6.010(2)(B)4, this facility is a Level 4 Authority.
- ✓ Pursuant to 10 CSR 20-6.010(2)(D), the facility provided a written statement from the higher level authority declining management of the facility under 10 CSR 20-6.010(2)(C)1.
  - ✓ This provision does not supersede or prohibit any domestic wastewater already routed, or proposed to be routed to the accepting wastewater treatment service. The acceptance of domestic wastewater does not meet the definition of becoming managed by a preferential higher authority.

OTHER ENVIRONMENTAL PERMITS
In accordance with 40 CFR 122.21(f)(6), the facility reported other environmental permits currently held by this facility. This facility has the following permits: Metallic Minerals Waste Management Permit MM-001, RCRA Large Quantity Generator ID MOD006266373, Air ID 006-003.

PART II. RECEIVING WATERBODY INFORMATION

RECEIVING WATERBODY TABLE:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES	DISTANCE TO SEGMENT	12-DIGIT HUC
#001	Mississippi River	P	1707.03	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)	0.21 mi	07140101-0807
#004	Joachim Creek	P	1719	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)	0.02 mi	07140101-0804

Classes are representations of hydrologic flow volume or lake basin size as defined in 10 CSR 20-7.031(1)(F). L1: Lakes with drinking water supply - wastewater discharges are not permitted to occur to L1 watersheds per 10 CSR 20-7.015(3)(C); L2: major reservoirs; L3: all other public and private lakes; P: permanent streams; C: streams which may cease flow in dry periods but maintain pools supporting aquatic life; E: streams which do not maintain surface flow; and W: wetlands. Losing streams are defined in 10 CSR 20-7.031(1)(O) and are designated on the losing stream dataset or determined by the Department to lose 30% or more of flow to the subsurface.

WBID: Waterbody Identification Number: Missouri Use Designation Dataset per 10 CSR 20-7.031(1)(Q) and (S) as 100K Extent-Remaining Streams or newer; 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; New C streams described on the dataset per 10 CSR 20-7.031(2)(A)3 as 100K Extent Remaining Streams.

HUC: Hydrologic Unit Code https://water.usgs.gov/GIS/huc.html

Designated Uses:
10 CSR 20-7.031(1)(C)1: **ALP** – Aquatic Life Protection (formerly AQL); current uses are defined to ensure the protection and propagation of fish shellfish and wildlife, 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 ALP effluent limitations in 10 CSR 20-7.031 Table A1-B3 for all habitat designations unless otherwise specified.
10 CSR 20-7.031(1)(C)2: Recreation in and on the water
WBC is 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 not included in WBC-A;
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 and drinking of water;
IRR – irrigation for use on crops utilized for human or livestock consumption, includes aquifers per 10 CSR 20-7.031(6)(A);
LWW – Livestock and Wildlife Watering (current narrative use is defined as LWP = Livestock and Wildlife Protection), includes aquifers per 10 CSR 20-7.031(6)(A);
DWS – Drinking Water Supply, includes aquifers per 10 CSR 20-7.031(6)(A);
IND – industrial water supply
10 CSR 20-7.031(1)(C)8 to 11: Wetlands (10 CSR 20-7.031 Tables A1-B3) do 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 20-7.015(7) and 10 CSR 20-7.031(6): **GRW** = Groundwater

Other Applicable Criteria:
10 CSR 20-7.031(4): **GEN** –; GEN may be assigned on a case by case basis if the NHD line is determined to be a water requiring protection by the Watershed Protection Section.
10 CSR 20-7.031(5)(N)6: **NNC** – lake numeric nutrient criteria apply
Water Quality Standards Search https://apps5.mo.gov/mocwis_public/waterQualityStandardsSearch.do

WATERS OF THE STATE DESIGNATIONS

Waters of the state are divided into seven categories per 10 CSR 20-7.015(1)(B)1 through 7. The applicable water of the state category is listed below. Missouri's technology-based effluent regulations are found in [10 CSR 20-7.015] and are implemented in 10 CSR 20-7.015(2) through (8). When implementing technology regulations, considerations are made for the facility type, discharge type, and category of waters of the state. Stormwater discharges and land application sites are not subject to limitations found in 10 CSR 20-7.015. Effluent limitation derivations are discussed in PART IV: EFFLUENTS LIMITS DETERMINATIONS.

- ✓ Missouri or Mississippi River; identified at 10 CSR 20-7.015(2)
- ✓ All other waters; identified at 10 CSR 20-7.015(1)(B)7 and 10 CSR 20-7.015(8)

EXISTING WATER QUALITY & IMPAIRMENTS

The receiving waterbody(s) segment(s), upstream, and downstream confluence water quality was reviewed. No relevant water quality data was available. The USGS https://waterdata.usgs.gov/nwis/sw or the Department's quality data database was reviewed. https://apps5.mo.gov/mocwis_public/wqa/waterbodySearch.do and https://apps5.mo.gov/wqa/ The Department's quality data database was reviewed. https://apps5.mo.gov/mocwis_public/wqa/waterbodySearch.do and https://apps5.mo.gov/wqa/ Impaired waterbodies which may be impacted by discharges from this facility were determined. Impairments include waterbodies on the 305(b) or 303(d) list and those waterbodies or watersheds under a TMDL. https://dnr.mo.gov/water/what-were-doing/water-planning/quality-standards-impaired-waters-total-maximum-daily-loads/tmdls 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. https://dnr.mo.gov/water/what-were-doing/water-planning/quality-standards-impaired-waters-total-maximum-daily-loads/impaired-waters 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. A TMDL is a calculation of the maximum amount of a given pollutant 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 for that watershed may be developed. The TMDL shall include the WLA calculation.

- ✓ Not applicable; this stream was listed on the 2018 Missouri 303(d) List for Escherichia coli. It was removed from the 303(d) List when water quality standards were attained.

WATERBODY MIXING CONSIDERATIONS

For outfall(s) identified below, mixing is afforded, see low flow values [calculated for the receiving stream/calculated utilizing the lake dimensions] below. For information how this regulation is used in determining effluent limits with or without mixing, see WASTELOAD ALLOCATION in Part III. If the base stream flow is above 0.1 cfs, mixing may be applied if 1) zones of passage are present, 2) mixing velocities are sufficient and stream bank configuration allows, 3) the aquatic life support system is maintained, 4) mixing zones do not overlap, 5) there are no drinking water intakes in the vicinity downstream, 6) the stream or lake has available pollutant loading to be allocated, and 7) downstream uses are protected. If mixing was not allowed in this permit, the facility may submit information, such as modeling, as to why mixing may be afforded to the outfall.

RECEIVING STREAM LOW-FLOW VALUES

Data were obtained using the USGS tool StreamStats at https://streamstats.usgs.gov/ss/
ZID cannot be more than 10x the DF.

Low-Flow Values and Mixing Considerations:				Mixing Zone (CFS)			Zone of Initial Dilution (CFS)		
Receiving stream	Low-Flow Values (CFS)*			[10 CSR 20-7.031(5)(A)4.B.(II)(a)]			[10 CSR 20-7.031(5)(A)4.B.(II)(b)]		
	1Q10	7Q10	30Q10	1Q10	7Q10	30Q10	1Q10	7Q10	30Q10
Mississippi River (P)	56,577	60,552	67,159	14144.3	15138	16789.8	13.3	13.3	13.3
Joachim Creek (P)	N/A	4.255	N/A	N/A	1.064	N/A	N/A	0.1064	N/A

PART III. RATIONALE AND DERIVATION OF PERMIT CONDITIONS

ANTIBACKSLIDING

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 reissuance conform to the anti-backsliding provisions of CWA §402(o), and 40 CFR 122.44.
  - ✓ 40 CFR 122.44(l)(i)(B)(1); 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 DMR data were available to support elevated effluent limitations. When calculating site specific limitations, the average flow and CV (coefficient of variation) changed which resulted in elevated daily maximums and monthly average for Cadmium at outfall #001.
    - Permit writer removed total settleable solids monitoring. DMRs showed values ranging from 0 mL/L/hr to 0.2 mL/L/hr showing this is not a pollutant of concern at the site. Furthermore, the facility already monitors for total suspended solids.
    - Permit writer removed WET testing at outfall 001 due to no reasonable potential. Reasonable potential was determined to not exist due to the waste load allocation at Joachim Creek.
    - Based on last five years of monitoring, the total nitrogen was never more than 2 mg/L. Therefore, this facility is not a significant source.
  - ✓ 40 CFR 122.44(l)(i)(B)(2); the Department determined technical mistakes or mistaken interpretations of law were made in issuing the permit under CWA §402(a)(1)(b).
    - The previous permit special condition indicated spills from hazardous waste substances must be reported to the department. However, this condition is covered under standard conditions therefore was removed from special conditions.
    - The previous permit's special conditions required sampling of total petroleum hydrocarbons (TPH) under the decision model to discharge stormwater having a sheen in secondary containment. The special condition has been revised in all permits beginning in 2015 to remove TPH as 40 CFR 136 does not contain any approved methods for the TPH parameter nor are there water quality standards for TPH. This permit requires oil and grease and BTEX (benzene, toluene, ethylbenzene, and xylene) sampling of the potentially contaminated stormwater in secondary containment. The facility need only sample for these constituents prior to release when a sheen or petroleum odor is present.

ANTIDEGRADATION REVIEW

Process water discharges with new, altered, or expanding flows, 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 https://dnr.mo.gov/document-search/antidegradation-implementation-procedure
Per [10 CSR 20-7.015(4)(A)], new discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream, or 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 has not submitted information proposing expanded or altered process water discharge; no further degradation proposed therefore no further review necessary.

BEST MANAGEMENT PRACTICES

Minimum site-wide best management practices are established in this permit to ensure all facilities are managing their sites equally to protect waters of the state from certain activities which could cause negative effects in receiving water bodies. While not all sites require a SWPPP because the SIC codes are specifically exempted in 40 CFR 122.26(b)(14), these best management practices are not specifically included for stormwater purposes. These practices are minimum requirements for all industrial sites to protect waters of the state. If the minimum best management practices are not followed, the facility may violate general criteria [10 CSR 20-7.031(4)]. Statutes are applicable to all permitted facilities in the state, therefore pollutants cannot be released unless in accordance with 644.011 and 644.016 (17) RSMo.

CLOSURE

To properly decontaminate and close a wastewater basin, the facility must draft a complete closure plan, and include the Closure Request Form #2512 https://dnr.mo.gov/document-search/facility-closure-request-form-mo-780-2512 The publication, Wastewater Treatment Plant Closure - PUB2568 found at https://dnr.mo.gov/print/document-search/pub2568 may be helpful to develop the closure plan. The regional office will then approve the closure plan, and provide authorization to begin the work. The regional office contact information can be found here: https://dnr.mo.gov/about-us/division-environmental-quality/regional-office

COST ANALYSIS FOR COMPLIANCE (CAFCOM)
Pursuant to 644.145 RSMo, when incorporating a new requirement for discharges from publicly owned facilities, or when enforcing provisions of this chapter or the CWA, pertaining to any portion of a publicly owned facility, the Department shall make a finding of affordability on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the CWA. This process is completed through a CAFCom. Permits not including new requirements may be deemed affordable.
✓ The Department is not required to complete a cost analysis for compliance because the facility is not publicly owned.

CHANGES IN DISCHARGES OF TOXIC POLLUTANT
This special condition reiterates the federal rules found in 40 CFR 122.44(f) for technology treatments and 122.42(a)(1) for all other toxic substances. In these rules, the facility is required to report changes in amounts of toxic substances discharged. Toxic substances are defined in 40 CFR 122.2 as "…any pollutant listed as toxic under section 307(a)(1)" or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing section 405(d) of the CWA." Section 307 of the clean water act then refers to those parameters listed in 40 CFR 401.15 and any other toxic parameter the Department determines is applicable for reporting under these rules in the permit. The facility must also consider any other toxic pollutant in the discharge as reportable under this condition and must report all increases to the Department as soon as discovered in the effluent. The Department may open the permit to implement any required effluent limits pursuant to CWA §402(k) where sufficient data was not supplied within the application but was supplied at a later date by either the facility or other resource determined to be representative of the discharge, such as sampling by Department personnel.

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 facility is not currently under Water Protection Program enforcement action.

DISCHARGE MONITORING REPORTING – ELECTRONIC (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 requiring electronic data reporting. To comply with the federal rule, the Department is requiring all facilities to submit discharge monitoring data and reports online. To review historical data, the Department's database has a publically facing search engine, available at https://apps5.mo.gov/mocwis_public/dmrDisclaimer.do

Registration and other information regarding MoGEM can be found at https://dnr.mo.gov/mogem. Information about the eDMR system can be found at https://dnr.mo.gov/env/wpp/edmr.htm.The first user shall register as an Organization Official and the association to the facility must be approved by the Department. To access the eDMR system, use: https://apps5.mo.gov/mogems/welcome.action For assistance using the eDMR system, contact edmr@dnr.mo.gov or call 855-789-3889 or 573-526-2082. To assist the facility in entering data into the eDMR system, the permit describes limit sets designators in each table in Part A of the permit. Facility personnel will use these identifiers to ensure data entry is being completed appropriately. For example, M for monthly, Q for quarterly, A for annual, and others as identified.

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 facility must first submit an eDMR Waiver Request form available on the Department's web page. A request must be made for each operating permit. An approved waiver is not 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.
✓ This facility has not been granted a waiver, nor would this facility qualify for a waiver.

DOMESTIC WASTEWATER, SLUDGE, AND BIOSOLIDS
Domestic wastewater is defined as wastewater originating primarily from the sanitary conveyances of bathrooms and kitchens. Domestic wastewater excludes stormwater, wash water, animal waste, process and ancillary wastewater.
✓ Not applicable; this facility discharges domestic wastewater to an off-site permitted wastewater treatment facility (POTW).

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. Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for productive use (i.e. fertilizer) and after having pathogens removed.
✓ Not applicable; the facility does not manage domestic wastewater on-site.

EFFLUENT LIMITATIONS
Two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs) are reviewed. Permits are required to establish the most stringent or most protective limit. If the TBEL or WQBEL does not provide adequate protection for the receiving water, then the other must be used per 10 CSR 20-7.015(9)(A) or 40 CFR 122.44(b)(1). See WASTELOAD ALLOCATION below which describes how WQBEL wasteload allowances are established under the permit. Effluent limitations derived and established for this permit are based on current operations of the facility. Any flow through the outfall is considered a discharge and must be sampled and reported as provided in the permit. Daily maximums and monthly averages are required per 40 CFR 122.45(d)(1) for continuous discharges (not from a POTW).

EMERGENCY DISCHARGE
For non-discharging permits, some permits may allow a small amount of wastewater discharge under very specific circumstances.
✓ Not applicable; this permit does not contain conditions allowing emergency discharges.

FEDERAL EFFLUENT LIMITATION GUIDELINES
Effluent Limitation Guidelines, or ELGs, are found at 40 CFR 400-499. https://www.ecfr.gov/current/title-40/chapter-I/subchapter-N 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. Effluent guidelines are not always established for every pollutant present in a point source discharge. In many instances, EPA promulgates effluent guidelines for an indicator pollutant. Industrial facilities complying with the effluent guidelines for the indicator pollutant will also control other pollutants (e.g. pollutants with a similar chemical structure). For example, EPA may choose to regulate only one of several metals present in the effluent from an industrial category, and compliance with the effluent guidelines will ensure similar metals present in the discharge are adequately controlled. All are technology based limitations which must be met by the applicable facility at all times. If Reasonable Potential is established for any particular parameter, and water-quality derived effluent limits are more protective of the receiving water's quality, the WQS will be used as the limiting factor in accordance with 40 CFR 122.44(d) and 10 CSR 20-7.015(9)(A).
✓ The facility has an associated ELG (40 CFR 421) but has changed processes and therefore the ELG does not apply.

GENERAL CRITERIA CONSIDERATIONS
In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into permits for pollutants determined to cause, have reasonable potential to cause, or to contribute to, an excursion above any water quality standard, including narrative water quality criteria. In order to comply with this regulation, permit decisions were made by completing a reasonable potential determination on whether discharges have reasonable potential to cause, or contribute to an excursion of the general criteria listed in 10 CSR 20-7.031(4). See Part III REASONABLE POTENTIAL for more information. In instances where reasonable potential exists, the permit includes limitations to address the reasonable potential. In discharges where reasonable potential does not exist, the permit may include monitoring to later determine the discharge's potential to impact the narrative criteria. Additionally, 644.076.1 RSMo, as well as Part I §D – Administrative Requirements of Standard Conditions included in this permit state it shall be unlawful for any person to cause or allow any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of §§644.006 to 644.141 of the Missouri Clean Water Law or any standard, rule, or regulation promulgated by the commission. See Part IV for specific determinations.

GROUNDWATER MONITORING
Groundwater is a water of the state according to 644.016(27) RSMo, 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.

LAND APPLICATION
Land application, or surficial dispersion of wastewater and/or sludge, is performed by facilities as an alternative to discharging. Authority to regulate these activities is pursuant to 644.026 RSMo. The Department implements requirements for these types of operations pursuant to 10 CSR 20-6.015(4)(A)1 which instructs the Department to develop permit conditions containing limitations, monitoring, reporting, and other requirements to protect soils, crops, surface waters, groundwater, public health, and the environment.
✓ Not applicable; this permit does not authorize operation of a surficial land application system to disperse wastewater or sludge.

LAND DISTURBANCE
Land disturbance, sometimes called construction activities, are actions which cause disturbance of the root layer or soil; these include clearing, grading, and excavating of the land. 40 CFR 122.26(b)(14) and 10 CSR 20-6.200(3) requires permit coverage for these activities. Coverage is not required for facilities when only providing maintenance of original line and grade, hydraulic capacity, or to continue the original purpose of the facility.

- ✓ Not applicable; this permit does not provide coverage for land disturbance activities. The facility may obtain a separate land disturbance permit (MORA) online at https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/stormwater/construction-land-disturbance MORA permits do not cover disturbance of contaminated soils, however, site specific permits such as this one can be modified to include appropriate controls for land disturbance of contaminated soils by adding site-specific BMP requirements and additional outfalls.

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. https://dnr.mo.gov/water/business-industry-other-entities/reporting/major-water-users All major water users are required by law to register water use annually (Missouri Revised Statutes Chapter 256.400 Geology, Water Resources and Geodetic Survey Section). https://dnr.mo.gov/document-search/frequently-asked-major-water-user-questions-pub2236/pub2236

- ✓ Applicable; this facility is a major water user and is registered with the state under registration number 58484285.

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). "Aquatic Life Protection" in 10 CSR 20-7.031 Tables A1 and A2, as well as general criteria protections in 10 CSR 20-7.031(4) apply to this discharge. The hardness value used for hardness-dependent metals calculations is typically based on the ecoregion's 50th percentile (also known as the median) per 10 CSR 20-7.015(1)(CC), and is reported in the calculations below, unless site specific data was provided. Per a memorandum dated August 6, 2019, the Director has determined limit derivation must use the median of the Level III Ecoregion to calculate permit limits, or site specific data if applicable. Additional use criterion (HHP, DWS, GRW, IRR, or LWW) may also be used, as applicable, to determine the most protective effluent limit for the receiving waterbody's class and uses. HHP, DWS, GRW, IRR, or LWW do not take hardness into account.

MODIFICATION REQUESTS

Facilities have the option to request a permit modification from the Department at any time under RSMo 644.051.9. Requests must be submitted to the Water Protection Program with the appropriate forms and fees paid per 10 CSR 20-6.011. It is recommended facilities contact the program early so the correct forms and fees are submitted, and the modification request can be completed in a timely fashion. Minor modifications, found in 40 CFR 122.63, are processed without the need for a public comment period. Major modifications, those requests not explicitly fitting under 40 CFR 122.63, do require a public notice period. Modifications to permits must be completed when: a new pollutant is found in the discharge; operational or functional changes occur which affect the technology, function, or outcome of treatment; the facility desires alternate numeric benchmarks; or other changes are needed to the permit.

Modifications are not required when utilizing or changing additives in accordance with the publication https://dnr.mo.gov/document-search/additive-usage-wastewater-treatment-facilities-pub2653/pub2653 nor are required when a temporary change or provisional discharge has been authorized by the regional office. While provisional discharges may be authorized by the regional office, they will not be granted for more than the time necessary for the facility to obtain an official modification from the Water Protection Program. Temporary provisional discharges due to weather events or other unforeseen circumstances may or may not necessitate a permit modification. The facility may ask for a Compliance Assistance Visit (CAV) from the regional office to assist in the decision-making process; CAVs are provided free to the permitted entity.

MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)

This permit allows discharge to waters of the state. The discharges this permit allows may flow into and through the city's stormwater collection system. Regulated MS4s are managed by public entities, cities, municipalities, or counties. Phase I MS4s are Kansas City, Independence, and Springfield. Phase II MS4s are determined by population or location in an urbanized area. Regulated MS4s are required to develop and maintain a stormwater management program. These programs have requirements for developing and implementing a plan to detect and eliminate illicit discharges to the storm sewer system. Phase I MS4s also maintain oversight programs for industrial and high risk runoff. Regulated MS4s may keep a list of all of the other regulated dischargers (wastewater and stormwater) flowing through their system. If this facility discharges into a separate storm sewer system, the facility must make contact with the owner/operator of that system to coordinate with them. Regulated MS4 operators may request to inspect facilities discharging into their system; a list of regulated MS4s can be viewed at https://dnr.mo.gov/document-search/missouris-regulated-municipal-separate-storm-sewer-systems-ms4s or search by permit ID: MOR04 at https://apps5.mo.gov/mocwis_public/permitSearch.do to determine if this facility needs to contact a local stormwater authority.

NUTRIENT MONITORING

Nutrient monitoring is required for facilities characteristically or expected to discharge nutrients (nitrogenous compounds and/or phosphorus) when the design flow is equal to or greater than 0.1 MGD per 10 CSR 20-7.015(9)(D)8. This requirement is applicable to all Missouri waterways.

- ✓ The total design flow for this facility is 0.86 MGD and the facility discharges nutrients, therefore nutrient monitoring is required on a quarterly basis per 10 CSR 20-7.015(9)(D)8.A. for discharges equal to or greater than 0.1 MGD but less than 1 MGD. This facility is required to monitor for phosphorus.

Water quality standards per 10 CSR 20-7.031(5)(N) describe nutrient criteria requirements assigned to lakes (which include reservoirs) in Missouri, equal to or greater than 10 acres during normal pool conditions. The Department's Nutrient Criteria Implementation Plan (NCIP) may be reviewed at: https://dnr.mo.gov/document-search/nutrient-criteria-implementation-plan-july-27-2018 Discharges of wastewater in to lakes or lake watersheds designated as L1 (drinking water use) are prohibited per 10 CSR 20-7.015(3)(C).

- ✓ Not applicable; this facility does not discharge in a lake watershed or the lake is less than 10 acres.

OIL/WATER SEPARATOR SYSTEMS AND USED OIL

Oil water separator (OWS) systems are frequently found at industrial sites where process water, wastewater, or stormwater may contain oils, petroleum, greases, oily wastewaters, or other immiscible liquids requiring separation. Food industry discharges typically require treatment prior to discharge to publically owned treatment works. Per 10 CSR 26-2.010(2)(B), all oil water separators classified as underground storage tanks (UST) which meet the volume requirements, must be operated according to manufacturer's specifications. OWS which are USTs may be authorized in NPDES permits per 10 CSR 26-2.010(2)(B) or otherwise will be regulated as a underground petroleum storage tank under tank rules. A facility may operate an OWS which is not considered a UST for the wastewater or stormwater at any facility without specific NPDES permit authorization. Alternatively, a facility is not required to cover a UST OWS under the NPDES permit if they desire to obtain alternative regulatory compliance. OWS treating animal, vegetable, or food grade oils are not required to be authorized under 10 CSR 20-26-2.020(2)(B). All best management practices for all OWS systems must be adhered. In 2017, field-poured concrete tanks, previously exempted from the tanks rules, lost their exempt status. Facilities must re-evaluate these concrete structures pursuant to these now relevant rules. Adjacent USTs are not covered by these regulations.

Any and all water treatment systems designed to remove floating immiscible oils are termed oil water separators. If a device is intended to capture oil and separate it from water which is to be discharged, this generally qualifies that oil as used oil (if it is petroleum-based in nature). Used oil and oily sludge must be disposed of in accordance with 10 CSR 25-11.279. Pursuant to 40 CFR 279.20(b)(2)(ii)(B), separating used petroleum-based oil from wastewater generated on-site (to make the wastewater acceptable for discharge or reuse pursuant to Federal or state regulations governing the management or discharge of wastewaters) are considered used oil generators and not processors under self-implementing 40 CFR 279 Standards For The Management Of Used Oil. Oily wastes generated by OWS are also generally subject to Spill Prevention, Control, and Countermeasure (SPCC) regulations.

OPERATOR CERTIFICATION REQUIREMENTS

Operators or supervisors of operations at regulated domestic wastewater treatment facilities shall be certified in accordance with 10 CSR 20-9 and any other applicable state law or regulation.

- ✓ Not applicable; this facility is not required to have a certified operator. This permit does not cover domestic wastewater or the domestic wastewater population equivalent (PE) is less than two hundred (200) individuals. Additionally, this facility is not owned or operated by a municipality, public sewer district, county, public water supply district, or private sewer company regulated by the Public Service Commission, or operated by a state or federal agency. Private entities are exempted from the population equivalent requirement unless the Department has reason to believe a certified operator is necessary.

PERMIT SHIELD

The permit shield provision of the Clean Water Act (Section 402(k)) and Missouri Clean Water Law (644.051.16 RSMo) provides that when a permit holder is in compliance with its NPDES permit or MSOP, it is effectively in compliance with certain sections of the Clean Water Act, and equivalent sections of the Missouri Clean Water Law. In general, the permit shield is a legal defense against certain enforcement actions, but is only available when the facility is in compliance with its permit and satisfies other specific conditions, including having completely disclosed all discharges and all facility processes and activities to the Department at time of application. It is the facility's responsibility to ensure that all potential pollutants, waste streams, discharges, and activities, as well as wastewater land application, storage, and treatment areas, are all fully disclosed to the Department at the time of application or during the draft permit review process. Previous permit applications are not necessarily evaluated or considered during permit renewal actions. All relevant disclosures must be provided with each permit application, including renewal applications, even when the same information was previously disclosed in a past permit application. Subsequent requests for authorization to discharge additional pollutants, expanded or newly disclosed flows, or for authorization for previously unpermitted and undisclosed activities or discharges, will likely require an official permit modification, including another public participation process.

PRETREATMENT

This permit does not regulate pretreatment requirements for facilities discharging to an accepting permitted wastewater treatment facility. If applicable, the receiving entity (the publicly owned treatment works - POTW) is to ensure compliance with any effluent limitation guidelines for pretreatment listed in 40 CFR Subchapter N per 10 CSR 20-6.100. Pretreatment regulations per 644.016 RSMo are limitations on the introduction of pollutants or water contaminants into publicly owned treatment works or facilities.

- ✓ Not applicable, this facility does not discharge industrial wastewater to a POTW. Domestic wastewater is not subject to pretreatment requirements.

REASONABLE POTENTIAL (RP)

Regulations per 10 CSR 20-7.015(9)(A)2 and 40 CFR 122.44(d)(1)(i) requires effluent limitations for all pollutants which 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. Per 10 CSR 20-7.031(4), general criteria shall be applicable to all waters of the state at all times; however, acute toxicity criteria may be exceeded by permit allowance in zones of initial dilution, and chronic toxicity criteria may be exceeded by permit allowance in mixing zones. A reasonable potential analysis (RPA) is a numeric RP decision calculated using effluent data provided by the facility for parameters that have a numeric Water Quality Standard (WQS). If 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 the pollutant per 40 CFR Part 122.44(d)(1)(iii) and the most stringent limits per 10 CSR 20-7.031(9)(A). The RPA is performed using the *Technical Support Document for Water Quality Based Toxics Control (TSD)* methods (EPA/505/2-90-001) for continuous discharges. See additional considerations under Part II WATERBODY MIXING CONSIDERATIONS and Part III WASTELOAD ALLOCATIONS. Wasteload allocations are determined utilizing the same equations and statistical methodology. Absent sufficient effluent data, effluent limits are derived without consideration of effluent variability and is assumed to be present unless found to be absent to meet the requirements of antidegradation review found in 10 CSR 20-7.031(3) and reporting of toxic substances pursuant to 40 CFR 122.44(f). The Department's permit writer's manual (https://dnr.mo.gov/water/business-industry-other-entities/technical-assistance-guidance/wastewater-permit-writers-manual), the EPA's permit writer's manual (https://www.epa.gov/npdes/npdes-permit-writers-manual), program policies, and best professional judgment guide each decision. Each parameter in each outfall is carefully considered; and all applicable information regarding: technology based effluent limitations, effluent limitation guidelines, water quality standards, inspection reports, stream water quality information, stream flows, uses assigned to each waterbody, and all applicable site specific information and data gathered by the facility through discharge monitoring reports and renewal (or new) application sampling.

Reasonable potential determinations (RPD) are based on physical conditions of the site as provided in Sections 3.1.2, 3.1.3, and 3.2 of the TSD using best professional judgement. An RPD consists of evaluating visual observations for compliance with narrative criteria, non-numeric information, or small amounts of numerical data (such as 1 data point supplied in the application). Narrative criteria with RP typically translate to a numeric WQS, so a parameter's establishment being based on narrative criteria does not necessarily make the permit writer's decision an RPD vs RP—how the data is collected does, however. For example, a facility with orange discharge can have RP for narrative criteria like color, but a numeric iron limit is established to account for the violation of narrative criteria based on effluent data submitted by the permittee. When insufficient data is received to make a determination on RP based on numeric effluent data, the RPD decisions are based on best professional judgment considering the type of effluent discharged, the current operational controls in place, and historical overall management of the site. In the case of iron causing excursions of narrative criteria for color, if a facility has not had iron monitoring in a previous permit, adding iron monitoring would be an RPD, since numeric data isn't being used in the determination, but observable, site-specific conditions are.

When the facility is performing surficial or subsurface land application, the volume of water, frequency of application, type of vegetation, soil type, land slopes, and general overall operating conditions are considered. 10 CSR 20-8 are regulations for the minimum operating conditions for land application; these regulations cannot be excused even if there is no RP. RP is reserved for discharging outfalls given that these outfalls are the only ones which water quality standards apply to, but the process is similar as the site conditions are compared to regulations, soil sampling, pollutant profile, and other site specific conditions. In the case of non-discharging outfalls, a permit writer instead performs an RPD to determine monitoring requirements.

The TSD RPA method cannot be performed on stormwater as the flow is intermittent and highly variable. A stormwater RPD consists of reviewing application data and discharge monitoring data and comparing those data to narrative or numeric water quality criteria. For stormwater outfalls, considerations are required per 10 CSR 6.200(6)(B)2: A. application and other information supplied by the facility; B. effluent guidelines; C. best professional judgment; D. water quality; and E. BMPs.

RPDs are also performed for WET testing in wastewater. While no WET regulations specific to industrial wastewater exist, 40 CFR 122.21(j)(5) implies the following can be considered: 1) the variability of the pollutants; 2) the ratio of wastewater flow to receiving stream flow; and 3) current technology employed to remove toxic pollutants. Generally, sufficient data does not exist to mathematically determine RPA for WET, but instead compares the data for other toxic parameters in the wastewater with the necessity to implement WET testing with either monitoring or limits. When toxic parameters exhibit RP, WET testing is generally included in the permit as an RPD. However, if all toxic parameters are controlled via limitations or have exhibited no toxicity in the past, then WET testing may be waived. Only in instances where the wastewater is well characterized can WET testing be waived.

WET testing is not implemented for stormwater as 10 CSR 20-7.015(9)(L) does not apply to stormwater. Precipitation can itself be acidic, or may contain run-in from other un-controlled areas and can provide false positives. Stormwater discharges do not adhere to the same principles of wastewater RPAs because stormwater discharges are not continuous, and at the time of precipitation discharge the receiving stream is also no longer at base (0) flow, meaning that using RP to develop WET testing requirements for stormwater is unrepresentative. The Department works with the Missouri Department of Conservation and has understanding of streams already exhibiting toxicity, even without the influence of industrial wastewater or stormwater. Facilities discharging to streams with historical toxicity are required to use laboratory water for dilution, instead of water from the receiving stream.

TSD methods encountered may be § 3.3.2, § 5.7.3 for metals, and § 5.4.1 for chloride. Part IV EFFLUENT LIMIT DETERMINATIONS provides specific decisions related to this permit.

✓ A statistical RPA was conducted on appropriate parameters. A more detailed version including calculations of this RPA is available upon request.

Parameter	CMC*	RWC Acute*	CCC*	RWC Chronic*	n**	Range max/min	CV***	MF	RP Yes/No
Arsenic	340.00	0.53	150.00	0.00	55	4.1/0.57	0.39	1.41	No
Cadmium, TR	10.73	15.46	1.43	0.01	55	76.1/1.3	1.07	2.23	Yes
Copper, TR	28.16	6.37	17.59	0.01	55	35.6/1.9	0.84	1.97	No
Lead, TR	209.86	83.00	8.18	0.08	55	371/0	1.26	2.46	No
Zinc, TR	225.12	112.46	223.30	0.11	55	446/3	1.55	2.77	No
WET - Acute	0.30	0.72	n/a	0.00	9	2.5/0	0.60	3.16	No

Units are (µg/L) unless otherwise noted.

n number of samples; if the number of samples is 10 or greater, then the CV value must be used in the WQBEL for the applicable constituent.
CV Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the mean of the same sample set.
CCC continuous chronic concentration
CMC continuous maximum concentration
RWC Receiving Water Concentration: concentration of a toxicant or the parameter in the receiving water after mixing (if applicable)
MF Multiplying Factor; 99% confidence level and 99% probability basis
RP Reasonable Potential: an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

REGIONAL OFFICES (ROS)

Regional Offices will provide a compliance assistance visit at a facility's request; a regional map with links to phone numbers can be found here: https://dnr.mo.gov/about-us/division-environmental-quality/regional-office. Or use https://dnr.mo.gov/compliance-assistance-enforcement to request assistance from the Region online.

RENEWAL REQUIREMENTS

The renewal special condition permit requirement is designed to guide the facility to prepare and include all relevant and applicable information in accordance with 10 CSR 20-6.010(7)(A)-(C), and if applicable, federal regulations. The special condition may not include all requirements and requests for additional information may be made at the time of permit renewal under 644.051.13(5) RSMo and 40 CFR 122.21(h). Prior to submittal, the facility must review the entire submittal to confirm all required information and data is provided; it is the facility's responsibility to discern if additional information is required. Failure to fully disclose applicable information with the application or application addendums may result in a permit revocation per 10 CSR 20-6.010(8)(A) and may result in the forfeiture of permit shield protection authorized in 644.051.16 RSMo. Forms are located at: https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/wastewater

SAMPLING FREQUENCY JUSTIFICATION

Sampling and reporting frequency was generally retained from previous permit. 40 CFR 122.45(d)(1) indicates all continuous discharges, such as wastewater discharges, shall be permitted with daily maximum and monthly average limits. Minimum sampling frequency for all parameters is annually per 40 CFR 122.44(i)(2).

Sampling frequency for stormwater-only outfalls is typically quarterly even though BMP inspection occurs monthly or more often dependent on site needs. 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 will consider implementing 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, volatile organic compounds, and others. For further information on sampling and testing methods see 10 CSR 20-7.015(9)(D)2.

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 the terms and conditions of an operating permit. SOCs are allowed under 40 CFR 122.47 and 10 CSR 20-7.031(11) providing certain conditions are met. An SOC is not allowed:

- For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed in accordance with 40 CFR 125.3.
- For a newly constructed facility in most cases per 644.029 RSMo. Newly constructed facilities must meet all applicable effluent limitations (technology and water quality) when discharge begins. New facilities are required to install the appropriate control technologies as specified in a permit or antidegradation review. A SOC is allowed for a new water quality based effluent limit not included in a previously public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
- To develop a TMDL, UAA, or other study associated with development of a site specific criterion. A facility is not prohibited from conducting these activities, but a SOC may not be specifically granted for conducting these activities.

In order to provide guidance in developing SOCs, and to attain a greater level of consistency, the Department issued a policy on development of SOCs on October 25, 2012. The policy provides guidance for standard time frames for schedules for common activities, and guidance on factors to modify the length of the schedule.

✓ Not applicable; this permit does not contain a SOC. Limits have not become more restrictive.

SECONDARY CONTAINMENT:

The Department has established minimum requirements for secondary containment areas. These conditions are necessary to prevent contamination in stormwater before storm events, and before stormwater has a risk for contamination in these areas. By including dry inspection requirements, the Department can be confident in the site's operational controls. By fixing all leaks and removing debris from the secondary containment areas prior to precipitation events, stormwater collected in the areas are unlikely to yield contamination or elicit sheen thereby allowing immediate removal of stormwater which is in compliance with SPCC plans.

The Department is establishing a permit requirement for visual inspection frequency commiserate with the potential for contamination for secondary containment(s) to protect waters of the state from petroleum contamination, oils and greases, or sheen pursuant to 10 CSR 20-7.031(4)(B); and other water contaminants as necessary. These conditions establish permissible allowances for the facility to discharge stormwater that was either free of sheen or has been cleaned of sheen, but only if the facility has demonstrated, through inspections, the facility has been effectively maintaining tanks and appurtenances in the secondary containment areas.

Historic petroleum secondary containment language required laboratory testing for benzene, toluene, ethylbenzene, and xylene (BTEX) upon sheen observance; to have all laboratory testing completed prior to release of the contained stormwater; and to be below established numeric limits for BTEX prior to release. However, it was noted by commenters that when the Department requires facilities to keep the sheeny accumulated stormwater in the secondary containment for long periods of time (time needed to obtain laboratory results for BTEX, it is contrary to other relevant regulations, which state contaminated stormwater must be disposed of as quickly as possible. Facilities then developed alternative actions, such as tanking sheeny secondary containment stormwater until the expedited BTEX laboratory analysis was completed, then releasing the water from the tank. These alternative methods of tanking sheeny stormwater are both costly and resource-intensive, requiring worker time which needs to be directed to other facility activities. By shifting worker time from post-sheen-occurrence management to pre-contamination dry-inspections, the Department has alleviated several commenter's concerns regarding past secondary containment special conditions.

By allowing on-site sheen removal, then discharge, the Department is allowing expedited drainage of the secondary containment without delay. When a facility properly maintains tanks and appurtenances via these series of inspections and provides sheen removal prior to release, then the facility can maintain compliance with Missouri's requirements for the safe storage and handling of flammable and combustible liquids (2 CSR 90-30.050), storage tank secondary containment volume requirements (40 CFR 112), and Missouri's general water quality criteria 10 CSR 20-7.031(4)(B).

The Department revised petroleum secondary containment special conditions in permits based on National Fire Protection Association (NFPA) standards [mainly NFPA 30], enforceable under Missouri fire prevention codes [2 CSR 90-30.050], and Spill Prevention, Control, and Countermeasure (SPCC) [40 CFR 112] requirements. 2 CSR 90-30.050(20) and (21) specifically reference the Department of Natural Resources' environmental regulations. To apply these referenced conditions, this permit requires periodic secondary containment inspections.

It is acceptable for the inspections this permit requires to contradict the facility's SPCC plan inspection frequency, as these two requirements have different goals; the frequencies designated in the SPCC plan are based on the facility's evaluation of a tankage system's potential for catastrophic failure, not small leaks that result in sheeny stormwater.

The inspection frequency this permit identifies for secondary containments have the capability to identify small leaks from appurtenances which have the possibility to cause contamination in standing stormwater, not simply a catastrophic failure. SPCC requirements pursuant to 40 CFR 112.8(c)(3)(iv) and 40 CFR 112.12(c)(3)(iv) also dictate that release of contaminated stormwater is prohibited unless regulated under an NPDES permit which allows for bypassing pursuant to 40 CFR 122.41(m)(3). As this permit does not allow bypassing, the facility must follow the inspection steps listed in the special conditions of this permit.

Many facilities are subject to the requirements outlined by the EPA in 40 CFR 112.3, also known as the SPCC plan: detailing the equipment, workforce, procedures, and steps necessary to prevent, control, and provide adequate countermeasures to a discharge. These regulations minimally require secondary containment and diversion structures be maintained. Title 40 regulations are developed by the Environmental Protection Agency. The self-certified SPCC plan a facility designs, while aimed to protect waters of the state and United States (WOTS/WOTUS), may differ considerably from site to site. This permit's conditions serves to treat similar facilities similarly. The EPA did not establish minimum frequency container or containment inspections; this permit does establish a minimum frequency, and concurrent inspections for this permit and per the SPCC plan may occur. This permit does not require a professional engineer (PE) inspect the tankage systems.

SPILLS, OVERFLOWS, AND OTHER UNAUTHORIZED DISCHARGE REPORTING

Per 260.505 RSMo, 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 possible 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.
https://revisor.mo.gov/main/OneSection.aspx?section=260.500&bid=13989&hl=

Any other spills, overflows, or unauthorized discharges reaching waters of the state must be reported to the regional office during normal business hours, or after normal business hours, to the Department's 24 hour Environmental Emergency Response spill line at 573-634-2436.

Certain industrial facilities are subject to the self-implementing regulations for Oil Pollution Prevention in 40 CFR 112, and are required to initiate and follow Spill Prevention, Control, and Countermeasure (SPCC) Plans. This permit, as issued, is not intended to be a replacement for any SPCC plan, nor can this permit's conditions be automatically relaxed based on the SPCC plan if the permit is more stringent than the plan.

SLUDGE – INDUSTRIAL

Industrial sludge is solid, semi-solid, or liquid residue generated during the treatment of industrial process or non-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 any material derived from industrial sludge. Industrial sludge could also be derived from lagoon dredging or other similar maintenance activities. Certain oil sludge, like those from oil water separators, are subject to self-implementing federal regulations under 40 CFR 279 for used oils.

✓ Not applicable; industrial sludge is not generated at this facility.

STANDARD CONDITIONS

The standard conditions Part I attached to this permit incorporate all sections of 10 CSR 20-6.010(8) and 40 CFR 122.41(a) through (n) by reference as required by law. These conditions, in addition to the conditions enumerated within the standard conditions must be reviewed by the facility to ascertain compliance with this permit, state regulations, state statutes, federal regulations, and the Clean Water Act. Standard Conditions Part III, if attached to this permit, incorporate requirements dealing with domestic wastewater, domestic sludge, and land application of domestic wastes.

STORMWATER PERMITTING: LIMITATIONS AND BENCHMARKS

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-only discharges. The *Technical Support Document for Water Quality Based Toxics Control* (EPA/505/2-90-001; 1991) §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), a benchmark, or a monitoring requirement as dictated by site specific conditions, the BMPs in place, the BMPs proposed, past performance of the facility, and the receiving water's current quality.

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 Water Quality Standards (WQSs) are based on one hour of exposure, and must be protected at all times. Therefore, industrial stormwater facilities with toxic contaminants present in the stormwater may have the potential to cause a violation of acute WQSs if toxic contaminants occur in sufficient amounts. In this instance, the permit may apply daily maximum limitations.

Conversely, it is unlikely for rainfall to cause a discharge for four continuous days from a facility; if this does occur however, the receiving stream will also likely sustain a significant amount of flow providing dilution. Most chronic WQSs are based on a four-day exposure with some exceptions. Under this scenario, most industrial stormwater facilities have limited potential to cause a violation of chronic water quality standards in the receiving stream.

A standard mass-balance equation cannot be calculated for stormwater because stormwater flow and flow in the receiving stream cannot be determined for conditions on any given day or storm event without real-time ad-hoc monitoring. The amount of stormwater discharged from the facility will vary based on current and 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, area of surfaces with reduced permeability (houses, parking lots, and the like) in the watershed, hydrogeology, topography, etc. Decreased permeability may increase the stream flow dramatically over a short period of time (flash).

Numeric benchmark values are based on site specific requirements taking in to account a number of factors but cannot be applied to any process water discharges. First, the technology in place at the site to control pollutant discharges in stormwater is evaluated. Other permits are also reviewed for similar activities. A review of the guidance forming the basis of Environmental Protection Agency's (EPA's) *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* (MSGP) may also occur. 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 may also be used. 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. If a facility has not disclosed BMPs applicable to the pollutants for the site, the facility may not be eligible for benchmarks.

40 CFR 122.44(b)(1) requires the permit implement the most stringent limitations for each discharge, including industrially exposed stormwater; and 40 CFR 122.44(d)(1)(i) and (iii) requires the permit to include water-quality based effluent limitations where reasonable potential has been found. However, because of the non-continuous nature of stormwater discharges, staff are unable to perform statistical Reasonable Potential Analysis (RPA) under most stormwater discharge scenarios. Reasonable potential determinations (RPDs; see REASONABLE POTENTIAL above) using best professional judgment are performed.

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 facility in knowing when additional corrective actions may be necessary to comply with the conditions of the permit.

BMP inspections typically occur more frequently than sampling. Sampling frequencies are based on the facility's ability to comply with the benchmarks and the requirements of the permit. Inspections must occur after large rain events and any other time an issue is noted; sampling after a benchmark exceedance may need to occur to show the corrective active taken was meaningful.

When a permitted feature or outfall consists of only stormwater, a benchmark may be implemented if there is no RP for water quality excursions.

✓ Not applicable; this facility does not have any stormwater-only outfalls.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

Pursuant to 40 CFR 122.44(k), Best Management Practices (BMPs) must be used to control or abate the discharge of pollutants when: 1) Authorized under §304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) Authorized under §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. A BMP may take the form of a numeric benchmark. In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators,* (EPA 833-B-09-002) published by the EPA in 2015 and again in 2021 https://www.epa.gov/sites/default/files/2021-03/documents/swppp_guide_industrial_2021_030121.pdf 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. Additional information can be found in *Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-006; September 1992).

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 facility can 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.

The facility can review the precipitation frequency maps for development of appropriate BMPs. The online map https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=mo can be targeted to the facility location and is useful when designing detention structures and planning for any structural BMP component. The stormwater map can also be used to determine if the volume of stormwater caused a disrupted BMP; and if the BMP must be re-designed to incorporate additional stormwater flows.

Areas which must 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 shall be formulated to best control the amount of pollutant being released and discharged by each activity or source. This must 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 must be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but may 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 (https://dnr.mo.gov/document-search/antidegradation-implementation-procedure).

Alternative Analysis (AA) evaluation of the BMPs is a structured evaluation of BMPs which are reasonable and cost effective. The AA evaluation can include practices 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 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), §II.B.

If parameter-specific numeric benchmark exceedances continue to occur and the facility 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 facility 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 must 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, which includes an appropriate fee; the application is found at: https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/wastewater

- ✓ Applicable; a SWPPP shall be developed and implemented for this facility; see specific requirements in the SPECIAL CONDITIONS section of the permit.

SUFFICIENTLY SENSITIVE ANALYTICAL METHODS

Please review Standard Conditions Part 1, §A, No. 4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 or 40 CFR 136 unless alternates are approved by the Department and incorporated within this permit. 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 any given discharge at concentrations 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. The reporting limits established by the chosen laboratory must be below the lowest effluent limits established for the specified parameter (including any parameter's future limit after an SOC) in the permit unless the permit provides for an ML or if the facility provides a written rationale to the Department. It is the facility's responsibility to ensure the laboratory has adequate equipment and controls in place to quantify the pollutant. Inflated reporting limits will not be accepted by the Department if the reporting limit is above the parameter value stipulated in the permit.

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 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 facility is responsible for working with their contractors to ensure the analysis performed is sufficiently sensitive.

UNDERGROUND INJECTION CONTROL (UIC)

The UIC program for all classes of wells in the State of Missouri is administered by the Missouri Department of Natural Resources and approved by EPA pursuant to §§1422 and 1425 of the Safe Drinking Water Act (SDWA) and 40 CFR 147 Subpart AA. Injection wells are classified based on the liquids which are being injected. Class I wells are hazardous waste wells which are banned by 577.155 RSMo; Class II wells are established for oil and natural gas production; Class III wells are used to inject fluids to extract minerals; Class IV wells are also banned by Missouri in 577.155 RSMo; Class V wells are shallow injection wells; some examples are heat pump wells and groundwater remediation wells. Domestic wastewater being disposed of sub-surface is also considered a Class V well. In accordance with 40 CFR 144.82, construction, operation, maintenance, conversion, plugging, or closure of injection wells shall not cause movement of fluids containing any contaminant into Underground Sources of Drinking Water (USDW) if the presence of any contaminant may cause a violation of any drinking water standards or groundwater standards under 10 CSR 20-7.031, or other health based standards, or may otherwise adversely affect human health. If the director finds the injection activity may endanger USDWs, the Department may require closure of the injection wells, or other actions listed in 40 CFR 144.12(c), (d), or (e). In accordance with 40 CFR 144.26, the facility shall submit a Class V Well Inventory Form for each active or new underground injection well drilled, or when the status of a well changes, to the Missouri Department of Natural Resources, Geological Survey Program, P.O. Box 250, Rolla, Missouri 65402. The Class V Well Inventory Form can be requested from the Geological Survey Program or can be found at the following web address: https://dnr.mo.gov/document-search/class-v-well-inventory-form-mo-780-1774 Single family residential septic systems and non-residential septic systems used solely for sanitary waste and having the capacity to serve fewer than 20 persons a day are excluded from the UIC requirements (40 CFR 144.81(9)). The Department implements additional requirements for these types of operations pursuant to 10 CSR 20-6.015(4)(A)1 which instructs the Department to develop permit conditions containing limitations, monitoring, reporting, and other requirements to protect soils, crops, surface waters, groundwater, public health, and the environment.

✓ Not applicable; the facility has not submitted materials indicating the facility is or will be performing UIC at this site.

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 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. Thermal variances are regulated separately and are found under 644.

✓ 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; definitions], the WLA is the maximum amount of pollutant each discharger is allowed to discharge into the receiving stream without endangering water quality. Only streams with available load allocations can be granted discharge allowances. Outfalls afforded mixing allocations provide higher limits because the receiving stream is able to accept more pollutant loading without causing adverse impacts to the environment or aquatic life.

✓ Applicable; wasteload allocations for toxic parameters were calculated using water quality criteria or water quality model results and by applying the dilution equation below. These equations are statistical equations (See Part III – REASONABLE POTENTIAL ANALYSIS) used to calculate the hypothetical or actual variability of the wastewater and the spreadsheet output obtains an effluent limit. Most toxic parameter's WLAs are calculated using the *Technical Support Document For Water Quality-Based Toxics Control* or "TSD" EPA/505/2-90-001; 3/1991, §4.5.5.

$$C = \frac{(Cs \times Qs) + (Ce \times Qe)}{(Qe + Qs)}$$

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

WASTELOAD ALLOCATION (WLA) MODELING

Facilities may submit site specific studies to better determine the site specific wasteload allocations applied in permits.

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

WATER QUALITY STANDARD REVISION

In accordance with 644.058 RSMo, the Department is required to utilize an evaluation of the environmental and economic impacts of modifications to water quality standards of twenty-five percent or more when making individual site-specific permit decisions.

- ✓ This operating permit does not contain requirements for a water quality standard changing twenty-five percent or more since the previous operating permit.

WHOLE EFFLUENT TOXICITY (WET) TEST

A WET test is a quantifiable method to conclusively determine if discharges from the facility cause toxicity to aquatic life by itself, in combination with, or through synergistic responses, typically when mixed with receiving stream water. Under the CWA §101(a)(3), requiring WET testing is reasonably appropriate for Missouri State Operating Permits to quantify toxicity. WET testing is also required by 40 CFR 122.44(d)(1) when RP is found. WET testing ensures the provisions in 10 CSR 20-6 and Missouri's Water Quality Standards in 10 CSR 20-7 are being met; the acute WQS for WET is 0.3 TUa. Under 10 CSR 20-6.010(8)(A)4, the Department may require other terms and conditions it deems necessary to ensure compliance with the CWA and related regulations of the Missouri Clean Water Commission. Missouri Clean Water Law (MCWL) RSMo 644.051.3 requires the Department to set permit conditions complying with the MCWL and CWA. 644.051.4 RSMo specifically references toxicity as an item the Department must consider in permits (along with water quality-based effluent limits); and RSMo 644.051.5 is the basic authority to require testing conditions. Requirements found in the federal application requirements for POTWs (40 CFR 122.21(j)(5)) do not apply to industrial facilities, therefore WET testing can be implemented on a case by case basis following the factors outlined below. Annual testing is the minimum testing frequency if reasonable potential is found; monitoring requirements promulgated in 40 CFR 122.44(i)(2) state "requirements to report monitoring results shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the discharge, but in no case less than once per year." To determine reasonable potential, factors considered are: 1) history of toxicity; 2) quantity and quality of substances (either limited or not) in the permit with aquatic life protections assigned; and 3) operational controls on toxic pollutants. See Part III under REASONABLE POTENTIAL for additional information. A facility does not have to be designated as a major facility to receive WET testing; and being a major facility does not automatically require WET testing. Additionally per 40 CFR 122.44(d)(1)(v), limits on whole effluent toxicity are not necessary where the permitting authority demonstrates in the fact sheet, using the procedures in 40 CFR 122.44(d)(1)(ii) of this section, that chemical-specific limits or specified operational controls are sufficient to attain and maintain applicable numeric and narrative water quality standards.

- ✓ Not applicable; WET testing was not implemented in this permit because the pollutants limited in this permit are sufficient to determine effluent toxicity, or there are no pollutants identified as "toxic", and there is no RP for WET.

PART IV. EFFLUENT LIMIT DETERMINATIONS

OUTFALL #001 – MAIN OUTFALL

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG.	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL							
FLOW	MGD	*	*	SAME	ONCE/MONTH	ONCE/MONTH	24 HR. TOT
CONVENTIONAL							
pH †	SU	6.5-9.0	6.5-9.0	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
TOTAL SUSPENDED SOLIDS (TSS)	mg/L	*	*	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
METALS							
ARSENIC, TR	µg/L	*	*	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
CADMIUM, TR	µg/L	118.1	45.7	107.8/44.3	ONCE/MONTH	ONCE/MONTH	GRAB
COPPER, TR	µg/L	*	*	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
LEAD, TR	µg/L	*	*	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
ZINC, TR	µg/L	*	*	SAME	ONCE/MONTH	ONCE/MONTH	GRAB
NUTRIENTS							
PHOSPHORUS, TOTAL P (TP)	mg/L	*	*	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
OTHER							
WET TEST - ACUTE	REMOVED						

*	monitoring and reporting requirement only
†	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

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 ensure compliance with permitted effluent limitations. If the facility is unable to obtain effluent flow, then it is the responsibility of the facility to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD), monthly monitoring continued from previous permit. The facility reported from 0.036 to 0.422 MGD in the last permit term.

CONVENTIONAL:

pH
6.5 to 9.0 SU – instantaneous grab sample. Water quality limits [10 CSR 20-7.031(5)(E)] are applicable to this outfall. pH is a fundamental water quality indicator. Additionally, metals leachability and ammonia availability in wastewater is dependent on pH. Limitations in this permit will protect against aquatic organism toxicity, downstream water quality issues, human health hazard contact, and negative physical changes in accordance with the general criteria at 10 CSR 20-7.031(4) and the Clean Water Act's (CWA) goal of 100% fishable and swimmable rivers and streams.

Total Suspended Solids (TSS)
Monitoring only continued from previous permit. There is no numeric 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 facility to identify increases in TSS indicating 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:

Arsenic, Total Recoverable
Monthly monitoring. The facility reported between 0.57 and 4.1 µg/L in the last permit term. Reasonable potential was not shown. However, application materials received June 28, 2021 marked the pollutant present in the discharge, therefore monitoring is continued.

Cadmium, Total Recoverable
118.1 µg/L daily maximum; 45.7 µg/L monthly average. The facility reported from 1.3 to 41.3 µg/L for this parameter. Previous limits were 107.8 µg/L daily maximum; 44.3 µg/L monthly average based on a hardness of 210 mg/L. See Part III, ANTIBACKSLIDING for more information.

Acute AQL: e^(1.0166 * ln210 – 3.062490) * (1.136672 – ln210 *0.041838) = 9.799 µg/L [at hardness 210]
Chronic AQL: e^(0.7977 * ln210 – 3.909) * (1.101672 – ln210*0.041938) = 1.254 µg/L [at hardness 210]
TR Conversion: AQL/Translator = 9.799 / 0.913 = 10.734 [at hardness 210]
TR Conversion: AQL/Translator = 1.254 / 0.878 = 1.428 [at hardness 210]
Acute WLA: Ce = ((1.331 cfsDF + 13.306 cfsZID) * 10.734 – (13.306 cfsZID * 0 background)) / 1.331 cfsDF = 118.068
Chronic WLA: Ce = ((1.331 cfsDF + 15138 cfsMZ) * 1.428 – (15138 cfsMZ * 0 background)) / 1.331 cfsDF = 16249.161
LTAa: WLAa * LTAa multiplier = 118.068 * 0.193 = 22.746 [CV: 1.0658618386651, 99th %ile]
LTAc: WLAc * LTAc multiplier = 16249.161 * 0.354 = 5754.922 [CV: 1.066, 99th %ile]
use most protective LTA: 22.746
Daily Maximum: MDL = LTA * MDL multiplier = 22.746 * 5.191 = 118.1 µg/L [CV: 1.066, 99th %ile]
Monthly Average: AML = LTA * AML multiplier = 22.746 * 2.009 = 45.7 µg/L [CV: 1.066, 95th %ile, n=4]

Copper, Total Recoverable
Monthly monitoring. The facility reported between 1.9 and 19.4 µg/L in the last permit term. Reasonable potential was not shown. However, application materials received June 28, 2021 marked the pollutant present in the discharge, therefore monitoring is continued.

Lead, Total Recoverable
Monthly monitoring. The facility reported between 3.6 and 349 µg/L in the last permit term. Reasonable potential was not shown. However, application materials received June 28, 2021 marked the pollutant present in the discharge, therefore monitoring is continued.

Zinc, Total Recoverable
Monthly monitoring. The facility reported between 3.0 and 446 µg/L in the last permit term. Reasonable potential was not shown. However, application materials received June 28, 2021 marked the pollutant present in the discharge, therefore monitoring is continued.

NUTRIENTS:

Phosphorus, Total P (TP)
Phosphorus is expected to be present in this discharge therefore quarterly monitoring is required per 10 CSR 20-7.015(9)(D)8.A.

OUTFALL #004 – STORMWATER OUTFALL

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAXIMUM LIMIT	BENCH-MARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL							
FLOW	MGD	*	-	SAME	ONCE/QUARTER	QUARTERLY	24 HR. ESTIMATE
CONVENTIONAL							
pH †	SU	6.5-9.0	-	SAME	ONCE/QUARTER	QUARTERLY	GRAB
SETTLEABLE SOLIDS	REMOVED						
TSS	mg/L	*	-	SAME	ONCE/QUARTER	QUARTERLY	GRAB
METALS							
CADMIUM, TR	µg/L	**	21.5	**/19.0	ONCE/QUARTER	QUARTERLY	GRAB
COPPER, TR	µg/L	*	-	**/50.1	ONCE/QUARTER	QUARTERLY	GRAB
LEAD, TR	µg/L	*	-	**/363.3	ONCE/QUARTER	QUARTERLY	GRAB
ZINC, TR	µg/L	**	451.9	**/404.0	ONCE/QUARTER	QUARTERLY	GRAB

* monitoring and reporting requirement only
** monitoring with associated benchmark
† report the minimum and maximum pH values; pH is not to be averaged
TR total recoverable

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 ensure compliance with permitted effluent limitations. If the facility is unable to obtain effluent flow, then it is the responsibility of the facility to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD), quarterly monitoring continued from previous permit. The facility reported from 0.0002 to 0.068 MGD in the last permit term.

CONVENTIONAL:

pH
6.5 to 9.0 SU – instantaneous grab sample. Water quality limits [10 CSR 20-7.031(5)(E)] are applicable to this outfall. pH is a fundamental water quality indicator. Additionally, metals leachability and ammonia availability in wastewater is dependent on pH. Limitations in this permit will protect against aquatic organism toxicity, downstream water quality issues, human health hazard contact, and negative physical changes in accordance with the general criteria at 10 CSR 20-7.031(4) and the Clean Water Act's (CWA) goal of 100% fishable and swimmable rivers and streams.

Total Suspended Solids (TSS)
Monitoring only. There is no numeric 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 facility to identify increases in TSS indicating 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. The facility reported from 5.7 to 114 mg/L in the last permit term. The benchmark is achievable through proper operational and maintenance of BMPs and falls within the range of values implemented in other permits having similar industrial activities.

METALS:

Cadmium, Total Recoverable
Monitoring with a daily maximum benchmark of 21.5 µg/L. Previous permit required quarterly monitoring with a daily maximum benchmark of 19 µg/L; the facility reported between 0.16 and 81.1 µg/L in the last permit term. The permit writer conducted a reasonable potential determination and concluded there is no reasonable potential to cause or contribute to instream exceedances of Missouri's water quality standards. The benchmark of 21.5 µg/L was calculated considering dilution in Joachim Creek with a hardness of 210.

Copper, Total Recoverable
Monitoring only. Previous permit limits were monitoring with a 50.1 µg/L daily maximum benchmark. The facility reported between 0.62 and 7.2 µg/L in the last permit term. The permit writer conducted a reasonable potential determination and determined there is no reasonable potential to cause or contribute to exceedances of Missouri water quality standards. Monitoring maintained, as this is still a pollutant of concern at this site and was marked present in the application materials received June 28, 2021.

Lead, Total Recoverable
Monitoring only. Previous permit limits were monitoring with a 363.3 µg/L daily maximum benchmark. The facility reported between 0.91 and 64.6 µg/L in the last permit term. The permit writer conducted a reasonable potential determination and determined there is no reasonable potential to cause or contribute to exceedances of Missouri water quality standards. Monitoring maintained, as this is still a pollutant of concern at this site and was marked present in the application materials received June 28, 2021.

Zinc, Total Recoverable
Monitoring with a daily maximum benchmark of 451.9 µg/L. Previous permit required quarterly monitoring with a daily maximum benchmark of 404 µg/L; the facility reported between 24.5 and 1500 µg/L in the last permit term. The permit writer conducted a reasonable potential determination and concluded there is no reasonable potential to cause or contribute to instream exceedances of Missouri's water quality standards. The benchmark of 451.9 µg/L was calculated considering dilution in Joachim Creek with a hardness of 210.

PART V. ADMINISTRATIVE REQUIREMENTS

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

PERMIT SYNCHRONIZATION

Permits are normally issued on a five-year term, but to achieve watershed synchronization some permits will need to be issued for less than the full five years as allowed by regulation. The intent is all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow the Department to explore a watershed based permitting effort at some point in the future.

- ✓ Industrial permits are not being synchronized.

PUBLIC NOTICE

The Department shall give public notice a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in or with 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 facility must be notified of the denial in writing. https://dnr.mo.gov/water/what-were-doing/public-notices The Department must issue public notice of a pending operating 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 wishing to submit comments regarding this proposed operating permit, 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. All comments must be in written form.

- ✓ The Public Notice period for this operating permit started July 15, 2022 and ended August 15, 2022. There were no comments received.

DATE OF FACT SHEET: JUNE 28, 2022
COMPLETED BY:
KYLE O'ROURKE, ENVIRONMENTAL PROGRAM SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - INDUSTRIAL UNIT
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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.

rec'd 2/7/2023 AP 41458

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
FORM A – APPLICATION FOR NONDOMESTIC PERMIT UNDER MISSOURI CLEAN WATER LAW

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
JET PAY CONFIRMATION NUMBER	

PLEASE READ ALL THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM. SUBMITTAL OF AN INCOMPLETE APPLICATION MAY RESULT IN THE APPLICATION BEING RETURNED.

IF YOUR FACILITY IS ELIGIBLE FOR A NO EXPOSURE EXEMPTION:
Fill out the No Exposure Certification Form (Mo 780-2828): https://dnr.mo.gov/forms/780-2828-f.pdf

1. REASON FOR APPLICATION:

☐ a. This facility is now in operation under Missouri State Operating Permit (permit) MO – _____, is submitting an application for renewal, and there is no proposed increase in design wastewater flow. Annual fees will be paid when invoiced and there is no additional permit fee required for renewal.

☐ b. This facility is now in operation under permit MO – _____, is submitting an application for renewal, and there is a proposed increase in design wastewater flow. Antidegradation Review may be required. Annual fees will be paid when invoiced and there is no additional permit fee required for renewal.

☐ c. This is a facility submitting an application for a new permit (for a new facility). Antidegradation Review may be required. New permit fee is required.

☑ d. This facility is now in operation under Missouri State Operating Permit (permit) MO – MO-000028 and is requesting a modification to the permit. Antidegradation Review may be required. Modification fee is required.

2. FACILITY

NAME		TELEPHONE NUMBER WITH AREA CODE	
The Doe Run Company - Herculaneum		573-538-5107	
ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
881 Main Street	Herculaneum,	MO	63048

3. OWNER

NAME		TELEPHONE NUMBER WITH AREA CODE	
The Doe Run Resources Corporation dba The Doe Run Company		573-538-5107	
EMAIL ADDRESS			
gbodnar@doerun.com			
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
1801 Park 270, Suite 300	St. Louis	MO	63146-4041

4. CONTINUING AUTHORITY

NAME		TELEPHONE NUMBER WITH AREA CODE	
The Doe Run Resources Corporation		573-538-5107	
EMAIL ADDRESS			
gbodnar@doerun.com			
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
1801 Park 270 Dr	St. Louis	MO	63146-4041

5. OPERATOR CERTIFICATION

NAME	CERTIFICATE NUMBER	TELEPHONE NUMBER WITH AREA CODE	
Certified Operator is not required for this facility			
ADDRESS (MAILING)	CITY	STATE	ZIP CODE

6. FACILITY CONTACT

NAME	TITLE	TELEPHONE NUMBER WITH AREA CODE
Genevieve M. Sutton, P.E.	Remediation Manager	573-538-5107
E-MAIL ADDRESS		
gbodnar@doerun.com		

7. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary.

NAME			
RL CASEY HOLDINGS LLC			
ADDRESS	CITY	STATE	ZIP CODE
210 GLENNON HEIGHTS RD	CRYSTAL CITY	MO	63019

8. ADDITIONAL FACILITY INFORMATION

8.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)
For Universal Transverse Mercator (UTM), use Zone 15 North referenced to North American Datum 1983 (NAD83)

001 NE ¼ SE ¼ Sec 29 T 41 R 6E Jeff County
UTM Coordinates Easting (X): 729862 Northing (Y): 4238134

002 N/A ¼ N/A ¼ Sec N/A T N/A R N/A N/A County
UTM Coordinates Easting (X): _____ Northing (Y): _____

003 N/A ¼ N/A ¼ Sec N/A T N/A R N/A N/A County
UTM Coordinates Easting (X): _____ Northing (Y): _____

004 NE ¼ SE ¼ Sec 29 T 41 R 6E Jeff County
UTM Coordinates Easting (X): 729797 Northing (Y): 4238167

Include all subsurface discharges and underground injection systems for permit consideration.

8.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.
Primary SIC 9999 and NAICS _____ SIC _____ and NAICS _____
SIC _____ and NAICS _____ SIC _____ and NAICS _____

9. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION

A. Is this permit for a manufacturing, commercial, mining, solid/hazardous waste, or silviculture facility? YES ☐ NO ☑
If yes, complete Form C.

B. Is the facility considered a "Primary Industry" under EPA guidelines (40 CFR Part 122, Appendix A) : YES ☐ NO ☑
If yes, complete Forms C and D.

C. Is wastewater land applied? YES ☐ NO ☑
If yes, complete Form I.

D. Are sludge, biosolids, ash, or residuals generated, treated, stored, or land applied? YES ☐ NO ☑
If yes, complete Form R.

E. Have you received or applied for any permit or construction approval under the CWA or any other environmental regulatory authority? YES ☐ NO ☑
If yes, please include a list of all permits or approvals for this facility:
Environmental Permits for this facility:_____

F. Do you use cooling water in your operations at this facility? YES ☐ NO ☑
If yes, please indicate the source of the water: _____

G. Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.

10. ELECTRONIC DISCHARGE MONITORING REPORT (eDMR) SUBMISSION SYSTEM

Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data. **One of the following must be checked in order for this application to be considered complete.** Please visit https://dnr.mo.gov/env/wpp/edmr.htmfor information on the Department's eDMR system and how to register.

☐ - I will register an account online to participate in the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before any reporting is due, in compliance with the Electronic Reporting Rule.

☑ - I have already registered an account online to participate in the Department's eDMR system through MoGEM.

☐ - I have submitted a written request for a waiver from electronic reporting. See instructions for further information regarding waivers.

☐ - The permit I am applying for does not require the submission of discharge monitoring reports.

11. FEES

Permit fees may be paid by attaching a check, or online by credit card or eCheck through the JetPay system. Use the URL provided to access JetPay and make an online payment:
For new permits: https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/591

For modifications: https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/596

12. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE NUMBER WITH AREA CODE
Michael Montgomery, VP of EHS	314-453-7678
SIGNATURE	DATE SIGNED
	2/6/23

MO 780-1479 (04-21)

Interim Treatment System

Nearest Downstream Landowner

N

0 375 750

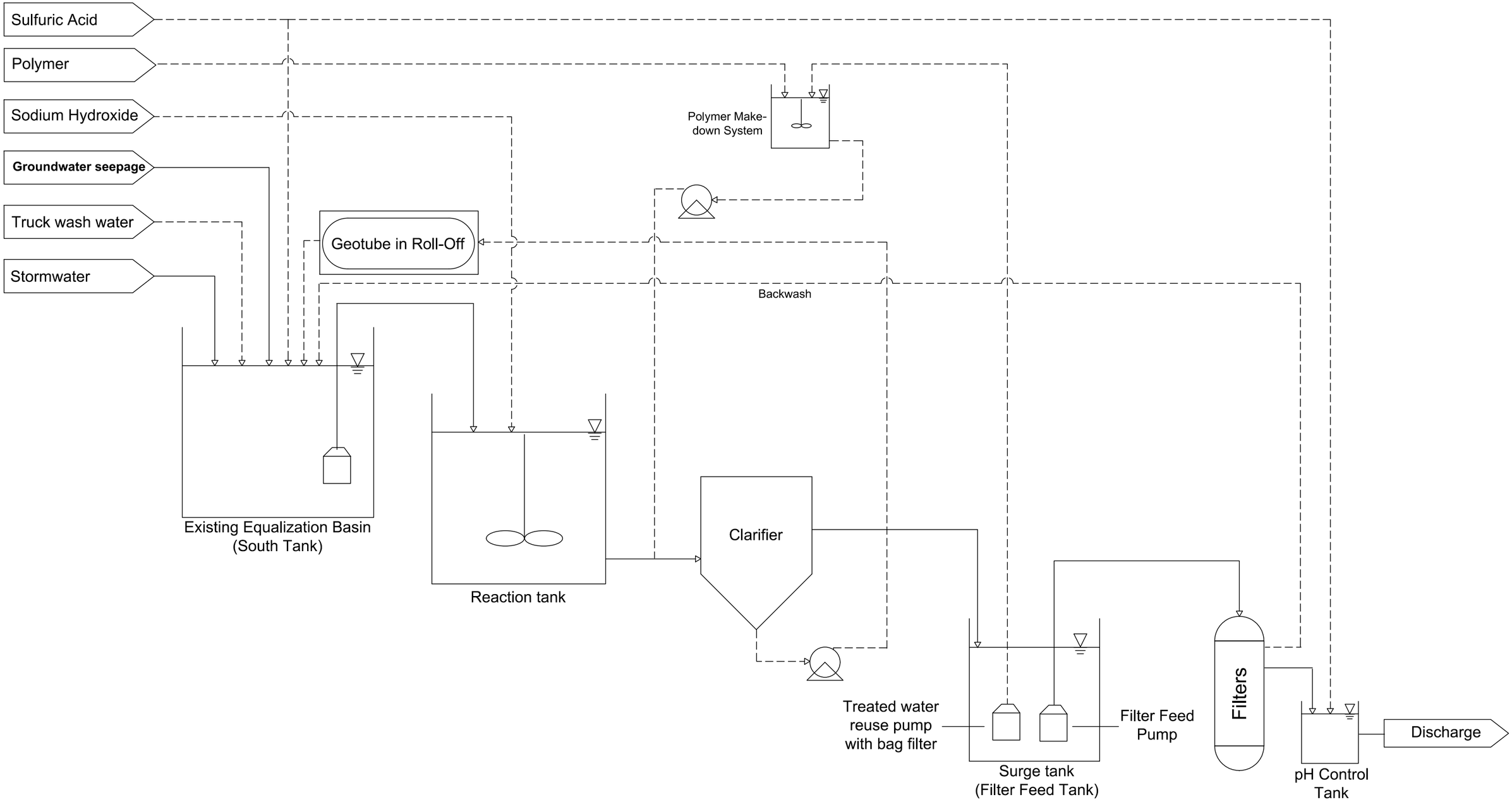
Feet

BARR

SITE LAYOUT MAP
Herculaneum Site
Doe Run

FIGURE 1

Barr Footer: ArcGIS 10.8.1, 2023-02-01 10:26 File: I:\Projects\25\51\1004\Maps\Reports\20230131_Permit Modification\Figure 1 - Site Layout Map.mxd User: kac2



BARR

ITS PROCESS FLOW DIAGRAM
Herculaneum Site
Doe Run

FIGURE 2