STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

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

Permit No.	MO-0004871
Owner:	Evergy, Inc.
Address:	P.O. Box 418679, Kansas City, MO 64141-9679
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Sibley Generating Station
Facility Address:	33200 East Johnson Road
Legal Description:	See following page(s); Jackson Co.
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.:	Cravens Creek – Missouri River; 10300101-0604

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

FACILITY DESCRIPTION

Former coal-fired power generating station; currently landfill leachate discharge and stormwater discharges; SIC # 4911; NAICS # 221112, this facility does not require a certified wastewater operator. Merged with permit MO-0136131.

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. This permit may be appealed in accordance with Sections 640.013, 621.250, and 644.051.6 of the Law.

January 1, 2020
Effective Date

January 1, 2024
Modification Date

December 31, 2024
Expiration Date

John Hoke, Director, Water Protection Program

FACILITY DESCRIPTION (CONTINUED)

OUTFALL #020 – landfill leachate and active landfill area contact water from MO-0136131

Legal Description:	NE¼, NW¼, Sec.1, T50N, R30W, Jackson Co.
UTM Coordinates:	X = 399055, Y = 4336881
Receiving Waterbody:	Missouri River (P)
First Classified Waterbody and ID:	Missouri River (P); WBID# 0345; 303(d)
Design Flow:	2.72 MGD
Average Flow:	1.35 MGD

OUTFALL #021 – stormwater from inactive landfill area noncontact water; new in this permit

Legal Description:	NE¼, NW¼, Sec.1, T50N, R30W, Jackson Co.
UTM Coordinates:	X = 399343, Y = 4336730
Receiving Waterbody:	Tributary to Missouri River
First Classified Waterbody and ID:	Missouri River (P); WBID# 0345; 303(d)
Average Flow:	unknown, new stormwater outfall

OUTFALL #022 – stormwater from inactive landfill area; new in this permit

Legal Description:	NE¼, NW¼, Sec.1, T50N, R30W, Jackson Co.
UTM Coordinates:	X = 399749, Y = 4336614
Receiving Waterbody:	Tributary to Missouri River (P)
First Classified Waterbody and ID:	Missouri River (P); WBID# 0345; 303(d)
Average Flow:	unknown, new stormwater outfall

OUTFALL #023 – stormwater from inactive landfill area noncontact water; new in this permit

Legal Description:	NE¼, NW¼, Sec.1, T50N, R30W, Jackson Co.
UTM Coordinates:	X = 399634, Y = 4336409
Receiving Waterbody:	Tributary to Missouri River
First Classified Waterbody and ID:	Missouri River (P); WBID# 0345; 303(d)
Average Flow:	unknown, new stormwater outfall

OUTFALL #024 – stormwater from inactive landfill area noncontact water; new in this permit

Legal Description:	NE¼, NW¼, Sec.1, T50N, R30W, Jackson Co.
UTM Coordinates:	X = 399592, Y = 4336335
Receiving Waterbody:	Tributary to Missouri River
First Classified Waterbody and ID:	Missouri River (P); WBID# 0345; 303(d)
Average Flow:	unknown, new stormwater outfall

OUTFALL #025 – stormwater from inactive landfill area noncontact water; new in this permit

Legal Description:	NE¼, NW¼, Sec.1, T50N, R30W, Jackson Co.
UTM Coordinates:	X = 399337, Y = 4336551
Receiving Waterbody:	Tributary to Missouri River
First Classified Waterbody and ID:	Missouri River (P); WBID# 0345; 303(d)
Average Flow:	unknown, new stormwater outfall

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Tables A-1 through A-4 for outfalls #001, #002, #003, #006, #007, and #010 were removed at the 2023 modification; these outfalls no longer exist.

OUTFALL #020 *CCR landfill leachate*	**TABLE A-5** **FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**					
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on **January 1, 2020** and remain in effect until expiration of the permit. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	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	100		30	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE FEBRUARY 28, 2020. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
LIMIT SET: Q						
CONVENTIONAL						
Oil & Grease	mg/L	20		15	once/quarter ◊	grab
Phosphorus, Total (TP)	mg/L	*		*	once/quarter ◊	grab
METALS						
Arsenic, Total Recoverable	µg/L	*		*	once/quarter ◊	grab
Boron, Total Recoverable	µg/L	*		*	once/quarter ◊	grab
Mercury, Total	µg/L	*		*	once/quarter ◊	grab
Molybdenum, Total Recoverable	µg/L	*		*	once/quarter ◊	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter ◊	grab
OTHER						
Chloride	mg/L	*		*	once/quarter ◊	grab
Sulfate	mg/L	*		*	once/quarter ◊	grab
Chloride plus Sulfate	mg/L	*		*	once/quarter ◊	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE APRIL 28, 2020. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
LIMIT SET: WA						
OTHER						
Whole Effluent Toxicity, Acute See Special Condition #1	TU_a	3.3			once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2021. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

* Monitoring and reporting requirement only

** Monitoring and reporting requirement with benchmark. Note removed at 2023 modification; no longer applicable.

▼ Cyanide. Note removed at 2023 modification; no longer applicable.

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

▲ Selenium. Note removed at 2023 modification; no longer applicable.

‡ The detection limit of this test is 1 TUa. The effluent limitation being established in the permit is below the detection limit of this test; the facility must meet 1 TUa for this outfall.

◊ Quarterly sampling

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

B. SCHEDULE OF COMPLIANCE

Removed at the 2024 modification; the outfalls are removed; there is no longer a discharge.

C. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Part I and Part III standard conditions dated August 1, 2014 and August 1, 2019, respectively, and hereby incorporated as though fully set forth herein.

D. SPECIAL CONDITIONS

1. Acute Whole Effluent Toxicity (WET) tests shall be conducted as follows:
   (a) Freshwater Species and Test Methods: Species and short-term test methods for estimating the acute toxicity of NPDES effluents are found in the most recent edition of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012; Table IA, 40 CFR Part 136). The permittee shall concurrently conduct 48-hour, static, non-renewal toxicity tests with the following species:
      - The fathead minnow, *Pimephales promelas* (Acute Toxicity EPA Test Method 2000.0).
      - The daphnid, *Ceriodaphnia dubia* (Acute Toxicity EPA Test Method 2002.0).

   (b) Chemical and physical analysis of the upstream control sample and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing required to stabilize the sample during shipping. Where upstream receiving water is not available or known to be toxic, other approved control water may be used.
   (c) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.
   (d) The laboratory shall not chemically dechlorinate the sample.
   (e) The Allowable Effluent Concentration (AEC) at outfall #007 is 100%; the dilution series is: 6.25%, 12.5%, 25%, 50%, and 100%.
   (f) The Allowable Effluent Concentration (AEC) at outfalls #006 and #020 is 9%; the dilution series is: 2.25%, 4.5%, 9%, 18%, and 36%.
   (g) All chemical and physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% effluent concentration.
   (h) The facility must submit a full laboratory report for all toxicity testing. The report must include a quantification of acute toxic units ($TU_a = 100/LC_{50}$) reported according to the test methods manual chapter on report preparation and test review. The Lethal Concentration 50 Percent (LC_{50}) is the effluent concentration causing death in 50 percent of the test organisms at a specific time.
   (i) Accelerated Testing Trigger: If the regularly scheduled acute WET test exceeds the TU_a limit, the permittee shall conduct accelerated follow-up WET testing as prescribed in the following conditions. Results of the follow-up accelerated WET testing shall be reported in TU_a. This permit requires the following additional toxicity testing if any one test result exceeds a

TU_a limit. A multiple dilution test shall be performed for both test species within 60 calendar days of becoming aware the regularly scheduled WET test exceeded a TU_a limit, and once every two weeks thereafter until one of the following conditions are met:

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

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

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

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

(3) TIE/TRE Trigger: The following shall apply upon the exceedance of the TU_a limit in three accelerated follow-up WET tests. The permittee should contact the Department within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. If the permittee does not contact the Department upon the third follow up test exceeding a TU_a limit, a toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall submit a plan for conducting a TIE or TRE within 60 calendar days of the date of the automatic trigger or the Department's direction to perform either a TIE or TRE. The plan shall be based on EPA Methods and include a schedule for completion. This plan must be approved by the Department before the TIE or TRE is begun.

2. Spills, Overflows, and Other Unauthorized Discharges.
   (a) Any spill, overflow, or other discharge(s) not specifically authorized above are unauthorized discharges.
   (b) Should 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.

3. 40 CFR 423.13(a): There shall be no discharge of polychlorinated biphenyl compounds (PCBs) such as those commonly [historically] used for transformer fluid.

4. 40 CFR 423.13(h) and (k): The facility shall not discharge neither fly ash nor bottom ash transport wastewater upon permit issuance.

5. 40 CFR 423.13(g): The facility shall not discharge flue gas desulphurization wastewater upon permit issuance.

6. 40 CFR 423.13(i): The facility shall not discharge flue gas mercury control wastewater upon permit issuance.

7. Electronic Discharge Monitoring Report (eDMR) Submission System.
   (a) Discharge Monitoring Reporting Requirements. The permittee must electronically submit compliance monitoring data via the eDMR system. Standard Conditions Part I, Section B, #7 indicates the eDMR system is currently the only Department approved reporting method for this permit.
   (b) Programmatic Reporting Requirements. All reports must be electronically submitted as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data. After such a system has been made available by the Department, required data shall be directly input into the system by the next report due date
      (1) Schedule of Compliance Progress Reports;
      (2) Whole Effluent Toxicity (WET) Reports;
      (3) Collection System Maintenance Annual Reports;
      (4) Wastewater Irrigation Annual Reports;
      (5) Any additional report required by the permit excluding bypass reporting.
   (c) The following shall be submitted electronically after such a system has been made available by the Department:
      (1) General Permit Applications/Notices of Intent to discharge (NOIs);
      (2) Notices of Termination (NOTs);
      (3) No Exposure Certifications (NOEs);
      (4) Low Erosivity Waivers, and Other Waivers from Stormwater Controls (LEWs); and
      (5) Bypass reporting.
   (d) Electronic Submission: access the eDMR system via: https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx
   (e) Electronic Reporting Waivers. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the Department in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: http://dnr.mo.gov/forms/780-2692-f.pdf. The Department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period the approved electronic reporting waiver is effective.

8. 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. This SWPPP and the requirements listed under Part E of the permit may be one document. The SWPPP must be kept on-site and should not be sent to the Department unless specifically requested. The SWPPP must be reviewed and updated annually or if site conditions affecting stormwater change. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in: *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in 2015 https://www.epa.gov/sites/production/files/2015-11/documents/swppp_guide_industrial_2015.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 not effective at preventing pollution [10 CSR 20-2.010(56)] to waters of the state. 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 (or 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) 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. Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
      i. Operational deficiencies must be corrected within seven (7) calendar days.
      ii. Minor structural deficiencies must be corrected within fourteen (14) calendar days.
      iii. Major structural deficiencies (deficiencies projected to take longer than 14 days to correct) 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 permittee shall work with the regional office to determine the best course of action. The permittee should consider temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
      iv. All actions taken to correct the deficiencies shall be included with the written report, including photographs, 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.
      v. BMP failure causing discharge through an unregistered outfall is considered an illicit discharge and must be reported in accordance with Standard Conditions Part I.
      vi. 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.
   (d) A provision for designating an individual to be responsible 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.

9. Site-wide minimum Best Management Practices (BMPs). At a minimum, the permittee shall adhere to the following:
   (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, warehouse activities, and other areas, and thereby prevent the contamination of stormwater from these substances.
   (b) Ensure adequate provisions are provided to prevent and to protect embankments from erosion.
   (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 and 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 should be retained on-site.
   (e) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
   (f) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property.

10. Stormwater Benchmarks. Condition removed at 2023 modification; no longer applicable.

11. Petroleum Secondary Containment.
Before releasing water accumulated in petroleum secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen to protect the general criteria found at 10 CSR 20-7.031(4).
(a) If odor or sheen is found, the water shall not be discharged without treatment and shall be disposed of in accordance with legally approved methods, such as being sent to an accepting wastewater treatment facility.
(b) If the facility wishes to discharge the accumulated stormwater with hydrocarbon odor or presence of sheen, the water shall be treated using an appropriate removal method. Following treatment and before release, the water shall be tested for oil and grease, benzene, toluene, ethylbenzene, and xylene using 40 CFR part 136 methods. All pollutant levels must be below the most protective, applicable standards for the receiving stream, found in 10 CSR 20-7.031 Table A before discharge is authorized. Records of all testing and treatment of water accumulated in secondary containment shall be stored in the SWPPP and be available on demand to the Department.

12. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with §644.051.16, RSMo, and the CWA section 402(k); however, this permit may be reopened and modified, or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Clean Water Act Sections 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 limited in the permit. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, termination, notice of planned changes, or anticipated non-compliance does not stay any permit condition.

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

14. 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.

15. Changes in Discharges of Toxic Pollutant.
In addition to the reporting requirements under §122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:
(a) That an activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
(1) One hundred micrograms per liter (100 µg/L);
(2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
(3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
(4) One milligram per liter (1 mg/L) for antimony;
(5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
(6) The notification level established by the Department in accordance with 40 CFR 122.44(f).
(b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
(1) Five hundred micrograms per liter (500 µg/l);
(2) One milligram per liter (1 mg/l) for antimony;
(3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with §122.21(g)(7).
(4) The level established by the Director in accordance with §122.44(f).

16. The permittee is authorized to discharge stormwater from outfalls #021, #022, #023, #024 and #025 not contaminated by exposure to industrial activities or materials from the industrial facility, landfill, or site. Permittee shall maintain adequate cover on the landfill to ensure any discharge from the outfalls is not contaminated by exposure to industrial activities or materials from the industrial facility or site.

17. Reporting of Non-Detects.
(a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way the precision and accuracy of the analyzed result can be enumerated.
(b) The permittee shall not report a sample result as "non-detect" without also reporting the detection limit of the test or the reporting limit of the laboratory. Reporting as "non-detect" without also including the detection/reporting limit will be considered failure to report, which is a violation of this permit.
(c) The permittee shall report the non-detect result using the less than "<" symbol and the laboratory's detection/reporting limit (e.g. <6).

(d) See sufficiently sensitive method requirements in Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
(e) When calculating monthly averages, one-half of the minimum detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the "<MDL" shall be reported as indicated in item (C).

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

19. This permit does not authorize 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. The facility must contact the U.S. Army Corps of Engineers (Corps) to determine if a CWA §404 Department of Army permit is required.

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, Form C, and Form D if the site remains categorical for any reason. If the form names have changed, then the facility should assure they are submitting the correct forms as required by regulation. Sampling for all parameters on Form D is required by law for all process wastewater at this facility.
(c) The facility must sample the stormwater outfalls and provide analysis for every parameter contained in the permit at any outfall for at the site in accordance with 10 CSR 20-6.200(2)(C)1.E(I) and (II)
(d) The facility may use the electronic submission system to submit the application to the Program.
(e) This facility must submit any corrective action reports completed for the last permit term if a benchmark exceedance occurred.

E. LAND DISTURBANCE

The permittee will not be required to procure a separate general permit (MO-RA000000) for land disturbance activities which discharge through outfalls permitted in this permit. If land disturbance activities discharge to any location other than a permitted outfall falling under this permit, a separate general permit is required. The general permit does not cover disturbance of contaminated soils so a modification of this site specific permit may be required.

1. Minimum Best Management Practices (BMPs) must prevent discharges from causing or contributing to an exceedance of water quality standards, including general criteria. All pollution prevention measures must be described in the SWPPP; at a minimum such measures must be designed, installed, implemented, and maintained to:
(a) Control the discharge of stormwater volume and velocity at the facility to minimize soil erosion; including peak flow rate, to minimize erosion at outlets, and to minimize downstream channel and stream bank erosion.
(b) Installation of sediment controls necessary to prevent soil erosion at the project boundary must be complete prior to the start of all phases of construction, in areas where stormwater runoff may freely leave the site. For projects where perimeter controls are infeasible, other practices shall be implemented to minimize discharges to perimeter areas of the project.
(c) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property to comply with general water quality criteria, effluent limits, or benchmarks.
(d) Minimize the amount of soil exposed during construction activity.
(e) Minimize the disturbance of steep slopes.
(f) Minimize sediment discharges from the project. Design, install, and maintain erosion and sediment controls addressing factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle size expected to be present on the project;
(g) Provide and maintain natural buffers around surface waters, direct stormwater to vegetated areas to increase sediment removal, and maximize stormwater infiltration and filtering, unless infeasible; and
(h) Unless infeasible, preserve topsoil.
(i) Remove any sediment per the manufacturer's instructions or before it has accumulated to one-half of the above-ground height of any perimeter control.
(j) BMPs shall be maintained in effective operating condition with timely repairs made until final stabilization has been achieved.
(k) Minimize sediment trackout from the project.
i. Restrict vehicle traffic to designated and controlled exit points.
ii. Use stabilization techniques at all exit points onto paved roads.
iii. Remove all tracked out sediment within the same day or by the end of the next day if no forecast of rain.

2. This facility shall implement a Land Disturbance SWPPP (may be included with the site specific SWPPP) which must be prepared and employed upon permit issuance which incorporates site specific practices to best minimize industrial exposed stormwater, soil exposure, soil erosion, and the discharge of pollutants from industrial stormwater and land disturbance activities. This facility is required to design, install, and maintain effective stormwater, erosion, and sediment controls to minimize pollutant discharges. The permittee shall fully implement the provisions of the SWPPP (or revised SWPPP) required under this part as a condition of this

permit and throughout the term of the permit. Either an electronic copy or a paper copy of the SWPPP must be accessible and made available as specified under the Records section of this permit. The SWPPP must be kept on-site and should not be sent to the Department unless specifically requested. The SWPPP must be reviewed and updated every five years or as site conditions change, such as when temporary BMPs are utilized. The permittee shall select, install, use, operate, and maintain appropriate and effective BMPs for the land disturbance project and all industrially exposed areas of the facility in accordance with the concepts and methods described in: *Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites*, (Document number EPA 833-R-06-004 published by the United States Environmental Protection Agency (USEPA) May 2007) and *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002 published by the EPA February 2009) (www.epa.gov/npdes/pubs/industrial_swppp_guide.pdf). The SWPPP must, at a minimum, incorporate the following:

(a) Site Description: Nature of Industrial Activity and Disturbance Activity: Information must be of practical use to contractors and site construction workers to guide the installation and maintenance of BMPs. The SWPPP must describe the nature of the construction activity, including:
   i. The function of the project (e.g., remediation).
   ii. List and describe all outfalls discharging stormwater subject to land disturbance. Additional stormwater outfalls must be added to this permit though permit modification.
   iii. The intended sequence and timing of soil disturbance activities at the site.
   iv. Estimates of the total area expected to be disturbed by excavation, grading, or other construction activities including off-site borrow and fill areas.
   v. Whether or not a 404/401 Permit is required for the project.

(b) Site Map: A general map with enough detail to identify the location of the construction site and waters of the State within one mile of the site. Legible site map(s) showing the site boundaries and outfalls identifying:
   i. Direction(s) of stormwater flow, approximate slopes before, and anticipated slopes after grading activities.
   ii. Areas of soil disturbance and undisturbed areas.
   iii. Location and type of structural BMPs.
   iv. Locations where stabilization practices are expected to occur.
   v. Locations of off-site material, waste, borrow, or equipment storage areas.
   vi. Locations of all waters of the state (including wetlands).
   vii. Locations where stormwater discharges to a surface water.
   viii. Areas where final stabilization has been accomplished and no further permit requirements apply.

(c) Selection of Temporary and Permanent BMPs: The permittee shall select appropriate BMPs for use, and list them in the SWPPP. The SWPPP shall include a description of both structural and operational BMPs used or intended for use.
   i. Incorporate effective erosion control practices specific to project conditions;
   ii. The SWPPP shall require existing vegetation and trees to be preserved where practical.
   iii. For surface waters of the state [RSMo 644] the permittee must:
      (1) Provide and maintain a 25-foot undisturbed natural buffer from any stream or property boundary;
      (2) If less than 25 feet, provide and maintain an undisturbed natural buffer supplemented by erosion and sediment controls to achieve the sediment load reduction equivalent to a 25-foot undisturbed natural buffer; or
      (3) If infeasible to provide and maintain an undisturbed natural buffer of any size, implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.
      (4) Where retaining a buffer of any size, the buffer should be measured perpendicularly from any of the following points, whichever is further landward from the water. The ordinary high water mark of the water body, [33 CFR 328.3(c)(6)]; or the edge of the stream or river bank, bluff, or cliff, whichever is applicable.
   iv. The SWPPP shall provide the following information for each BMP used at the site:
      (1) Description of the BMP, including identifier if used.
      (2) Whether the BMP is temporary or permanent.
      (3) Site conditions required for effective use of the BMP. (maximum slope, etc)
      (4) BMP installation/construction procedures, including representative drawings.
      (5) Operation and maintenance procedures for the BMP.
      (6) Where, in relation to other site features, the BMP is to be located. (GPS location may be used)
      (7) When the BMP will be installed in relation to each phase of the land disturbance, and procedures to complete the project.
      (8) Provide a reason and date anytime temporary BMPs are removed before final stabilization has been achieved.
      (9) Site conditions required (ie. vegetation established) before removal of the BMP.

(d) Disturbed Areas:
   i. For temporarily ceased soil disturbing activities on any portion of the project not resuming for a period exceeding 14 calendar days:
      (1) The permittee shall construct BMPs to establish interim stabilization; and
      (2) Stabilization must be initiated immediately and completed within 14 calendar days.
   ii. For permanently ceased soil disturbing activities on any portion of the project, final stabilization of disturbed areas must be initiated immediately and completed within 14 calendar days. Allowances to the 14 day completion period for

temporary and final stabilization may be made due to weather and equipment malfunctions. The use of allowances shall be documented in the SWPPP.

iii. Interim stabilization shall consist of well-established and maintained BMPs reasonably certain to protect waters of the state from sediment pollution over an extended period of time. This may require adding more BMPs to an area normally used during daily operations. These BMPs may include a combination of sediment basins, check dams, sediment fences, and/or mulch. The types of BMPs used must be suited to the area disturbed, taking into account the number of acres exposed, and the steepness of the slopes. If the slope of the area is greater than 4:1 (four feet horizontal to one foot vertical) or if the slope is greater than 3% and greater than 150 feet in length, then the permittee shall establish interim stabilization within seven days of ceasing operations on interim areas.

iv. If vegetative stabilization measures are being implemented, stabilization is considered "installed" when plants are sufficiently established. Two years of growing seasons may be required to assure roots are fully established and vegetation and soils will not be washed away during high-precipitation storm events.

(e) Installation: The permittee shall ensure BMPs are properly installed at the locations and times specified in the SWPPP. Peripheral or border BMPs to control runoff from disturbed areas shall be installed or marked for preservation before general site clearing is started. Note, this requirement does not apply to earth disturbances related to initial site clearing for establishing entry, exit, and access of the site, which may require stormwater controls be installed immediately after the earth disturbance. For phased projects, BMPs shall be properly installed iteratively prior to construction activities. Stormwater discharges shall pass through an appropriate sediment control measure such as a sedimentation basin, sediment traps, or silt fences prior to leaving the land disturbance area.

(f) Sedimentation Basins/Sediment Control: The SWPPP shall include a sedimentation basin for each drainage area if needed and must be sized to provide sufficient settling based on the expected soils at the site. The basin shall be sized to treat (at a minimum) a local 2-year, 24-hour storm based on the acreage served and infiltration expected at the site. A 2-year, 24-hour storm event can be determined for the project location using the *National Oceanic and Atmospheric Administration's National Weather Service Atlas 14* https://hdsc.nws.noaa.gov/hdsc/pfds/ or other suitable resource. The areal projected runoff can be calculated using the rational equation https://www.lmnoeng.com/Hydrology/rational.php or other suitable source. Accumulated sediment shall be removed from the basin when the basin is 50% full or sooner. Sediments removed may be utilized on site as clean fill or, if determined to contain contaminated industrial sludges, dealt with alternatively. Utilize outlet structures with surficial discharge pipes for basins and impoundments unless infeasible. Discharges from the basin shall not cause scouring of the banks or bottom of the receiving stream. The SWPPP shall require the basin be maintained until final stabilization of the complete area served by the basin. Where use of a settling basin is infeasible, the SWPPP shall evaluate and specify other similarly effective BMPs to be employed to control erosion and sediment runoff. These similarly effective BMPs shall be selected from appropriate BMP guidance documents included in this permit. The BMPs must provide equivalent water quality protection to achieve compliance with this permit. The SWPPP shall require both temporary and permanent sedimentation basins to have a stabilized spillway to minimize the potential for erosion of the spillway or basin embankment.

(g) Procedural BMPs: The SWPPP shall describe any operational, managerial, or procedural BMPs needed at the site. Procedural BMPs are activities or behaviors (not necessarily associated with structural BMPs) such as street sweeping, or good housekeeping techniques. These procedural BMPs shall be described based on frequency required, interval between execution, precipitation expected, or other detailed site conditions or qualifying events shown to be applicable to each specific procedural BMP.

(h) Roadways: Where applicable, upon installation of or connection to roadways, all efforts must be made to prevent the deposition of sediment onto roadways through the use of proper BMPs. Stormwater control inlets susceptible to receiving sediment shall have curb inlet protection. Curb inlet protection shall be cleaned as needed when sediment accumulates to approximately 50% or less of the total BMP height. Where stormwater will flow from a roadway, a sediment-catching BMP such as gravel berm or silt fence shall be provided.

(i) Dewatering: Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls. The SWPPP shall include a description of any anticipated dewatering methods. The SWPPP shall call for specific BMPs designed to treat water pumped from trenches and excavations and in no case shall this water be pumped off-site without being treated by the specified BMPs.

(j) Amending/Updating the SWPPP: The permittee shall amend and update the SWPPP as appropriate during the term of the land disturbance activity. The permittee shall amend the SWPPP at a minimum whenever the:

i. Design, operation, or maintenance of BMPs is changed;
ii. Design of the project has changed and changes could significantly affect the quality of the stormwater discharges;
iii. Permittee's inspections indicate deficiencies in the SWPPP or any BMP;
iv. Department notifies the permittee in writing of deficiencies in the SWPPP;
v. SWPPP is determined to be ineffective in minimizing or controlling erosion and sedimentation (e.g., there is visual evidence of excessive site erosion or excessive sediment deposits in streams or lakes); and/or
vi. Department determines violations of water quality criteria may occur or have occurred.

(k) Designated Individuals: A named individual shall be designated by the permittee/operator as the lead for environmental matters, contact information must be included in the SWPPP. This individual shall have a thorough and demonstrable knowledge of the site's SWPPP and sediment and erosion control practices in general.

(l) Inspections, Logs, and Reports: Qualified individuals shall conduct regularly scheduled inspections. These inspections shall be conducted by persons responsible for environmental matters at the site, or specifically trained by, and directly supervised by, the person responsible for environmental matters at the site. All installed BMPs and other pollution control measures for industrial stormwater and for disturbed areas not finally stabilized, shall be inspected for proper installation, operation, and maintenance. All stormwater outfalls shall be inspected for evidence of erosion or sediment deposition. When practicable, the receiving stream shall also be inspected for 50 feet downstream of the outfall. Any structural, operational, or maintenance problems shall be noted in an inspection report and corrected as soon as practicable but no more than seven calendar days after the inspection. All BMPs must be inspected in accordance to one of the two schedules listed below, and any changes to the frequency of inspections, including switching between the options listed below, must be documented in the SWPPP:

i. At least once every seven calendar days and within 48 hours after any storm event equal to or greater than a 2-year, 24-hour storm has ceased during a normal work day and within 72 hours if the rain event ceases during a non-work day such as a weekend or holiday; or

ii. Once every 14 calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches of precipitation or greater, or the occurrence of runoff from snowmelt. To determine if a storm event of 0.25 inches or greater has occurred on your site, the responsible individual must either keep a properly maintained rain gauge on site, or obtain the storm event information from a weather station for the location.

iii. If inspections occur every 14 calendar days and there is a storm event at the site continuing for multiple days, and each day of the storm produces 0.25 inches or more of rain, the facility is required to conduct an inspection within 24 hours of the first day of the storm and within 24 hours after the end of the storm.

iv. An individual must conduct an inspection within 24 hours once a storm event has produced 0.25 inches within a 24 hour period, even if the storm event is still continuing.

v. The SWPPP must explain how the person responsible for erosion control will be notified when stormwater runoff occurs. If weather conditions prevent correction of BMPs within seven calendar days, the reasons for the delay must be documented (including pictures) and there must be a narrative explaining why the work cannot be accomplished within the seven day time period. The documentation must be filed with the regular inspection reports. The permittee shall correct the problem as soon as weather conditions allow. Areas on-site finally stabilized must be inspected at least once per month.

vi. A log of each inspection and copy of the inspection report shall be kept readily accessible and must be available upon request by the Department. Electronic logs are acceptable. If inspection reports are kept off-site, your SWPPP must indicate where they are stored. The inspection report shall be signed (may sign electronically) by the person performing the inspection. The inspection report must include the following minimum information:

(1) Inspector's name;
(2) Date of inspection, (time of inspection of each element is encouraged but not required);
(3) Frequency and duration of precipitation events (or daily NOAA data) since last inspection;
(4) Observations relative to the effectiveness and condition of the BMPs;
(5) Actions taken or necessary to correct the observed problem; and
(6) Listing of areas where land disturbance operations have permanently or temporarily stopped.

(m) Notification to All Contractors: The permittee shall be responsible for notifying each contractor or entity (including but not limited to utility crews, city employees or their agents, or other personnel) who will perform work which could impact stormwater runoff at the site. These notifications shall include notice of the existence of the SWPPP; and what actions or precautions shall be taken while on-site to minimize the potential for erosion and the potential for damaging any BMP. The permittee is solely responsible to assure timely correction of any damage to any established BMP and any subsequent water quality violation resulting from the damage.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
2023 MODIFICATION STATEMENT OF BASIS
FOR
MO-0004871
SIBLEY GENERATING STATION

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 changed; Evergy has decommissioned this facility and vegetation is expected to be at least at 70% and will be near 100% during the next growing season. Outfalls #001, #002, #003, #006, #007, and #010 no longer exist and have been operationally removed therefore are removed from this permit. The only outfalls left are associated with the landfill.

REMOVED OUTFALLS:

OUTFALL #001 – stormwater; coal pile runoff; subject to 40 CFR 423; after coal removal, pond will remain for land disturbance stormwater control; must be maintained as wastewater basin until clean closed.

Legal Description:	SW¼, SW¼, Sec.35, T51N, R30W, Jackson Co.
UTM Coordinates:	X = 397222, Y = 4337810
Receiving Waterbody:	Missouri River (P)
First Classified Waterbody and ID:	Missouri River (P); WBID# 0345; 303(d)
Design Flow:	3.53 MGD
Average Flow:	0.064 MGD

OUTFALL #002 – stormwater basin from former coal combustion residual (CCR) slag area; slag has been removed; will remain as Best Management Practice (BMP) for land disturbance stormwater control

Legal Description:	NE¼, NW¼, Sec.2, T50N, R30W, Jackson Co.
UTM Coordinates:	X = 397600, Y = 4337373
Receiving Waterbody:	Missouri River (P)
First Classified Waterbody and ID:	Missouri River (P); WBID# 0345; 303(d)
Design Flow:	0.371 MGD
Average Flow:	0.007 MGD

OUTFALL #003 – stormwater; formerly slag dewatering and boiler blowdown; slag has been removed

Legal Description:	NE¼, NW¼, Sec.2, T50N, R30W, Jackson Co.
UTM Coordinates:	X = 397645, Y = 4337337
Receiving Waterbody:	Missouri River (P)
First Classified Waterbody and ID:	Missouri River (P); WBID# 0345; 303(d)
Design Flow:	0.062 MGD
Average Flow:	0.001 MGD

OUTFALL #006 – stormwater basin; formerly carbon filter backwash and demineralizer, condensate polisher backwash, chemical cleaning wastes, containment drains, and domestic wastewater; will remain as Best Management Practice (BMP) for land disturbance stormwater control; clean out of sludge will be completed after plant decommissioning activities

Legal Description:	NW¼, NE¼, Sec.2, T50N, R30W, Jackson Co.
UTM Coordinates:	X = 397820, Y = 4337116
Receiving Waterbody:	Missouri River (P)
First Classified Waterbody and ID:	Missouri River (P); WBID# 0345; 303(d)
Design Flow:	0.279 MGD
Average Flow:	0.005 MGD

OUTFALL #007 – former fly ash pond; ash is being actively removed; formerly discharged ash sluice wastewater, neutralization tank discharge, and stormwater from chemical feed area. Currently only discharges direct fall precipitation, not a stormwater control catchment.

Legal Description:	NW¼, NW¼, Sec.2, T50N, R30W, Jackson Co.
UTM Coordinates:	X = 398723, Y = 4336820
Receiving Waterbody:	8-20-13 MUDD V1.0 (C)
First Classified Waterbody and ID:	8-20-13 MUDD V1.0 (C); WBID# 3960
Design Flow:	2.79 MGD
Average Flow:	0.051 MGD

OUTFALL #010 – stormwater

Legal Description:	NE¼, NW¼, Sec.2, T50N, R30W, Jackson Co.
UTM Coordinates:	X = 398723, Y = 4336820
Receiving Waterbody:	Tributary to Missouri River
First Classified Waterbody and ID:	Missouri River (P); WBID# 0345; 303(d)
Design Flow:	0.093 MGD
Average Flow:	0.002 MGD

PART II. MODIFICATION RATIONALE

This operating permit is hereby modified to reflect the decommissioning of the power station; there are no longer discharges from the following outfalls: These outfalls were removed from the facility description; the limit sets (Tables A-1 through A-4) were removed from the permit. Notes no longer applicable (benchmarks, cyanide, and selenium) were removed. Special Condition #10 (benchmarks) was removed as it is no longer applicable. Schedule of compliance was removed as it is no longer applicable.

Pagination was fixed. No other changes were made at this time.

PART III. ADMINISTRATIVE REQUIREMENTS

On the basis of preliminary staff review, and utilizing current applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue this permit subject to specified effluent limitations, schedules, and special conditions. The changes contained herein do not require a public notice comment period per 10 CSR 20-6.020.

40 CFR 122.63(e)(2) states that a public notice is not required when a modification deletes a point source outfall when the discharge from that outfall is terminated and does not result in discharge of pollutants from other outfalls except in accordance with permit limits.

DATE OF FACT SHEET: DECEMBER 6, 2023

COMPLETED BY:
PAM HACKLER, ENVIRONMENTAL SCIENTIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
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MISSOURI DEPARTMENT OF NATURAL RESOURCES
2019 FACT SHEET
FOR THE PURPOSE OF RENEWAL OF MO-0004871
SIBLEY GENERATING STATION

The Federal Water Pollution Control Act ("Clean Water Act" Section 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 (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified for less.

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

PART I. FACILITY INFORMATION

Facility Type: Industrial – Major, Categorical; >1 MGD
SIC Code(s): 4911
NAICS Code(s): 221112
Application Date: 05/23/2005, 08/12/2019
Expiration Date: 11/02/2005

FACILITY DESCRIPTION:
Former power generating facility. Originally constructed in the 1960s, Unit 1 retired in 2017 and units 2 and 3 were retired in 2018; permit MO-0136131 for the Utility Waste Landfill has been added to this permit to encompass the entire site under one Missouri State Operating Permit.

The charter number for the continuing authority for this facility is 001371758; this number was verified by the permit writer to be associated with the facility and precisely matches the continuing authority reported by the facility in an email dated 10/17/2019. In accordance with 40 CFR 122.21(f)(6), the Department evaluated other permits currently held by this facility; this facility has an air permit, 112011-009 and OP2012-056, and a solid waste permit for the landfill, 0709505/0909502.

PERMITTED FEATURES TABLE:

OUTFALL	AVERAGE FLOW	DESIGN FLOW	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.064 MGD	3.53 MGD	settling, retention	coal pile runoff, coal is being removed; 38 acres, 80% coal, 5% paved, 15% stone
#002	0.007 MGD	0.371 MGD	settling, retention, BMPs	settling basin, former slag basin, all slag has been removed; will serve as a BMP until power plant completely razed and will be used for stormwater retention during land disturbance activities; flow measured in parshall flume; 4 acres, 60% stone, 40% paved
#003	0.001 MGD	0.062 MGD	BMPs	stormwater from decommissioning and land disturbance activities; formerly wastewater; flow measured with parshall flume; 2 acres, 50% paved, 50% stone
#004	n/a	n/a	n/a	removed, formerly once-through cooling water; plant is shut down
#005	n/a	n/a	n/a	removed, formerly once-through cooling water; plant is shut down

OUTFALL	AVERAGE FLOW	DESIGN FLOW	TREATMENT LEVEL	EFFLUENT TYPE
#006	0.005	0.279	settling, retention, coagulation, neutralization	former process waste pond, no longer receives process waste but has not been cleaned out yet; will serve as a BMP for stormwater from decommissioning and land disturbance activities; 3 acres, 60% paved, 20% stone, 20% other
#007	0.051 MGD	2.79 MGD	settling, retention, coagulation, neutralization	receives only direct precipitation currently; fly ash in pond is being removed (clean closure by removal per 40 CFR 257)
#008	n/a	n/a	n/a	eliminated prior to 2000
#009	n/a	n/a	n/a	eliminated prior to 2000
#010	0.002 MGD	0.093 MGD	BMPs	stormwater from decommissioning and land disturbance activities; 1 acre, 60% paved, 20% stone, 20% other
#020	1.35 MGD	2.72 MGD	settling, retention, coagulation, neutralization	landfill leachate pond serving utility waste landfill
#021	unknown/new	unknown/new	overland flow, letdown ditches	non-contact stormwater at landfill
#022	unknown/new	unknown/new	overland flow, letdown ditches	non-contact stormwater at landfill
#023	unknown/new	unknown/new	overland flow, letdown ditches	non-contact stormwater at landfill
#024	unknown/new	unknown/new	overland flow, letdown ditches	non-contact stormwater at landfill
#025	unknown/new	unknown/new	overland flow, letdown ditches	non-contact stormwater at landfill

BMPs: Best Management Practices

FACILITY OWNER:
KCP&L Greater Missouri Operations Company, the owner of the facility has undergone a name change resulting from the merger of Great Plains Energy, the parent company of KCP&L Greater Missouri Operations Company. The name of the parent company is now Evergy, Inc. The permittee has requested that the facility owner be listed as Evergy, Inc.

FACILITY PERFORMANCE HISTORY & COMMENTS:
The electronic discharge monitoring reports were reviewed for the last permit term; however, these data are not representative of current site conditions as the facility has ceased generating electricity. The permit writer used the application materials to determine effluent limits and permit requirements for the current activities at the site. The facility determined outfalls #002, #003, and #010 were similar and sampled only #003 for the reapplication materials. Outfall #001, while still subject to the ELG for coal pile runoff, is also sufficiently similar to be grouped together. Outfall #001 has the appropriate limits for TSS while benchmarks were applied for the remaining parameters. Sludge from cleanout of ponds serving all outfalls will continue to be subject to ELG and solids removal requirements at the time of sludge removal.

Outfall #007, the former ash pond, no longer receives wastewater but has not yet been cleaned out therefore must continue to contain limits. The permit writer further determined outfall #006 wastewater sludge has not been cleaned out, therefore is not eligible for stormwater benchmarks.

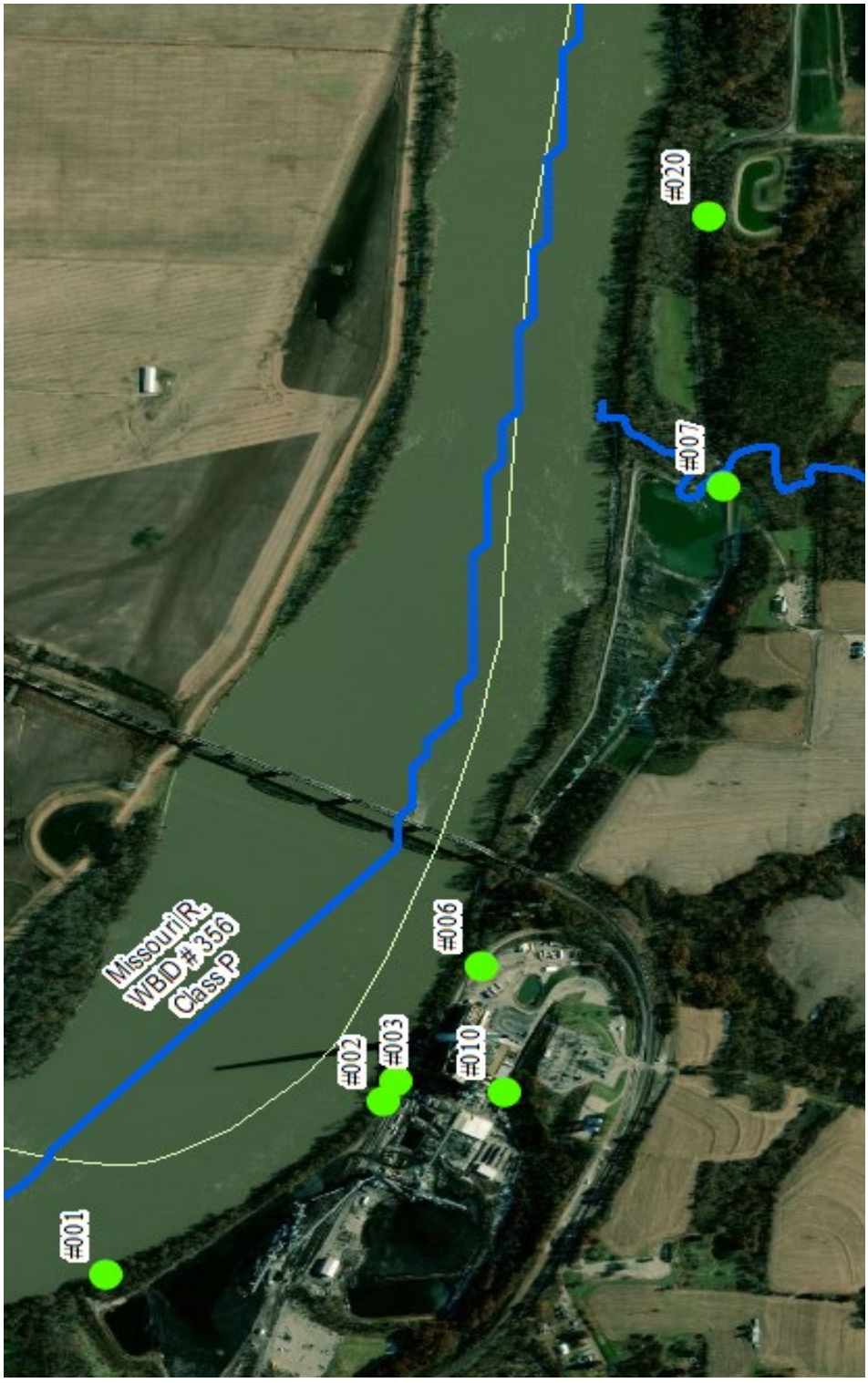
UTILITY WASTE LANDFILL:
The utility waste landfill has been established in this permit as outfall #020, formerly found in permit MO-0136131. By-products from the coal combustion process are disposed of on-site; the facility may also receive CCR from other power plants, and is also receiving historic fly ash from the historic fly ash pond. Landfill leachate is collected and ultimately discharged to the Missouri River. The landfill expansion is designed to provide approximately 4.65 million cubic yards of additional airspace for the disposal of utility waste; the wastes include: fly ash, scrubber sludge, bottom ash, slag, and other miscellaneous waste, including water treatment waste.

Contact water is managed through a leachate collection system above the liner and drains to a leachate pond located north of the landfill. The leachate discharges to the Missouri River. Non-contact stormwater runoff from closed or vegetated areas of the expansion will be collected in a series of channels and perimeter ditches and conveyed to letdown ditches. These stormwater discharges are newly permitted in this permit as outfalls #021, #22, #023, #024, and #025. 40 CFR 122.26(b)(14)(v) indicates stormwater associated with landfills is industrial activity therefore was added to the permit.

Effluent parameters were established for outfall #020 largely based on 40 CFR 423 effluent limitation guideline and the EPA document *Steam Electric Power Generating Point Source Category: Final Detailed Study Report* (EPA 821-R-09-008), October 2009. While this outfall shows little reasonable potential for causing or contributing to water quality exceedances (except for pH), the document has highlighted several parameters of concern for leachate discharges. These parameters were carefully considered for implementation into this permit and were established based on their potential for detection or probability of occurrence in the leachate.

Outfalls #021, #022, #023, #024, and #025 discharge non-contact stormwater from the onsite utility waste landfill. Cover has been placed on areas of the landfill to protect from exposure to rain, snow, snowmelt and runoff. No exposure certification is appropriate as long as adequate cover is maintained.

FACILITY MAP:



LANDFILL MAP:

PART II. RECEIVING WATERBODY INFORMATION

RECEIVING WATERBODY'S WATER QUALITY:
The USGS has data available for the Missouri River. Please visit USGS.gov to download the applicable data.

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

- ✓ Applicable; the Missouri River was initially listed on the 2012 Missouri 303(d) list for *Escherichia coli*. This facility is not considered a source of the above listed pollutant(s) or considered to contribute to the impairment.

TOTAL MAXIMUM DAILY LOAD (TMDL):
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 may be developed. The TMDL shall include the WLA calculation. http://dnr.mo.gov/env/wpp/tmdl/

- ✓ Applicable; The Missouri River is associated with the 2006 EPA approved TMDL for Chlordane and PCBs. This facility is not considered to be a source of the above listed pollutant(s) or considered to contribute to the impairment.

UPSTREAM OR DOWNSTREAM IMPAIRMENTS:
The permit writer has reviewed upstream and downstream stream segments of this facility for impairments.
- ✓ There is no upstream impairment present at this facility.
- ✓ The permit writer has noted downstream of the facility the stream is on the 303(d) list and has a TMDL; see above.

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:
Per Missouri's Effluent Regulations [10 CSR 20-7.015(1)(B)], waters of the state are divided into seven categories. This facility is subject to effluent limitations derived on a site specific basis which are presented in each outfall's effluent limitation table and further discussed in Part IV: Effluents Limits Determinations.
- ✓ Missouri or Mississippi River
- ✓ All Other Waters
- ✓ Western Corn Belt Plains Ecoregion

RECEIVING WATERBODY TABLE:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES	DISTANCE TO CLASSIFIED SEGMENT	12-DIGIT HUC
#001 #002 #003 #006 #020	Missouri River	P	0356	DWS, GEN, HHP, IND, IRR, LWW, SCR, WBC-B, WWH (ALP)	0 mi	Cravens Creek – Missouri River; 10300101-0604
#010 #021 #022 #023 #024 #025	Tributary to Missouri River	n/a	n/a	GEN	0.1 mi 0.2 mi 0.3 mi 0.3 mi 0.3 mi 0.3 mi	
#007	8-20-13 MUDD V1.0 Stream	C	3960	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)	0 mi	

n/a not applicable

Classes are hydrologic classes 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: wetland. 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: Missouri Use Designation Dataset per 10 CSR 20-7.031(1)(Q) and (S) as 100K Extant-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.

Per 10 CSR 20-7.031, the Department defines the Clean Water Commission's water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and 1st classified receiving stream's beneficial water uses are to be maintained in the receiving streams in accordance with [10 CSR 20-7.031(1)(C)]. Uses which may be found in the receiving streams table, above:

10 CSR 20-7.031(1)(C)1.: **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-A2 for all habitat designations unless otherwise specified.
10 CSR 20-7.031(1)(C)2.: Recreation in and on the water
WBC = Whole Body Contact recreation where the entire body is capable of being submerged;
WBC-A = whole body contact recreation supporting swimming uses and has public access;
WBC-B = whole body contact recreation not supported 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
LWW = Livestock and Wildlife Watering (current narrative use is defined as LWP = Livestock and Wildlife Protection);
DWS = Drinking Water Supply
IND = industrial water supply
10 CSR 20-7.031(1)(C)8-11.: Wetlands (10 CSR 20-7.031 Tables A1-B3 currently does not have corresponding habitat use criteria for these defined uses): WSA = storm- and flood-water storage and attenuation; WHP = habitat for resident and migratory wildlife species; WRC = recreational, cultural, educational, scientific, and natural aesthetic values and uses; WHC = hydrologic cycle maintenance.
10 CSR 20-7.031(6): **GRW** = Groundwater

RECEIVING WATERBODY MONITORING REQUIREMENTS:
No receiving water monitoring requirements are recommended at this time.

MIXING CONSIDERATIONS:
For outfall #007, mixing zone and zone of initial dilution are not allowed per 10 CSR 20-7.031(5)(A)4.B.(I)(a) and (b), as the base stream flow does not provide dilution to the effluent.

Missouri River data obtained from 9/1/1999 through 9/2/2019 from gaging station 06893000.
1Q10: 17663.8 cfs
7Q10: 18691.9 cfs
30Q10: 19960.9 cfs
60Q10: 20628.9 cfs

MIXING CONSIDERATIONS TABLE: MISSOURI RIVER

	MIXING ZONE (CFS) (CHRONIC) [10 CSR 20-7.031(5)(A)5.A.4.B.(III)(a)]				ZONE OF INITIAL DILUTION (CFS) (ACUTE) [10 CSR 20-7.031(5)(A)4.B.(III)(b)]			
	1Q10	7Q10	30Q10	60Q10	1Q10	7Q10	30Q10	60Q10
outfall #001 (df = 5.462)	4416.0 cfs	4673.0 cfs	4990.2 cfs	5157.2 cfs	54.6 cfs	54.6 cfs	54.6 cfs	54.6 cfs
outfall #020 (df = 0.019 cfs)	4416.0 cfs	4673.0 cfs	4990.2 cfs	5157.2 cfs	0.19 cfs	0.19 cfs	0.19 cfs	0.19 cfs

PART III. RATIONALE AND DERIVATION OF PERMIT CONDITIONS

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:
As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.
- ✓ Not applicable; this is an existing facility.

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 for the reissuance conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.
  - ✓ Material and substantial alterations or additions to the permitted facility occurred after permit issuance justify the application of a less stringent effluent limitation.
    - The last permit for this power generating facility was issued November 3. 2000; the last permit for the utility waste landfill was issued December 3, 2010.
    - The facility has ceased generating electricity therefore almost all previous permit requirements for outfalls #001 through #010, including general criteria, have been reevaluated and reestablished per current operations, which is for land disturbance and decommissioning of the plant.
    - The only effluent which has not changed is outfall #001, coal pile runoff (although the coal pile is being removed soon); and outfall #020, landfill leachate imported from permit MO-0136131. See individual parameter descriptions under Part IV EFFLUENT LIMITS DETERMINATIONS for additional parameter specific information and Part I FACILITY INFORMATION of the fact sheet for additional facility changes.
    - Outfalls #004 and #005 were removed completely; there is no longer cooling water or process water discharges.
    - Outfall #010, stormwater. Previous permit limits for oil and grease and settleable solids were removed in favor of benchmarks which will allow the facility to update and assure BMPs are working appropriately. There is no RP for oil and grease or settleable solids to cause or contribute to in-stream exceedances from the stormwater at this site.
    - The previous permit special conditions contained a specific set of prohibitions related to general criteria (GC) found in 10 CSR 20-7.031(4); however, there was no determination as to whether the discharges have reasonable potential to cause or contribute to excursion of those general water quality criteria in the previous permit. This permit assesses each general criteria as listed in the previous permit's special conditions. Federal regulations 40 CFR 122.44(d)(1)(iii) requires instances where reasonable potential (RP) to cause or contribute to an exceedance of a water quality standard exists, a numeric limitation must be included in the permit. Rather than conducting the appropriate RP determination, the previous permit simply placed the prohibitions in the permit. These conditions were removed from the permit. Appropriate reasonable potential determinations were conducted for each general criterion listed in 10 CSR 20-7.031(4)(A) through (I) and effluent limitations were placed in the permit for those general criteria where it was

determined the discharge had reasonable potential to cause or contribute to excursions of the general criteria. Specific effluent limitations were not included for those general criteria where it was determined the discharges will not cause or contribute to excursions of general criteria. Removal of the prohibitions does not reduce the protections of the permit or allow for impairment of the receiving stream. The permit maintains sufficient effluent limitations, monitoring requirements and best management practices to protect water quality while maintaining permit conditions applicable to permittee disclosures and in accordance with 10 CSR 20-7.031(4) where no water contaminant by itself or in combination with other substances shall prevent the water of the state from meeting the following conditions:

(A) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses.
- There is no RP for putrescent bottom deposits preventing full maintenance of beneficial uses; the permit writer has determined domestic wastewater is no longer discharged which could form putrescent bottom deposits.
- For outfalls #001, #006, #007, and #020, there is RP for unsightly or harmful bottom deposits preventing full maintenance of beneficial uses; these outfalls have been determined to contain wastewater or stormwater which have sufficient total suspended solids which may create bottom deposits in the receiving stream.
- For the stormwater-only outfalls (those not listed above), there is no RP for unsightly or harmful bottom deposits preventing full maintenance of beneficial uses because nothing disclosed by the permittee indicates unsightly or harmful bottom deposits would be discharged from the facility.

(B) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses.
- For outfall #006, there is RP for oil in sufficient amounts to be unsightly preventing full maintenance of beneficial uses; the permit writer implemented water quality oil and grease limits for this outfall to limit the discharge of oil and grease in amounts which could cause a sheen.
- For all other outfalls, there is no RP for oil in sufficient amounts to be unsightly preventing full maintenance of beneficial uses; the permit writer has reviewed all available information and although outfalls #007 and #020 contain limits for oil and grease, these limits are based on technology guidelines and data do not indicate water quality will be affected at these outfalls. Stormwater outfalls have a benchmark for oil and grease.
- For all outfalls, there is no RP for scum and floating debris in sufficient amounts to be unsightly preventing full maintenance of beneficial uses; the permit writer considered pollutants which may cause scum or floating debris and have not found any parameters present at this site traditionally associated with floating debris within the discharge.

(C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.
- For unsightly color or turbidity, see discussion under bottom deposits.

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

(E) There shall be no significant human health hazard from incidental contact with the water.
- This criterion is very similar to (D) above. See Part IV, Effluent Limits Derivation below.

(F) There shall be no acute toxicity to livestock or wildlife watering.
- This criterion is very similar to (D) above. See Part IV, Effluent Limits Derivation below.

(G) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.
- It has been established any chemical changes are covered by the specific numeric effluent limitations established in the permit.
- For all outfalls, there is no RP for hydrologic changes impairing the natural biological community because nothing disclosed by the permittee indicates this is occurring.

(H) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
- There are no solid waste disposal activities or any operation which has reasonable potential to cause or contribute to the materials listed above being discharged through any outfall.

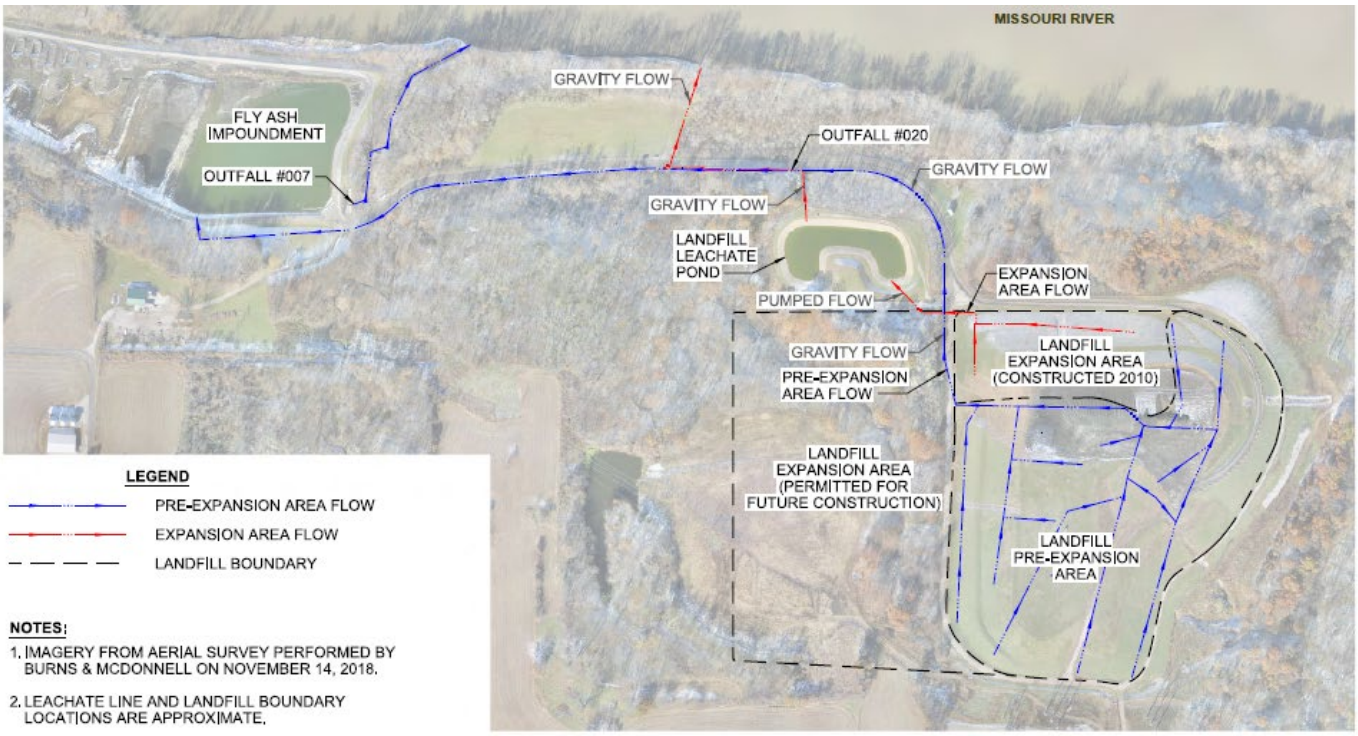
ANTIDEGRADATION REVIEW:

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 http://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm

✓ Not applicable; the facility disclosed the re-route of wastewater but an antidegradation was determined to be not applicable because the pollutant characteristics have not changed, nor the receiving water. The facility provided the following.

On August 29, 2018, Phase One Part One of the Combined Coal Residuals (CCR) Rule, Part 257.60(c)(4) and 257.101(b) revised the date Owner/Operators must cease placing CCR and non-CCR waste streams into certain units, including the Sibley Fly Ash Impoundment, from April 17, 2019 to October 31, 2020. However, this part of the Rule is being challenged, with the result KCP&L GMO may need to redirect leachate from the Pre-expansion Area going to the impoundment. Although KCP&L GMO prefers permit allow all work to be accomplished in one continuous project, this request is presented in two distinct phases to allow separate, early review and DNR-SWMP approval of Phase 1.



Work generally consists of rerouting the Pre-expansion Area leachate draining to the Fly Ash Impoundment to the Landfill Leachate Pond. A new six-inch HDPE pipe will be connected to the existing six-inch HDPE pipe, which will be routed to a new four-foot diameter manhole. A new 12-inch line will carry leachate from the manhole to the existing Landfill Leachate Pond. This pipe will be installed on 0.5% slope and will be provided with riprap at the Landfill Leachate Pond.

KCP&L GMO is requesting a modification to direct leachate from the 2010 Landfill Expansion Area (Stage A) to the existing landfill leachate pond using gravity flow instead of the force main. Use of gravity flow will increase reliability and reduce required maintenance associated with pumping leachate from the expansion area of the landfill. The piping modification will require a new 6-inch HDPE leachate pipe be installed in the sump of the Landfill Expansion Area to allow it to drain via gravity west to the new manhole installed in Phase 1 where it will combine with the leachate from the landfill Pre-expansion Area, before being routed to the existing Landfill Leachate Pond. Details of the planned work are identified in the contract drawings provided in Attachment 2. The proposed Phase 2 modifications will require a pipe trench be excavated through the existing liner system. Please note the sump is relatively shallow for landfill sumps, only about ten feet below surrounding grade. Burns & McDonnell proposes to backfill the repair area with AquaBlok in lieu of the compacted soil liner. AquaBlok is a low-permeability composite-aggregate consisting of aggregate coated with a powdered high-swell sodium bentonite coating. The use of AquaBlok will minimize the impact to the existing liner system, as opposed to recompaction of the existing soil liner material. AquaBlok would allow for a narrower trench because it would not require benching or feathering in of successive lifts, as would be required with a compacted soil liner. The AquaBlok material would also provide a lower permeability than what could be achieved with replacement of existing liner material. Pelletized bentonite may be provided as a secondary alternative.

After review of the above disclosures, the Engineering Section in the Water Protection Program determined an antidegradation was not required as no new pollutants were being added to the river.

ANTIDEGRADATION REVIEW FOR STORMWATER:
This permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) which must include an alternative analysis (AA) of the BMPs. The SWPPP must be developed, implemented, updated, and maintained at the facility. Failure to implement and maintain the chosen alternative, is a permit violation. The AA is a structured evaluation of BMPs to determine which are reasonable and cost effective. Analysis should include practices designed to be 1) non-degrading, 2) less degrading, or 3) degrading water quality. The chosen BMP will be the most reasonable and cost effective while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The analysis must demonstrate why "no discharge" or "no exposure" are not feasible alternatives at the facility. Existing facilities with established SWPPPs and BMPs need not conduct an additional alternatives analysis unless new BMPs are established to address BMP failures or benchmark exceedances. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.015(9)(A)5 and 7.031(3). For stormwater discharges with new, altered, or expanding discharges, the stormwater BMP chosen for the facility, through the AA performed by the facility, must be implemented and maintained at the facility. Failure to implement and maintain the chosen BMP alternative is a permit violation; see SWPPP.
✓ Applicable; the facility must review and maintain stormwater BMPs as appropriate.

BEST MANAGEMENT PRACTICES:
Minimum site-wide best management practices are established in this permit to assure all permittees 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 RSMo 644.011 and 644.016 (17).

CHANGES IN DISCHARGES OF TOXIC POLLUTANT:
This special condition reiterates the federal rules found in 40 CFR 122.44(f) and 122.42(a)(1). 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 found in 40 CFR 401.15. The permittee should also consider any other toxic pollutant in the discharge as reportable under this condition.

COMPLIANCE AND ENFORCEMENT:
Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.
✓ Not applicable; the permittee/facility is not currently under Water Protection Program enforcement action.

DOMESTIC WASTEWATER, SLUDGE, AND BIOSOLIDS:
Domestic wastewater is defined as wastewater (i.e., human sewage) originating primarily from the sanitary conveyances of bathrooms and kitchens. Domestic wastewater excludes stormwater, animal waste, process waste, and other similar waste.
✓ Not applicable; this facility currently discharges domestic wastewater subsurface with flows of 3,000 gallons per day or less as calculated in accordance with 19 CSR 20-3.060(1)(E) and tables 2A and 2B. This permit does not authorize any industrial wastewater for introduction into the sub-surface system. In the near future, the facility will be removing the subsurface system and will be providing chemical toilets to the workers.

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.
Additional information: http://extension.missouri.edu/main/DisplayCategory.aspx?C=74 (WQ422 through WQ449).
✓ Standard conditions Part III is incorporated into this permit.

EFFLUENT LIMITATIONS:
Effluent limitations derived and established for this permit are based on current operations of the facility and applied per 10 CSR 20-7.015(9)(A). Any flow through the outfall is considered a discharge and must be sampled and reported as provided in the permit. Future permit action due to facility modification may contain new operating permit terms and conditions which supersede the terms and conditions, including effluent limitations, of this operating permit. Daily maximums and monthly averages are required per 40 CFR 122.45(d)(1) for continuous discharges (not from a POTW).

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

- ✓ The facility has an associated Effluent Limit Guideline (ELG) at 40 CFR 423 applicable to the stormwater discharge from the coal pile at this site, and is applied under 40 CFR 125.3(a). Should Reasonable Potential be 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). See Part IV: EFFLUENT LIMITS DETERMINATION.

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

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

To assist the facility in entering data into the eDMR system, the permit describes limit sets in each table in Part A of the permit. The data entry personnel should use these identifiers to assure data entry is being completed appropriately.

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

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, the permit writer has completed 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). In instances where reasonable potential exists, the permit includes limitations within the permit 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 Section D – Administrative Requirements of Standard Conditions Part I of 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 sections 644.006 to 644.141 of the Missouri Clean Water Law or any standard, rule, or regulation promulgated by the commission.

- ✓ Applicable; this permit contains effluent limitations to protect for toxicity in accordance with 10 CSR 20-7.031(4)(D) and (G); see Part IV outfall #007 for specific pollutant discussion.
- ✓ This permit has effluent limitations for pH at all outfalls for this site, including stormwater outfalls. This facility has determined pH adjustment may be necessary to meet permit limits. The effluent limits established for pH will protect for the general criteria at 10 CSR 20-7.031(4); (E) downstream uses; (F) protect from harm through contact; (G) protect livestock and wildlife watering use; and (H) physical and chemical change protection.

GROUNDWATER MONITORING:
Groundwater is a water of the state according to RSMo 644.016(27), 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. The facility is removing all of the ash from the pond serving outfall #007 per 40 CFR 257 therefore the most stringent closure requirement is being followed which would negate the need for any groundwater monitoring in the pond #007 area. The landfill groundwater is being managed under the Waste Management Program and under 40 CFR 257.

LAND APPLICATION:
Land application of wastewater or sludge is performed by facilities to maintain a basin as no-discharge.

- ✓ Not applicable; this permit does not authorize operation of a land application system to disperse wastewater or sludge.

MAJOR WATER USER:
Any surface or groundwater user with a water source and the equipment necessary to withdraw or divert 100,000 gallons (or 70 gallons per minute) or more per day combined from all sources from any stream, river, lake, well, spring, or other water source is considered a major water user in Missouri. All major water users are required by law to register water use annually (Missouri Revised Statues Chapter 256.400 Geology, Water Resources and Geodetic Survey Section). https://dnr.mo.gov/pubs/pub2236.htm

✓ Not applicable; this permittee can no longer withdraw water from the state in excess of 70 gpm/0.1 MGD.

OIL/WATER SEPARATORS:
Oil water separator (OWS) tank systems are frequently found at industrial sites where process water and stormwater may contain oils and greases, oily wastewaters, or other immiscible liquids requiring separation. Food industry discharges typically require pretreatment prior to discharge to municipally owned treatment works. Per 10 CSR 26-2.010(2)(B), all oil water separator tanks must be operated according to manufacturer's specifications and authorized in NPDES permits per 10 CSR 26-2.010(2) or may be regulated as a petroleum tank.

✓ Not applicable; the permittee has not disclosed the use of any oil water separators they wish to include under the NPDES permit at this facility and therefore oil water separator tanks are not authorized by this permit.

REASONABLE POTENTIAL (RP):
Federal regulation [40 CFR Part 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 in zones of initial dilution, and chronic toxicity criteria may be exceeded by permit in mixing zones. If the permit writer determines any given pollutant has the reasonable potential to cause or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for the pollutant per 40 CFR Part 122.44(d)(1)(iii) and the most stringent limits per 10 CSR 20-7.031(9)(A). Permit writers may use mathematical reasonable potential analysis (RPA) using the Technical Support Document for Water Quality Based Toxics Control (TSD) methods (EPA/505/2-90-001) as found in Section 3.3.2, or may also use reasonable potential determinations (RPD) as provided in Sections 3.1.2, 3.1.3, and 3.2 of the TSD.

✓ Not applicable; a mathematical RPA was not conducted for this facility for outfalls #001 through #010 given the limited data available and the change in operations. Instead, an RPD was conducted using best professional judgment.

✓ Applicable; an RPA was conducted on outfall #020 for appropriate parameters and was conducted as per (TSD Section 3.3.2). A more detailed version including calculations of this RPA is available upon request. See Wasteload Allocations (WLA) for Limits in this section.

✓ Outfall #020 (landfill leachate)

Parameter:	Units	CMC Acute	CCC Chronic	Listing	Daily Max	Monthly Average	n#	CV	n Max	MF	RWC Acute	RWC Chronic	RP
Arsenic, TR	µg/L	n/a	20	AQL	8067067.47	4021090.16	1	0.600	15.3	13.2	18.35212	0.18164	No
Boron, TR	µg/L	n/a	2000	IRR	806706746.92	402109015.52	1	0.600	19900	13.2	23869.75	236.25	No
Chloride + Sulfate*	mg/L	1000	n/a	AQL	11000	n/a	8	0.600	1230	3.33	372.28659	3.68476	No
Copper, TR	µg/L	31.93	19.71	AQL	351.23	175.08	1	0.600	19.6	13.2	23.50990	0.23269	No
Mercury, Total (future)	µg/L	1.65	0.8	AQL	18.12	9.03	1	0.600	0.2	13.2	0.23990	0.00237	No
Fluoride	mg/L	n/a	4	LWP	1613413.5	804218.0	1	0.600	1.1	13.2	1.31943	0.01306	No

Units are (µg/L) unless otherwise noted.
n/a Not Applicable
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).
* Used as a screening tool to determine the receiving water concentration; because the current standards indicate the effluent limitations should be established as 20% above background. Background is not currently not known.

✓ This permit also establishes permit limits and benchmarks for stormwater at outfalls identified in the Facility Description of the permit. The Department has determined stormwater is not a continuous discharge and is therefore not necessarily dependent on mathematical RPAs. However, the permit writer completed an RPD, a reasonable potential determination, using best professional judgment for all of the appropriate parameters in this permit. An RPD consists of reviewing application data and/or discharge monitoring data for the last five years and comparing those data to narrative or numeric water quality criteria.

✓ Permit writers use the Department's permit writer's manual (http://dnr.mo.gov/env/wpp/permits/manual/permit-manual.htm), the EPA's permit writer's manual (https://www.epa.gov/npdes/npdes-permit-writers-manual), program policies, and best professional judgment. For each parameter in each permit, the permit writer carefully considers all applicable information regarding:

technology based effluent limitations, effluent limitation guidelines, water quality standards, stream flows and uses, and all applicable site specific information and data gathered by the permittee through discharge monitoring reports and renewal (or new) application sampling. Best professional judgment is based on the experience of the permit writer, cohorts in the Department and resources at the EPA, research, and maintaining continuity of permits if necessary. For stormwater permits, the permit writer is required per 10 CSR 6.200(6)(B)2 to consider: A. application and other information supplied by the permittee; B. effluent guidelines; C. best professional judgment of the permit writer; D. water quality; and E. BMPs. Part IV provides specific decisions related to this permit.

✓ The permit writer reviewed application materials, DMR data, past inspections, and other site specific factors to evaluate general and narrative water quality reasonable potential for this facility. Per the permit writer's best professional judgment, based on available data and full and accurate disclosure on application materials. See Part IV: Effluent Limit Determinations for specific parameter RP.

SAMPLING FREQUENCY JUSTIFICATION:
Sampling and reporting frequency was generally retained from previous permit for wastewater streams. 40 CFR 122.45(d)(1) indicates all continuous 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. The facility may sample more frequently if additional data is required to determine if best management operations and technology are performing as expected.

SAMPLING TYPE JUSTIFICATION:
Sampling type was continued from the previous permit. The sampling types are representative of the discharges, and are protective of water quality. Discharges with altering effluent should have composite sampling; discharges with uniform effluent can have grab samples. Grab samples are usually appropriate for stormwater. Parameters which must have grab sampling are: pH, ammonia, *E. coli*, total residual chlorine, free available chlorine, hexavalent chromium, dissolved oxygen, total phosphorus, volatile organic compounds, and others.

SCHEDULE OF COMPLIANCE (SOC):
A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, effluent limits, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. SOCs are allowed under 40 CFR 122.47 and 10 CSR 20-7.031(11) providing certain conditions are met.
A 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. 40 CFR § 125.3.
- For a newly constructed facility in most cases. Newly constructed facilities must meet applicable effluent limitations when discharge begins, because the facility has installed the appropriate control technology 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 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 to permit writers on standard time frames for schedules for common activities, and guidance on factors to modify the length of the schedule.

✓ Applicable; the time given for effluent limitations of this permit listed under Interim Effluent Limitations and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(11)]. The facility has been given a schedule of compliance to meet final effluent limits. See permit Sections A and B for compliance dates. The schedule for outfall #007 will be established ending December 31, 2021 as the closure by removal has been proposed to be completed by then.

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 practicable moment after discovery. The Department may require the submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply whether or not the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the noncompliance reporting requirement found in Standard Conditions Part I. http://dnr.mo.gov/env/esp/spillbill.htm

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.

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.
✓ Applicable; sludge is being removed by the facility from the fly ash pond and will be placed in to the utility waste landfill onsite.

STANDARD CONDITIONS:
The standard conditions Part I attached to this permit incorporate all sections of 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 should be reviewed by the permittee to ascertain compliance with this permit, state regulations, state statues, federal regulations, and the Clean Water Act. Standard Conditions Part III, if attached to this permit, incorporate requirements dealing with domestic wastewater, sludge, and land application.

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 discharges. The *Technical Support Document for Water Quality Based Toxics Control* (EPA/505/2-90-001; 1991) Section 3.1 indicates most procedures within the document apply only to water quality based approaches, not end-of-pipe technology-based controls. Hence, stormwater-only outfalls will generally only contain a maximum daily limit (MDL), benchmark, or monitoring requirement as dictated by site specific conditions, the BMPs in place, 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 writer 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. 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. The permit writer also evaluates other similar permits 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 permittee 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 permittee 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 should 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 at the discretion of the permit writer, if there is no RP for water quality excursions.

✓ Applicable, this facility has stormwater-only outfalls where benchmarks or limitations were deemed appropriate contaminant measures.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k), Best Management Practices (BMPs) must be used to control or abate the discharge of pollutants when: 1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; 3) Numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in 2015 https://www.epa.gov/sites/production/files/2015-11/documents/swppp_guide_industrial_2015.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).

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

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

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

Alternative Analysis (AA) evaluation of the BMPs is a structured evaluation of BMPs which are reasonable and cost effective. The AA evaluation should 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 discharge" or "no exposure" is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and *Antidegradation Implementation Procedure* (AIP), Section II.B.

If parameter-specific numeric benchmark exceedances continue to occur and the permittee feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation

of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the Department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification, which includes an appropriate fee; the application is found at: https://dnr.mo.gov/forms/#WaterPollution

✓ Applicable; a SWPPP shall be developed and implemented for this facility.

SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:

Please review Standard Conditions Part 1, section A, number 4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 and/or 40 CFR 136 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is "sufficiently sensitive" when; 1) the method quantifies the pollutant below the level of the applicable water quality criterion or; 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility's discharge is high enough the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015 and or 40 CFR 136. These methods are also required for parameters listed as monitoring only, as the data collected may be used to determine if numeric limitations need to be established. A permittee is responsible for working with their contractors to ensure the analysis performed is sufficiently sensitive. 40 CFR 136 lists the approved methods accepted by the Department. Tables A1-B3 at 10 CSR 20-7.031 shows water quality standards.

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 section 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 RSMo 577.155; 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 RSMo 577.155; 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 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 permittee 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: http://dnr.mo.gov/forms/780-1774-f.pdf 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)).

✓ Not applicable; the permittee has not submitted materials indicating the facility 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 shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010; definitions], the WLA is the amount of pollutant each discharger is allowed to discharge into the receiving stream without endangering water quality. Two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs) are reviewed. If one limit does not provide adequate protection for the receiving water, then the other must be used per 10 CSR 20-7.015(9)(A). Total Maximum Daily Loads, if required for this facility, were also reviewed.

✓ Applicable; wasteload allocations for toxic parameters were calculated using water quality criteria or water quality model results and by applying the dilution equation below; WLAs are calculated using the *Technical Support Document For Water Quality-Based Toxics Control* or TSD EPA/505/2-90-001; 3/1991.

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

(EPA/505/2-90-001, Section 4.5.5)

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

- ✓ Acute wasteload allocations designated as daily maximum limits (MDL) were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).
- ✓ Chronic wasteload allocations designated as monthly average limits (AML) were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ).
- ✓ Number of Samples "n": effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying assumption which should be, at a minimum, targeted to comply with the values dictated by the WLA. Therefore, it is recommended the actual planned frequency of monitoring be used to determine the value of "n" for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for "n" must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is "n = 4". For total ammonia as nitrogen, "n = 30" is used.

WASTELOAD ALLOCATION (WLA) MODELING:

Permittees 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 section 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 contains a permit requirement for hardness-dependent metals for which water quality criteria has been modified by twenty-five percent or more since the issuance of the previous permit. The hardness calculation changed from the 25^{th} percentile to the 50^{th} percentile. The change of this requirement was necessary to ensure the criteria implemented in permits are reflective of the most current science available, while protecting the water quality of the receiving streams, and also without placing needless and overly burdensome requirements on regulated entities.

PART IV. EFFLUENT LIMITS DETERMINATIONS

OUTFALLS #001, #002, #003, #010 – STORMWATER

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAXIMUM LIMIT	BENCH-MARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL							
FLOW	MGD	*	-	N/A	ONCE/QUARTER	QUARTERLY	24 HR. ESTIMATE
CONVENTIONAL							
COD	mg/L	**	120	N/A	ONCE/QUARTER	QUARTERLY	GRAB
OIL & GREASE	mg/L	**	10	N/A	ONCE/QUARTER	QUARTERLY	GRAB
pH †	SU	6.5 TO 9.0	-	N/A	ONCE/QUARTER	QUARTERLY	GRAB
TSS (OUTFALL #001)	mg/L	50	-	SAME	ONCE/QUARTER	QUARTERLY	GRAB
TSS (OTHERS)	mg/L	**	100	N/A	ONCE/QUARTER	QUARTERLY	GRAB
METALS							
ARSENIC, TR	µg/L	**	15	N/A	ONCE/QUARTER	QUARTERLY	GRAB
BORON, TR	µg/L	**	500	N/A	ONCE/QUARTER	QUARTERLY	GRAB
SELENIUM, TR	µg/L	**	14	N/A	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
n/a	these outfalls are reestablished as stormwater only outfalls, prior limits not applicable

DERIVATION AND DISCUSSION OF LIMITS:

PHYSICAL:

Flow

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

CONVENTIONAL:

Chemical Oxygen Demand (COD)

Monitoring with 120 mg/L daily maximum benchmark is included using the permit writer's best professional judgment. There is no numeric water quality standard for COD; however, increased oxygen demand may impact instream water quality. COD is also a valuable indicator parameter. COD monitoring allows the permittee to identify increases in COD which may indicate materials/chemicals coming into contact with stormwater causing an increase in oxygen demand. Increases in COD may indicate a need for maintenance or improvement of BMPs. The benchmark value falls within the range of values implemented in other permits having similar industrial activities and is achievable through proper BMP controls.

Oil & Grease

Monitoring with a daily maximum benchmark of 10 mg/L implemented in this permit to assure land disturbance activities are well controlled using available O&G BMPs as appropriate. The application materials included 0.7 mg/L for this parameter but land disturbance has not yet begun. Oil and grease is considered a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or toluene, but these constituents are often lost during testing due to their boiling points. It is recommended to perform separate testing for these constituents if they are a known pollutant of concern at the site, i.e. aquatic life toxicity or human health is a concern. Results do not allow for separation of specific pollutants within the test, they are reported, totaled, as "oil and grease". Per 10 CSR 20-7.031 Table A1: *Criteria for Designated Uses*; 10 mg/L is the standard for protection of aquatic life. This standard will also be used to protect the general criteria found at 10 CSR 20-7.031(4). Ten mg/L is the level at which sheen is expected to form on receiving

waters. Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at levels which vary from 10 mg/L. To protect the general criteria, it is the responsibility of the permittee to visually observe the discharge and receiving waters for sheen or bottom deposits. 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.

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; these outfalls may undergo pH adjustment prior to discharge.

Total Suspended Solids (TSS)
For outfall #001: 50 mg/L at all times per 40 CFR 423.12(b)(9) continued from previous permit.

For outfalls #002, #003, #006, #010, #021, #022: Monitoring with a daily maximum benchmark of 100 mg/L. 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 permittee 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 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:

Arsenic, Total Recoverable
Monitoring with a benchmark of 15 µg/L. The permit writer has determined arsenic is a pollutant of concern at the site due to historic operations as a coal-fired power plant. Arsenic is a well-established pollutant within the steam-electric category. The benchmark was established using available site specific data (4.67 + 10.47) for the stormwater at the site until additional data can be collected.

Boron, Total Recoverable
Monitoring with a benchmark of 500 µg/L. The permit writer has determined boron is a pollutant of concern at the site due to historic operations as a coal-fired power plant and can be used as an indicator of stormwater contacting ash. Boron is a well-established pollutant within the steam-electric category. The benchmark was established using available site specific data (235.2 *~2) for the stormwater at the site until additional data can be collected.

Selenium, Total Recoverable
Monitoring with a benchmark of 14 µg/L. The permit writer has determined selenium is a pollutant of concern at the site due to historic operations as a coal-fired power plant; selenium has been established as a pollutant of concern in coal pile runoff, coal handling, and coal washing, and as a contaminant present in leachate. The benchmark was established using available site specific data (6.92 µg/L *~2) for the stormwater at the site until additional data can be collected.

OUTFALL #006 – FORMER PROCESS WASTEWATER POND

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	MONTHLY	24 HR. TOT
CONVENTIONAL							
BOD_5	mg/L	45 WEEKLY	30	SAME	ONCE/MONTH	MONTHLY	GRAB
E. COLI (4/1-10/31)	#/100 ML	1030	206	NEW	ONCE/MONTH	MONTHLY	GRAB
OIL & GREASE	mg/L	15	10	20, 15	ONCE/MONTH	MONTHLY	GRAB
pH †	SU	6.5 TO 9.0	6.5 to 9.0	6-9	ONCE/MONTH	MONTHLY	GRAB
TOTAL SUSPENDED SOLIDS (TSS)	mg/L	100	30	NET	ONCE/MONTH	MONTHLY	GRAB
NUTRIENTS							
AMMONIA AS N	mg/L	*	*	NEW	ONCE/QUARTER	QUARTERLY	GRAB
NITROGEN, KJELDAHL, TOT.	mg/L	*	*	NEW	ONCE/QUARTER	QUARTERLY	GRAB
NITRATE PLUS NITRITE AS N	mg/L	*	*	NEW	ONCE/QUARTER	QUARTERLY	GRAB
NITROGEN, TOTAL N (TN)	mg/L	*	*	NEW	ONCE/QUARTER	QUARTERLY	GRAB
PHOSPHORUS, TOTAL P (TP)	mg/L	*	*	NEW	ONCE/QUARTER	QUARTERLY	GRAB
OTHER							
WET TEST - ACUTE	TUa	3.3	-	PASS/FAIL	ONCE/YEAR	ANNUALLY	GRAB

* 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

DERIVATION AND DISCUSSION OF LIMITS:

PHYSICAL:

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

CONVENTIONAL:

Biochemical Oxygen Demand - 5 Day (BOD_5)
Historic domestic wastewater pond, 45 mg/L weekly average, 30 mg/L monthly average, continued from previous permit and 10 CSR 20.7.031(8)(A)1.

Escherichia coli (E. coli)
This outfall serves the former domestic wastewater pond and is not yet been remediated of wastewater or sludge. *E. coli* monitoring is required. WBC-B Daily maximum limit of 1030 colony forming units per 100 mL [10 CSR 20-7.015(9)(B)1.E.] and a monthly geometric mean limit of 206 bacteria per 100 mL [10 CSR 20-7.031 Table A1] during the recreational season from April 1 through October 31 only [10 CSR 20-7.031(5)(C)], to protect Whole Body Contact (B) [10 CSR 20-7.031(C)2.A.(II)] designated use of the receiving stream.

Oil & Grease
15 mg/L daily maximum; 10 mg/L monthly average; previous permit was 20 mg/L daily maximum, 15 mg/L monthly average as technology-based limits. However, this basin may contain oily wastewaters as was observed in historical inspections. Oil and grease is considered a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or toluene, but these constituents are often lost during testing due

to their boiling points. The permit writer completed an RPD on this parameter and found RP based on historical visual observations. Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at levels which vary from 10 mg/L. To protect the general criteria, it is the responsibility of the permittee to visually observe the discharge and receiving waters for sheen or bottom deposits.
AQL Chronic: 10 mg/L per 10 CSR 20-7.031 Table A1
Set chronic standard equal to chronic WLA per TSD §5.4.2 (EPA/505/2-90-001); multiply by 1.5 to obtain acute limit.
10 mg/L * 1.5 = 15 mg/L

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. Previous limits were technology-based however, the limitations of 6.0 to 9.0 are not protective of water quality.

Total Suspended Solids (TSS)
Technology limits: 100 mg/L daily maximum and 30 mg/L monthly average per 40 CFR 423.12 as the basin contains process waste sludge. Previous permit allowed net limitations, however, this permit no longer authorizes intake water to be used therefore there is no intake stream to compare this discharge to.

NUTRIENTS:

Ammonia, Total as Nitrogen
Nitrogen is expected to be present in the discharge therefore quarterly monitoring of ammonia is required per 10 CSR-20-7.015(9)(D)8. and 20-7.015(9)(D)8.B. as this facility's design flow falls within 0.1 to 0.999 MGD.

Nitrogen, Total Kjeldahl (TKN)
Nitrogen is expected to be present in this outfall's discharge therefore monitoring is required per 10 CSR 20-7.015(9)(D)8. Quarterly monitoring of total Kjeldahl nitrogen is required per 10 CSR 20-7.015(9)(D)8.A as this outfall's design flow falls under 1 MGD but above 0.1 MGD.

Nitrate plus Nitrite as N
Nitrogen is expected to be present in this outfall's discharge therefore monitoring is required per 10 CSR 20-7.015(9)(D)8. Quarterly monitoring of nitrate plus nitrite required per 10 CSR 20-7.015(9)(D)8.A as this outfall's design flow falls under 1 MGD but above 0.1 MGD.

Nitrogen, Total N (TN)
Nitrogen is expected to be present in this outfall's discharge therefore the permit writer has determined the facility shall provide a sum for total nitrogen at this site.

Phosphorus, Total P (TP)
Phosphorus is expected to be present in this outfall's discharge therefore monitoring is required per 10 CSR 20-7.015(9)(D)8. Quarterly monitoring of phosphorus is required per 10 CSR 20-7.015(9)(D)8.A as this outfall's design flow falls under 1 MGD but above 0.1 MGD.

OTHER:

Whole Effluent Toxicity (WET) Test
The permit writer has determined process wastewater has reasonable potential to cause toxicity within the receiving stream and backsliding is not permissible for this parameter because the basin has yet to be cleaned out. A WET test is a quantifiable method to determine discharges from the facility cause toxicity to aquatic life by itself, in combination with, or through synergistic responses, when mixed with receiving stream water.

Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures the provisions in 10 CSR 20-6 and the Water Quality Standards in 10 CSR 20-7 are being met. Under 10 CSR 20-6.010(8)(A)4, the Department may require other terms and conditions it deems necessary to assure compliance with the CWA and related regulations of the Missouri Clean Water Commission. The following Missouri Clean Water Laws (MCWL) apply: §644.051.3. requires the Department to set permit conditions complying with the MCWL and CWA; §644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits); and §644.051.5. is the basic authority to require testing conditions. WET tests are required by all facilities meeting the following criteria:

- ✓ Facility is a designated a Major
- ✓ Facility handled large quantities of toxic substances, or substances toxic in large amounts

✓ Other: wastewater basin, historical pollutants

Annual testing is the minimum testing frequency; 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."

WET, Acute

The permit writer has determined this facility has reasonable potential to cause toxicity in the receiving stream.
WQS: no toxics in toxic amounts [10 CSR 20-7.031(4)(J)2.B.] = 0.3 TUa
Acute AQL: 0.3 TUa
Acute WLA: Ce = ((0.019 cfsDF + 0.19 cfsZID) * 0.3 – (0.19 cfsZID * 0 background)) / 0.019 cfsDF = 3.3
LTAa: WLAa * LTAa multiplier = 3.3 * 0.321 = 1.06 [CV: 0.6, 99th %ile]
Daily Maximum: MDL = LTA * MDL multiplier = 1.06 * 3.114 = 3.3 TUa [CV: 0.6, 99th %ile]

The Allowable Effluent Concentration (AEC) at outfall #006 is 9%. 10 CSR 20-7.015((9)(L)4.A. states the dilution series must be proportional; the dilution series is: 2.25%, 4.5%, 9%, 18%, and 36%. This limit is the same as the previous permit however, the reporting attributes have changed.

OUTFALL #007 – FLY ASH POND

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	MONTHLY	24 HR. TOT
CONVENTIONAL							
CYANIDE, AMENABLE	µg/L	*	*	NEW	ONCE/MONTH	MONTHLY	GRAB
OIL & GREASE	mg/L	20	15	SAME	ONCE/MONTH	MONTHLY	GRAB
pH †	SU	6.5 TO 9.0	6.5 to 9.0	6-9	ONCE/MONTH	MONTHLY	GRAB
TOTAL SUSPENDED SOLIDS (TSS)	mg/L	100	30	SAME	ONCE/MONTH	MONTHLY	GRAB
METALS							
ALUMINUM, TR	µg/L	*	*	NEW, INT.	ONCE/MONTH	MONTHLY	GRAB
ALUMINUM, TR	µg/L	750	374	NEW, FIN.	ONCE/MONTH	MONTHLY	GRAB
ARSENIC, TR	µg/L	*	*	NEW, INT.	ONCE/MONTH	MONTHLY	GRAB
ARSENIC, TR	µg/L	32.9	16.4	NEW, FIN.	ONCE/MONTH	MONTHLY	GRAB
BERYLLIUM, TR	µg/L	*	*	NEW, INT.	ONCE/MONTH	MONTHLY	GRAB
BERYLLIUM, TR	µg/L	8.2	4.1	NEW, FIN.	ONCE/MONTH	MONTHLY	GRAB
BORON, TR	µg/L	*	*	NEW, INT.	ONCE/MONTH	MONTHLY	GRAB
BORON, TR	µg/L	3285	1638	NEW, FIN.	ONCE/MONTH	MONTHLY	GRAB
CHROMIUM III, TR	µg/L	*	*	NEW, INT.	ONCE/MONTH	MONTHLY	GRAB
CHROMIUM III, TR	µg/L	164	81.9	NEW, FIN.	ONCE/MONTH	MONTHLY	GRAB
SELENIUM, TR	µg/L	*	*	NEW, INT.	ONCE/MONTH	MONTHLY	GRAB
SELENIUM, TR	µg/L	8.2	4.1	NEW, FIN.	ONCE/MONTH	MONTHLY	GRAB
NUTRIENTS							
AMMONIA AS N	mg/L	*	*	NEW	ONCE/MONTH	MONTHLY	GRAB
NITROGEN, TOTAL KJELDAHL	mg/L	*	*	NEW	ONCE/MONTH	MONTHLY	GRAB
NITRATE PLUS NITRITE AS N	mg/L	*	*	NEW	ONCE/MONTH	MONTHLY	GRAB
NITROGEN, TOTAL N (TN)	mg/L	*	*	NEW	ONCE/MONTH	MONTHLY	GRAB
PHOSPHORUS, TOTAL P (TP)	mg/L	*	*	NEW	ONCE/MONTH	MONTHLY	GRAB
OTHER							
CHLORIDE	mg/L	*	*	NEW	ONCE/MONTH	MONTHLY	GRAB
SULFATE	mg/L	*	*	NEW	ONCE/MONTH	MONTHLY	GRAB
CHLORIDE PLUS SULFATE	mg/L	*	*	NEW, INT.	ONCE/MONTH	MONTHLY	GRAB
CHLORIDE PLUS SULFATE	mg/L	1000	*	NEW, FIN.	ONCE/MONTH	MONTHLY	GRAB
WET TEST - ACUTE	TUa	0.3 (ML1)	-	PASS/FAIL	ONCE/YEAR	ANNUALLY	GRAB

* 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
int. parameter requirements prior to end of SOC
fin. parameter requirements at end of SOC
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 assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the

permittee to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD), monthly monitoring continued from previous permit.

CONVENTIONAL:

Cyanide, Amenable to Chlorination
Monthly monitoring required. The facility reported <7 µg/L for this pollutant, however this was not a sufficiently sensitive method and cyanide may be a pollutant of concern for the former fly ash pond.

Oil & Grease
20 mg/L daily maximum; 15 mg/L monthly average based on 40 CFR 423.13(b)(4). Oil and grease is considered a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or toluene, but these constituents are often lost during testing due to their boiling points. The facility reported from 0.4 to 1.4 mg/L. The permit writer completed an RPD on this parameter and found no RP. Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at varying levels. To protect the general criteria, it is the responsibility of the permittee to visually observe the discharge and receiving waters for sheen or bottom deposits. Quarterly monitoring increased to monthly in this permit.

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. Previous permit was technology limitations however, technology limits are no longer protective of the receiving stream as the discharge is to a newly classified stream which receives no mixing considerations.

Total Suspended Solids (TSS)
100 mg/L daily maximum and 30 mg/L monthly average per 40 CFR 423.13(b)(4); net limitations have been removed as the facility is no longer permitted to sluice ash (the facility has shut down). It is unclear if the facility is able to meet these limits, however, these are technology limitations which cannot be afforded a schedule of compliance.

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 was 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. Per a memorandum dated August 6, 2019, the Director has determined permit writers should 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.

Aluminum, Total Recoverable
Monthly monitoring required. The facility reported 692 µg/L for this pollutant and has been determined to be a pollutant of concern for the former fly ash pond. A schedule of compliance with limits is being established in concordance with the closure by removal (clean closure) of the basin's 5 year plan dated 10/14/2016.
Acute AQL: 750 µg/L
LTAa: WLAa * LTAa multiplier = 750 * 0.321 = 240.812 [CV: 0.6, 99th %ile]
Daily Maximum: MDL = LTA * MDL multiplier = 240.812 * 3.114 = 750 µg/L [CV: 0.6, 99th %ile]
Monthly Average: AML = LTA * AML multiplier = 240.812 * 1.552 = 373.8 µg/L [CV: 0.6, 95th %ile, n=4]

Arsenic, Total Recoverable
Monthly monitoring required. The facility reported 16 µg/L for this pollutant and has been determined to be a pollutant of concern for the former fly ash pond. A schedule of compliance with limits is being established in concordance with the closure by removal (clean closure) of the basin's 5 year plan dated 10/14/2016.
Chronic AQL: 20 µg/L
LTAc: WLAc * LTAc multiplier = 20 * 0.527 = 10.549 [CV: 0.6, 99th %ile]
Daily Maximum: MDL = LTA * MDL multiplier = 10.549 * 3.114 = 32.9 µg/L [CV: 0.6, 99th %ile]
Monthly Average: AML = LTA * AML multiplier = 10.549 * 1.552 = 16.4 µg/L [CV: 0.6, 95th %ile, n=4]

Beryllium, Total Recoverable
Monthly monitoring required, possible contaminant of concern. A schedule of compliance with limits is being established in concordance with the closure by removal (clean closure) of the basin's 5 year plan dated 10/14/2016.

Chronic AQL: 5 µg/L
LTAc: WLAc * LTAc multiplier = 5 * 0.527 = 2.637 [CV: 0.6, 99th %ile]
Daily Maximum: MDL = LTA * MDL multiplier = 2.637 * 3.114 = 8.2 µg/L [CV: 0.6, 99th %ile]
Monthly Average: AML = LTA * AML multiplier = 2.637 * 1.552 = 4.1 µg/L [CV: 0.6, 95th %ile, n=4]

Boron, Total Recoverable
Monthly monitoring required. The facility reported 1460 µg/L for this pollutant and has been determined to be a pollutant of concern for the former fly ash pond. A schedule of compliance with limits is being established in concordance with the closure by removal (clean closure) of the basin's 5 year plan dated 10/14/2016.
Chronic IRR: 2000 µg/L
LTAc: WLAc * LTAc multiplier = 2000 * 0.527 = 1054.867 [CV: 0.6, 99th %ile]
Daily Maximum: MDL = LTA * MDL multiplier = 1054.867 * 3.114 = 3285.3 µg/L [CV: 0.6, 99th %ile]
Monthly Average: AML = LTA * AML multiplier = 1054.867 * 1.552 = 1637.6 µg/L [CV: 0.6, 95th %ile, n=4]

Chromium III, Total Recoverable
Monthly monitoring required, possible contaminant of concern. A schedule of compliance with limits is being established in concordance with the closure by removal (clean closure) of the basin's 5 year plan dated 10/14/2016.
Chronic IRR: 100 µg/L
LTAc: WLAc * LTAc multiplier = 100 * 0.527 = 52.743 [CV: 0.6, 99th %ile]
Daily Maximum: MDL = LTA * MDL multiplier = 52.743 * 3.114 = 164.3 µg/L [CV: 0.6, 99th %ile]
Monthly Average: AML = LTA * AML multiplier = 52.743 * 1.552 = 81.9 µg/L [CV: 0.6, 95th %ile, n=4]

Selenium, Total Recoverable
Monthly monitoring required. The facility reported 65 µg/L for this pollutant and has been determined to be a pollutant of high concern for the former fly ash pond. A schedule of compliance with limits is being established in concordance with the closure by removal (clean closure) of the basin's 5 year plan dated 10/14/2016.
Chronic AQL: 5 µg/L
LTAc: WLAc * LTAc multiplier = 5 * 0.527 = 2.637 [CV: 0.6, 99th %ile]
Daily Maximum: MDL = LTA * MDL multiplier = 2.637 * 3.114 = 8.2 µg/L [CV: 0.6, 99th %ile]
Monthly Average: AML = LTA * AML multiplier = 2.637 * 1.552 = 4.1 µg/L [CV: 0.6, 95th %ile, n=4]

NUTRIENTS:

Ammonia, Total as Nitrogen
Nitrogen is expected to be present in the discharge therefore monthly monitoring of ammonia is required per 10 CSR-20-7.015(9)(D)8. and 20-7.015(9)(D)8.B. as this facility's design flow is equal to or greater than 1 MGD.

Nitrogen, Total Kjeldahl (TKN)
Nitrogen is expected to be present in this facility's discharge therefore monitoring is required per 10 CSR 20-7.015(9)(D)8. Monthly monitoring of total Kjeldahl nitrogen is required per 10 CSR 20-7.015(9)(D)8.B. as this facility's design flow is equal to or above 1 MGD.

Nitrate plus Nitrite as N
Nitrogen is expected to be present in this facility's discharge therefore monitoring is required per 10 CSR 20-7.015(9)(D)8. Monthly monitoring of nitrate plus nitrite required per 10 CSR 20-7.015(9)(D)8.B. as this facility's design flow is equal to or above 1 MGD.

Nitrogen, Total N (TN)
Nitrogen is expected to be present in this facility's discharge therefore the permit writer is requesting the facility sum the speciated nitrogen to submit the total nitrogen of the discharge.

Phosphorus, Total P (TP)
Phosphorus is expected to be present in this facility's discharge therefore monitoring is required per 10 CSR 20-7.015(9)(D)8. Monthly monitoring of phosphorus is required per 10 CSR 20-7.015(9)(D)8.B. as this facility's design flow is equal to or above 1 MGD.

OTHER:

Chloride
Monitoring required to determine chloride plus sulfate below. The facility shall sample and independently report the analytical value of chloride.

Sulfate
Monitoring required to determine chloride plus sulfate below. The facility shall sample and independently report the analytical value of sulfate.

Chloride Plus Sulfate
Monthly monitoring required. Chloride and sulfate are pollutants of concern for the former fly ash pond. A schedule of compliance with limits is being established in concordance with the closure by removal (clean closure) of the basin's 5 year plan dated 10/14/2016.
1000 mg/L per 10 CSR 20-7.031(5)(L).

Whole Effluent Toxicity (WET) Test
Previous permit required annual testing but afforded dilution as the stream was not classified at the time of reissuance. Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures the provisions in 10 CSR 20-6 and the Water Quality Standards in 10 CSR 20-7 are being met. Under 10 CSR 20-6.010(8)(A)4, the Department may require other terms and conditions it deems necessary to assure compliance with the CWA and related regulations of the Missouri Clean Water Commission. The following Missouri Clean Water Laws (MCWL) apply: §644.051.3. requires the Department to set permit conditions complying with the MCWL and CWA; §644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits); and §644.051.5. is the basic authority to require testing conditions. WET tests are required by all facilities meeting the following criteria:

- ✓ Facility is a designated a Major
- ✓ Facility handles large quantities of toxic substances, or substances toxic in large amounts

Annual testing is the minimum testing frequency; 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."

WET, Acute
The permit writer has determined this facility has reasonable potential to cause toxicity in the receiving stream.

WQS:	no toxics in toxic amounts [10 CSR 20-7.031(4)(J)2.B.] = 0.3 TUa	
	LTA_a: 0.3 TUa (0.321) = 0.0963 TUa	[CV = 0.6, 99th Percentile]
MDL:	0.0963 TUa (3.11) = 0.3 TUa	[CV = 0.6, 99th Percentile]

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

The standard Allowable Effluent Concentration (AEC) for facilities discharging to a Class C stream is 100%. The standard dilution series for facilities discharging to waterbodies with no mixing considerations is 100%, 50%, 25%, 12.5%, & 6.25%.

OUTFALL #020 – LANDFILL LEACHATE

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG.	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL							
FLOW	MGD	*	*	QUARTERLY	ONCE/MONTH	MONTHLY	24 HR. TOT
CONVENTIONAL							
OIL & GREASE	mg/L	20	15	15, 10	ONCE/QUARTER	QUARTERLY	GRAB
pH †	SU	6.5 TO 9.0	6.5 to 9.0	SAME	ONCE/MONTH	MONTHLY	GRAB
PHOSPHORUS, TOTAL (TP)	Mg/L	*	*	NEW	ONCE/QUARTER	QUARTERLY	GRAB
TOTAL SUSPENDED SOLIDS (TSS)	mg/L	100	30	SAME	ONCE/MONTH	MONTHLY	GRAB
METALS							
ARSENIC, TR	µg/L	*	*	NEW	ONCE/QUARTER	QUARTERLY	GRAB
BORON, TR	µg/L	*	*	NEW	ONCE/QUARTER	QUARTERLY	GRAB
MERCURY, T	µg/L	*	*	NEW	ONCE/QUARTER	QUARTERLY	GRAB
MOLYBDENUM, TR	µg/L	*	*	NEW	ONCE/QUARTER	QUARTERLY	GRAB
SELENIUM, TR	µg/L	*	*	NEW	ONCE/QUARTER	QUARTERLY	GRAB
OTHER							
CHLORIDE	mg/L	*	*	NEW	ONCE/QUARTER	QUARTERLY	GRAB
SULFATE	mg/L	*	*	SAME	ONCE/QUARTER	QUARTERLY	GRAB
CHLORIDE PLUS SULFATE	mg/L	*	*	NEW	ONCE/QUARTER	QUARTERLY	GRAB
WET, ACUTE	TUa	3.3	-	PASS/FAIL	ONCE/YEAR	ANNUALLY	GRAB

* 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 assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD), monthly monitoring increased from quarterly under the previous permit, see pH below.

CONVENTIONAL:

Oil & Grease

20 mg/L daily maximum; 15 mg/L monthly average based on 40 CFR 423.15(a)(3); previous permit used water quality standards, however, there is no RP. Oil and grease is considered a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or toluene, but these constituents are often lost during testing due to their boiling points. The facility reported from 0.4 to 1.3 mg/L. The permit writer completed an RPD on this parameter and found no RP. Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at levels which vary from 10 mg/L. To protect the general criteria, it is the responsibility of the permittee to visually observe the discharge and receiving waters for sheen or bottom deposits. Quarterly monitoring continued from the previous permit.

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 and continued from the previous permit. This facility discharges high pH and has disclosed they will be doing pH adjustment. The

maximum pH reported by the facility was almost over 9.0, at 8.94 SU. Because of the proximity to the WQS, this renewal permit has increased the monitoring frequency from quarterly to monthly.

Phosphorus, Total P (TP)
Phosphorus is expected to be present in this facility's discharge therefore monitoring is required per 10 CSR 20-7.015(9)(D)8. Monthly monitoring of phosphorus is required per 10 CSR 20-7.015(9)(D)8.B. as this facility's design flow is equal to or above 1 MGD.

Total Suspended Solids (TSS)
100 mg/L daily maximum and 30 mg/L monthly average per 40 CFR 423.14(a)(3); quarterly monitoring increased to monthly to assure compliance with the ELG; data range from 3 to 27 mg/L for this parameter. The permit writer has determined more frequent sampling necessary to capture any discharges which may be over the monthly average. Of course, if the facility does exceed the monthly average, the facility should obtain additional samples to assure the discharge has decreased to below the average limit.

METALS:

Arsenic, Total Recoverable
New parameter, quarterly monitoring only. The effluent limitation guideline has established technology-based effluent limitations for this pollutant for new sources after 2015 per 40 CFR 423.14(b), however, this a new source per 40 CFR 423.14(a) as this landfill discharge was established in 2010. Given the EPA has established this parameter as a contaminant of concern in landfill leachate, this permit will establish monitoring for it to: 1) assure the WQS is being met, and 2) to possibly establish a BTA limit in the future. Arsenic was established by the EPA as being a contaminants of concern (COC) in the most court cases related to damages from CCR and is bioaccumulative.

Boron Total Recoverable
New parameter, quarterly monitoring only. The WQS for this parameter is 2 mg/L for irrigation; the facility reported 19.9 mg/L for this parameter in the 2015 application for renewal of permit MO-0136131. An RPA determined no RP at this time due to the large mixing zone, however, boron is intrinsically associated with coal combustion residuals based on EPA information. Monitoring is required to assure boron concentrations do not increase to above allowable levels. When the EPA was reviewing damage cases collected for the CCR rulemaking [40 CFR 257], EPA identified one or more "contaminants of concern" (COCs) for each damage case. Boron is a COC in more damage cases (approximately 50 percent of the total) than any Appendix IV constituent with the exception of arsenic. The damage cases reflect a range of waste types disposed in both surface impoundments and landfills. These damage cases corroborate the findings of the risk assessment and also capture other risk scenarios not modeled in the original risk assessment.

Mercury, Total Recoverable
New parameter, quarterly monitoring only. The effluent limitation guideline has established technology-based effluent limitations for this pollutant for new sources after 2015 per 40 CFR 423.14(b), however, this a new source per 40 CFR 423.14(a) as this landfill discharge was established in 2010. Given the EPA has established this parameter as a contaminant of concern in landfill leachate, this permit will establish monitoring for it to: 1) assure the WQS is being met, and 2) to possibly establish a BTA limit in the future.

Molybdenum, Total Recoverable
New parameter, quarterly monitoring only. The facility reported 6.56 mg/L of molybdenum in the discharge. There are no WQS for this parameter, however Mo is intrinsically associated with coal combustion residuals based on EPA documents. Monitoring is included to assure discharges of this pollutant are not increasing over time which may necessitate implementing a technology limitation for removal of the pollutant prior to discharge to the Missouri River. The maximum contaminant loading associated with 40 CFR 257 is 100 µg/L which is protective of human health for consumption. Because the Missouri River is a drinking water source, a protective standard of 100 µg/L may be approved in the future.

Selenium, Total Recoverable
New parameter, quarterly monitoring only. Selenium is a bioaccumulative pollutant and identified as a pollutant of concern in flue gas desulphurization (FGD) wastewater by the EPA in 40 CFR 423. This facility has emplaced FGD wastes in the landfill thereby making it a parameter of concern in the leachate discharges from the landfill. While the facility reported <15 µg/L for this pollutant in the 2015 application for renewal materials, the permit writer has determined this may not have been the most sensitive analytical method available at the time and does not meet the onus of using the most sensitive method per 40 CFR 136. Monitoring for this parameter is necessary to determine if FGD wastes are contributing to selenium loading of the Missouri River and future monitoring results may be used to establish technology limitations in accordance with 40 CFR 125.3.

OTHER:

Chloride
New parameter, quarterly monitoring and reporting only; see below.

Sulfate
Monitoring continued from previous permit and required to determine chloride plus sulfate below. The facility shall sample and independently report the analytical value of sulfate. Sulfate values ranged from 751 to 1230 mg/L over the last permit term; these values do not presently show reasonable potential but sulfate is a known pollutant of concern with coal combustion residuals therefore monitoring is continued.

Chloride Plus Sulfate
Data summation required to determine future reasonable potential; monitoring only requirement.

The rules currently indicate the effluent limits should be established at 20% above natural background using the 60Q10 of the stream. However, it is the permit writer's opinion these requirements are not implementable in NPDES permits at this time. The Department does not know what natural background is, if natural background is to be the streams chloride plus sulfate levels without anthropogenic influence. If a known background is used (31 mg/L), then the effluent limitations derived are actually much lower than what is afforded for streams below 0.1 cfs as shown below.
Acute AQL: 20 % above background = 31 * 1.2 = 37.2 mg/L
Acute WLA: Ce = ((2.72 cfsDF + 27.2 cfsZID) * 37.2 – (27.2 cfsZID * 31 background)) / 2.72 cfsDF = 45.584
LTAa: WLAa * LTAa multiplier = 45.584 * 0.321 = 14.636 [CV: 0.6, 99th %ile]
Daily Maximum: MDL = LTA * MDL multiplier = 14.636 * 3.114 = 45.6 mg/L [CV: 0.6, 99th %ile]
Monthly Average: AML = LTA * AML multiplier = 14.636 * 1.552 = 22.7 mg/L [CV: 0.6, 95th %ile, n=4]

Therefore, the permit writer, instead, used the established limit of 1000 mg/L and applied it to mixing in the 7Q10 streamflow (without using 20% above background) which would result in an effluent limitation well above the sulfate values at this time. It was determined by speaking with Watershed Protection Section, the 1000 mg/L value was based on 1/5th of the total dissolved solids (TDS) of the salts which would cause toxicity to aquatic organisms (5000 mg/L TDS) therefore, because the 1000 mg/L was based on toxicity, the mixing was applied at the 7Q10 of the stream to determine reasonable potential.
Acute AQL: 1000 mg/L
Acute WLA: Ce = ((4.208 cfsDF + 42.085 cfsZID) * 1000 – (42.085 cfsZID * 31 background)) / 4.208 cfsDF = 10690
LTAa: WLAa * LTAa multiplier = 10690 * 0.321 = 3432.38 [CV: 0.6, 99th %ile]
Daily Maximum: MDL = LTA * MDL multiplier = 3432.38 * 3.114 = 10690 mg/L [CV: 0.6, 99th %ile]

Because Missouri Water Quality Standards continue to implement the 20% above natural background requirements, the permit writer has continued monitoring of these parameters until the standards are either 1) changed; or 2) reconfirmed to be applicable to the discharge at this facility.

Whole Effluent Toxicity (WET) Test
The permit writer has determined the landfill leachate has reasonable potential to cause toxicity within the receiving stream because it is landfill leachate and backsliding is not permissible for this parameter. A WET test is a quantifiable method to determine discharges from the facility cause toxicity to aquatic life by itself, in combination with, or through synergistic responses, when mixed with receiving stream water.

Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures the provisions in 10 CSR 20-6 and the Water Quality Standards in 10 CSR 20-7 are being met. Under 10 CSR 20-6.010(8)(A)4, the Department may require other terms and conditions it deems necessary to assure compliance with the CWA and related regulations of the Missouri Clean Water Commission. The following Missouri Clean Water Laws (MCWL) apply: §644.051.3. requires the Department to set permit conditions complying with the MCWL and CWA; §644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits); and §644.051.5. is the basic authority to require testing conditions. WET tests are required by all facilities meeting the following criteria:
- ✓ Facility is a designated a Major
- ✓ Facility handles large quantities of toxic substances, or substances toxic in large amounts
- ✓ Other: landfill leachate

Annual testing is the minimum testing frequency; 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."

WET, Acute

The permit writer has determined this facility has reasonable potential to cause toxicity in the receiving stream.
WQS: no toxics in toxic amounts [10 CSR 20-7.031(4)(J)2.B.] = 0.3 TUa
Acute AQL: 0.3 TUa
Acute WLA: Ce = ((0.019 cfsDF + 0.19 cfsZID) * 0.3 – (0.19 cfsZID * 0 background)) / 0.019 cfsDF = 3.3
LTAa: WLAa * LTAa multiplier = 3.3 * 0.321 = 1.06 [CV: 0.6, 99th %ile]
Daily Maximum: MDL = LTA * MDL multiplier = 1.06 * 3.114 = 3.3 TUa [CV: 0.6, 99th %ile]

The Allowable Effluent Concentration (AEC) at outfall #020 is 9%. 10 CSR 20-7.015((9)(L)4.A. states the dilution series must be proportional; the dilution series is: 2.25%, 4.5%, 9%, 18%, and 36%. This limit is the same as the previous permit however, the reporting attributes have changed.

PART V. ADMINISTRATIVE REQUIREMENTS

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

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

- ✓ This permit is not being synchronized at this time; this permit will be issued for a period of five years because of the decommissioning activities of the site.

PUBLIC NOTICE:
The Department shall give public notice a draft permit has been prepared and its issuance is pending. http://dnr.mo.gov/env/wpp/permits/pn/index.html Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in or with water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

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

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

- ✓ The Public Notice period for this operating permit was from 10/25/2019-11/25/2019; no comments were received.

DATE OF FACT SHEET: NOVEMBER 16, 2019
COMPLETED BY:
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MISSOURI DEPARTMENT OF NATURAL RESOURCES
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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.

STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
August 1, 2019

PART III – BIOSOLIDS AND SLUDGE FROM DOMESTIC TREATMENT FACILITIES

SECTION A – GENERAL REQUIREMENTS

1. PART III Standard Conditions pertain to biosolids and sludge requirements under the Missouri Clean Water Law and regulations for domestic and municipal wastewater and also incorporates federal sludge disposal requirements under 40 CFR Part 503 for domestic wastewater. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFR Part 503 for domestic biosolids and sludge.
2. PART III Standard Conditions apply only to biosolids and sludge generated at domestic wastewater treatment facilities, including public owned treatment works (POTW) and privately owned facilities.
3. Biosolids and Sludge Use and Disposal Practices:
    a. The permittee is authorized to operate the biosolids and sludge generating, treatment, storage, use, and disposal facilities listed in the facility description of this permit.
    b. The permittee shall not exceed the design sludge/biosolids volume listed in the facility description and shall not use biosolids or sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
    c. For facilities operating under general operating permits that incorporate Standard Conditions PART III, the facility is authorized to operate the biosolids and sludge generating, treatment, storage, use and disposal facilities identified in the original operating permit application, subsequent renewal applications or subsequent written approval by the department.
4. Biosolids or Sludge Received from other Facilities:
    a. Permittees may accept domestic wastewater biosolids or sludge from other facilities as long as the permittee's design sludge capacity is not exceeded and the treatment facility performance is not impaired.
    b. The permittee shall obtain a signed statement from the biosolids or sludge generator or hauler that certifies the type and source of the sludge
5. Nothing in this permit precludes the initiation of legal action under local laws, except to the extent local laws are preempted by state law.
6. This permit does not preclude the enforcement of other applicable environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable biosolids or sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act or under Chapter 644 RSMo.
8. In addition to Standard Conditions PART III, the Department may include biosolids and sludge limitations in the special conditions portion or other sections of a site specific permit.
9. Exceptions to Standard Conditions PART III may be authorized on a case-by-case basis by the Department, as follows:
    a. The Department may modify a site-specific permit following permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR § 124.10, and 40 CFR § 501.15(a)(2)(ix)(E).
    b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR Part 503.

SECTION B – DEFINITIONS

1. Best Management Practices are practices to prevent or reduce the pollution of waters of the state and include agronomic loading rates (nitrogen based), soil conservation practices, spill prevention and maintenance procedures and other site restrictions.
2. Biosolids means organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge.
3. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food, feed or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
4. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR Part 503.
5. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PSRP) in accordance with 40 CFR Part 503.
6. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a (POTW) or a privately owned facility.
7. Feed crops are crops produced primarily for consumption by animals.
8. Fiber crops are crops such as flax and cotton.
9. Food crops are crops consumed by humans which include, but is not limted to, fruits, vegetables and tobacco.
10. Industrial wastewater means any wastewater, also known as process wastewater, not defined as domestic wastewater. Per 40 CFR Part 122.2, process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. Land application of industrial wastewater, residuals or sludge is not authorized by Standard Conditions PART III.
11. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including, sand filters, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological contact systems, and other similar facilities. It does not include wastewater treatment lagoons or constructed wetlands for wastewater treatment.
12. Plant Available Nitrogen (PAN) is nitrogen that will be available to plants during the growing seasons after biosolids application.
13. Public contact site is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
14. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks or equivalent facilities. Sludge does not include carbon coal byproducts (CCBs), sewage sludge incinerator ash, or grit/screenings generated during preliminary treatment of domestic sewage.
15. Sludge lagoon is part of a mechanical wastewater treatment facility. A sludge lagoon is an earthen or concrete lined basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
16. Septage is the sludge pumped from residential septic tanks, cesspools, portable toilets, Type III marine sanitation devices, or similar treatment works such as sludge holding structures from residential wastewater treatment facilities with design populations of less than 150 people. Septage does not include grease removed from grease traps at a restaurant or material removed from septic tanks and other similar treatment works that have received industrial wastewater. The standard for biosolids from septage is different from other sludges. See Section H for more information.

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

1. Biosolids or sludge shall be routinely removed from wastewater treatment facilities and handled according to the permit facility description and the requirements of Standard Conditions PART III or in accordance with Section A.3.c., above.
2. The permittee shall operate storage and treatment facilities, as defined by Section 644.016(23), RSMo, so that there is no biosolids or sludge discharged to waters of the state. Agricultural storm water discharges are exempt under the provisions of Section 644.059, RSMo.
3. Mechanical treatment plants shall have separate biosolids or sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove biosolids or sludge from these storage compartments on the required design schedule is a violation of this permit.

SECTION D – BIOSOLIDS OR SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR BY CONTRACT HAULER

1. Permittees that use contract haulers, under the authority of their operating permit, to dispose of biosolids or sludge, are responsible for compliance with all the terms of this permit. Contract haulers that assume the responsibility of the final disposal of biosolids or sludge, including biosolids land application, must obtain a Missouri State Operating Permit unless the hauler transports the biosolids or sludge to another permitted treatment facility.
2. Testing of biosolids or sludge, other than total solids content, is not required if biosolids or sludge are hauled to a permitted wastewater treatment facility, unless it is required by the accepting facility.

SECTION E – INCINERATION OF SLUDGE

1. Please be aware that sludge incineration facilities may be subject to the requirements of 40 CFR Part 503 Subpart E, Missouri Air Conservation Commission regulations under 10 CSR 10, and solid waste management regulations under 10 CSR 80, as applicable.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or, if the ash is determined to be hazardous, with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, mass of sludge incinerated and mass of ash generated. Permittee shall also provide the name of the ash disposal facility and permit number if applicable.

SECTION F – SURFACE DISPOSAL SITES AND BIOSOLIDS AND SLUDGE LAGOONS

1. Please be aware that surface disposal sites of biosolids or sludge from wastewater treatment facilities may be subject to other laws including the requirements in 40 CFR Part 503 Subpart C, Missouri Air Conservation Commission regulations under 10 CSR 10, and solid waste management regulations under 10 CSR 80, as applicable.
2. Biosolids or sludge storage lagoons are temporary facilities and are not required to obtain a permit as a solid waste management facility under 10 CSR 80. In order to maintain biosolids or sludge storage lagoons as storage facilities, accumulated biosolids or sludge must be removed routinely, but not less than once every two years unless an alternate schedule is approved in the permit. The amount of biosolids or sludge removed will be dependent on biosolids or sludge generation and accumulation in the facility. Enough biosolids or sludge must be removed to maintain adequate storage capacity in the facility.
    a. In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of biosolids or sludge on the bottom of the lagoon, upon prior approval of the Department; or
    b. Permittee shall close the lagoon in accordance with Section I.

SECTION G – LAND APPLICATION OF BIOSOLIDS

1. The permittee shall not land apply biosolids unless land application is authorized in the facility description, the special conditions of the issued NPDES permit, or in accordance with Section A.3.c., above.
2. This permit only authorizes "Class A" or "Class B" biosolids derived from domestic wastewater to be land applied onto grass land, crop land, timber, or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
3. Class A Biosolids Requirements: Biosolids shall meet Class A requirements for application to public contact sites, residential lawns, home gardens or sold and/or given away in a bag or other container.
4. Class B biosolids that are land applied to agricultural and public contact sites shall comply with the following restrictions:
    a. Food crops that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.
    b. Food crops below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for four months or longer prior to incorporation into the soil.
    c. Food crops below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than four months prior to incorporation into the soil.
    d. Animal grazing shall not be allowed for 30 days after application of biosolids.
    e. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.
    f. Turf shall not be harvested for one year after application of biosolids if used for lawns or high public contact sites in close proximity to populated areas such as city parks or golf courses.
    g. After Class B biosolids have been land applied to public contact sites with high potential for public exposure, as defined in 40 CFR § 503.31, such as city parks or golf courses, access must be restricted for 12 months.
    h. After Class B biosolids have been land applied public contact sites with low potential for public exposure as defined in 40 CFR § 503.31, such as a rural land application or reclamation sites, access must be restricted for 30 days.

5. Pollutant limits
    a. Biosolids shall be monitored to determine the quality for regulated pollutants listed in Table 1, below. Limits for any pollutants not listed below may be established in the permit.
    b. The number of samples taken is directly related to the amount of biosolids or sludge produced by the facility (See Section J, below). Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable Department approved material to achieve pollutant concentration below those identified in Table 1, below.
    c. Table 1 gives the ceiling concentration for biosolids. Biosolids which exceed the concentrations in Table 1 may not be land applied.

TABLE 1

Biosolids ceiling concentration	
Pollutant	Milligrams per kilogram dry weight
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

d. Table 2 below gives the low metal concentration for biosolids. Because of its higher quality, biosolids with pollutant concentrations below those listed in Table 2 can safely be applied to agricultural land, forest, public contact sites, lawns, home gardens or be given away without further analysis. Biosolids containing metals in concentrations above the low metals concentrations but below the ceiling concentration limits may be land applied but shall not exceed the annual loading rates in Table 3 and the cumulative loading rates in Table 4. The permittee is required to track polluntant loading onto application sites for parameters that have exceeded the low metal concentration limits.

TABLE 2

Biosolids Low Metal Concentration	
Pollutant	Milligrams per kilogram dry weight
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2,800

e. Annual pollutant loading rate.

Table 3

Biosolids Annual Loading Rate	
Pollutant	Kg/ha (lbs./ac) per year
Arsenic	2.0 (1.79)
Cadmium	1.9 (1.70)
Copper	75 (66.94)
Lead	15 (13.39)
Mercury	0.85 (0.76)
Nickel	21 (18.74)
Selenium	5.0 (4.46)
Zinc	140 (124.96)

f. Cumulative pollutant loading rates.

Table 4

Biosolids Cumulative Pollutant Loading Rate	
Pollutant	Kg/ha (lbs./ac)
Arsenic	41 (37)
Cadmium	39 (35)
Copper	1500 (1339)
Lead	300 (268)
Mercury	17 (15)
Nickel	420 (375)
Selenium	100 (89)
Zinc	2800 (2499)

6. Best Management Practices. The permittee shall use the following best management practices during land application activities to prevent the discharge of biosolids to waters of the state.
   a. Biosolids shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under § 4 of the Endangered Species Act or its designated critical habitat.
   b. Apply biosolids only at the agronomic rate of nitrogen needed (see 5.c. of this section).
   c. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil, and crop

nitrogen removal when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kgTN; or 2) When biosolids are land applied at an application rate greater than two dry tons per acre per year.

i. PAN can be determined as follows:

(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor[1]).

[1] Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volitalization factors and mineralization rates can be utilized on a case-by-case basis.

ii. Crop nutrient production/removal to be based on crop specific nitrogen needs and realistic yield goals. **NOTE:** There are a number of reference documents on the Missouri Department of Natural Resources website that are informative to implement best management practices in the proper management of biosolids, including crop specific nitrogen needs, realistic yields on a county by county basis and other supporting references.

iii. Biosolids that are applied at agronomic rates shall not cause the annual pollutant loading rates identified in Table 3 to be exceeded.

d. Buffer zones are as follows:

i. 300 feet of a water supply well, sinkhole, water supply reservoir or water supply intake in a stream;

ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstandingstate resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;

iii. 150 feet of dwellings or public use areas;

iv. 100 feet (35 feet if biosolids application is down-gradient or the buffer zone is entirely vegetated) of lake, pond, wetlands or gaining streams (perennial or intermittent);

v. 50 feet of a property line. Buffer distances from property lines may be waived with written permission from neighboring property owner.

vi. For the application of dry, cake or liquid biosolids that are subsurface injected, buffer zones identified in 5.d.i. through 5.d.iii above, may be reduced to 100 feet. The buffer zone may be reduced to 35 feet if the buffer zone is permanently vegetated. Subsurface injection does not include methods or technology reflective of combination surface/shallow soil incorporation.

e. Slope limitation for application sites are as follows:

i. For slopes less than or equal to 6 percent, no rate limitation;

ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels;

iii. Slopes > 12 percent, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.

iv. Dry, cake or liquid biosolids that are subsurface injected, may be applied on slopes not to exceed 20 percent. Subsurface injection does not include the use of methods or technology reflective of combination surface/shallow soil incorporation.

f. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.

g. Biosolids may be land applied to sites with soil that are snow covered, frozen, or saturated with liquid when site restrictions or other controls are provided to prevent pollutants from being discharged to waters of the state during snowmelt or stormwater runoff. During inclement weather or unfavorable soil conditions use the following management practices:

i. A maximum field slope of 6% and a minimum 300 feet grass buffer between the application site and waters of the state. A 35 feet grass buffer may be utilized for the application of dry, cake or liquid biosolids that are subsurface injected. Subsurface injection does not include the use of mthods or technology refletive of combination surface/shallow soil incorporation;

ii. A maximum field slope of 2% and 100 feet grass buffer between the application site and waters of the state. A 35 feet grass buffer may be used for the application of dry, cake or liquid biosolids that are subsurface injected. Subsurface injection does not included the use of methods or technology refletive of combination surface/shallow soil incorporation;

iii. Other best management practices approved by the Department.

SECTION H – SEPTAGE

1. Haulers that land apply septage must obtain a state permit. An operating permit is not required for septage haulers who transport septage to another permitted treatment facility for disposal.
2. Do not apply more than 30,000 gallons of septage per acre per year or the volume otherwise stipulated in the operating permit.
3. Septic tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to mechanical treatment facilities.
4. Septage must comply with Class B biosolids regarding pathogen and vector attraction reduction requirements before it may be applied to crops, pastures or timberland. To meet required pathogen and vector reduction requirements, mix 50 pounds of hydrated lime for every 1,000 gallons of septage and maintain a septage pH of at least 12 pH standard units for 30 minutes or more prior to application.
5. Lime is to be added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.
6. As residential septage contains relatively low levels of metals, the testing of metals in septage is not required.

SECTION I– CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical and lagoons) and sludge or biosolids storage and treatment facilities. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain Department approval of a closure plan which addresses proper removal and disposal of all sludges and/or biosolids. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6. 010 and 10 CSR 20 – 6.015.
3. Biosolids or sludge that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:
    a. Biosolids and sludge shall meet the monitoring and land application limits for agricultural rates as referenced in Section G, above.
    b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
    c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre. Alternative, site-specific application rates may be included in the closure plan for department consideration.
        i. PAN can be determined as follows:
        (Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor[1]).
        [1] Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volitalization factors and mineralization rates can be utilized on a case-by-case basis
4. Domestic wastewater treatment lagoons with a design treatment capacity less than or equal to 150 persons, are "similar treatment works" under the definition of septage. Therefore the sludge within the lagoons may be treated as septage during closure activities. See Section B, above. Under the septage category, residuals may be left in place as follows:
    a. Testing for metals or fecal coliform is not required.
    b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at a rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
    c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If 100 dry tons/acre or more will be left in the lagoon, test for nitrogen and determine the PAN using the calculation above. Allowable PAN loading is 300 pounds/acre.
5. Biosolids or sludge left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, and unless otherwise approved, the lagoon berm shall be demolished, and the site shall be graded and contain ≥70% vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion. Alternative biosolids or sludge and soil mixing ratios may be included in the closure plan for department consideration.
6. Lagoon and earthen structure closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed one acre in accordance with 10 CSR 20-6.200.
7. When closing a mechanical wastewater plant, all biosolids or sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
    a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain ≥70% vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate

surface water drainage without creating erosion.

b. Hazardous Waste shall not be land applied or disposed during mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations pursuant to 10 CSR 25.

c. After demolition of the mechanical plant, the site must only contain clean fill defined in Section 260.200.1(6) RSMo as uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinderblocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the Department for fill, reclamation, or other beneficial use. Other solid wastes must be removed.

8. If biosolids or sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or I, a landfill permit or solid waste disposal permit must be obtained if the permittee chooses to seek authorization for on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR Part 503, Subpart C.

SECTION J – MONITORING FREQUENCY

1. At a minimum, biosolids or sludge shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed. Please see the table below.

TABLE 5

Biosolids or Sludge produced and disposed (Dry Tons per Year)	Monitoring Frequency (See Notes 1, and 2)		
	Metals, Pathogens and Vectors, Total Phosphorus, Total Potassium	Nitrogen TKN, Nitrogen PAN[1]	Priority Pollutants[2]
319 or less	1/year	1 per month	1/year
320 to 1650	4/year	1 per month	1/year
1651 to 16,500	6/year	1 per month	1/year
16,501+	12/year	1 per month	1/year

[1] Calculate plant available nitrogen (PAN) when either of the following occurs: 1) when biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.

[2] Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) are required only for permit holders that must have a pre-treatment program. Monitoring requirements may be modified and incorporated into the operating permit by the Department on a case-by-case basis.

Note 1: Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids. This data shall be used to calculate the dry tons of sludge applied per acre.
Note 2: Table 5 is not applicable for incineration and permit holders that landfill their sludge.

2. Permittees that operate wastewater treatment lagoons, peak flow equalization basins, combined sewer overflow basins or biosolids or sludge lagoons that are cleaned out once a year or less, may choose to sample only when the biosolids or sludge is removed or the lagoon is closed. Test one composite sample for each 319 dry tons of biosolids or sludge removed from the lagoon during the reporting year or during lagoon closure. Composite sample must represent various areas at one-foot depth.
3. Additional testing may be required in the special conditions or other sections of the permit.
4. Biosolids and sludge monitoring shall be conducted in accordance with federal regulation 40 CFR § 503.8, Sampling and analysis.

SECTION K – RECORD KEEPING AND REPORTING REQUIREMENTS

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in Standard Conditions PART III and any additional items in the Special Conditions section of this permit. This shall include dates when the biosolids or sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
2. Reporting period
   a. By February 19th of each year, applicable facilities shall submit an annual report for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and biosolids or sludge disposal facilities.
   b. Permittees with wastewater treatment lagoons shall submit the above annual report only when biosolids or sludge are removed from the lagoon during the report period or when the lagoon is closed.
3. Report Form. The annual report shall be prepared on report forms provided by the Department or equivalent forms approved by the Department.
4. Reports shall be submitted as follows:
   Major facilities, which are those serving 10,000 persons or more or with a design flow equal to or greater than 1 million gallons per day or that are required to have an approved pretreatment program, shall report to both the Department and EPA if the facility land applied, disposed of biosolids by surface disposal, or operated a sewage sludge incinerator. All other facilities shall maintain their biosolids or sludge records and keep them available to Department personnel upon request. State reports shall be submitted to the address listed as follows:

   DNR regional or other applicable office listed in the
   permit (see cover letter of permit)
   ATTN: Sludge Coordinator

Reports to EPA must be electronically submitted online via the Central Data Exchange at: https://cdx.epa.gov/ Additional information is available at: https://www.epa.gov/biosolids/compliance-and-annual-reporting-guidance-about-clean-water-act-laws

5. Annual report contents. The annual report shall include the following:
    a. Biosolids and sludge testing performed. If testing was conducted at a greater frequency than what is required by the permit, all test results must be included in the report.
    b. Biosolids or sludge quantity shall be reported as dry tons for the quantity produced and/or disposed.
    c. Gallons and % solids data used to calculate the dry ton amounts.
    d. Description of any unusual operating conditions.
    e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
        i. This must include the name and address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
        ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
    f. Contract Hauler Activities:
    If using a contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate biosolids or sludge use permit.
    g. Land Application Sites:
        i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. The facility shall report PAN when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.
        ii. If the "Low Metals" criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
        iii. Report the method used for compliance with pathogen and vector attraction requirements.
        iv. Report soil test results for pH and phosphorus. If no soil was tested during the year, report the last date when tested and the results.

AP 43299

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 10/27/2023	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 – 0004871, 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 – _____ 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	
Sibley Generating Station		785-508-2443	
ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
33200 East Johnson Road	Sibley	MO	64088

3. OWNER

NAME		TELEPHONE NUMBER WITH AREA CODE	
Evergy, Inc.		785-508-2443	
EMAIL ADDRESS			
jared.morrison@evergy.com			
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
818 S. Kansas Ave.	Topeka	KS	66612

4. CONTINUING AUTHORITY

NAME		TELEPHONE NUMBER WITH AREA CODE	
Evergy, Inc.		785-508-2443	
EMAIL ADDRESS			
jared.morrison@evergy.com			
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
818 S. Kansas Ave.	Topeka	KS	66612

5. OPERATOR CERTIFICATION

NAME	CERTIFICATE NUMBER	TELEPHONE NUMBER WITH AREA CODE	
Jeff Creason	NA	816-537-5743	
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
14015 Smart Rd	Greenwood	MO	64034

6. FACILITY CONTACT

NAME	TITLE	TELEPHONE NUMBER WITH AREA CODE
Jared Morrison	Director, Environmental Services	785-508-2443
E-MAIL ADDRESS		
jared.morrison@evergy.com		

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

NAME			
Hollrah Farms LLC			
ADDRESS	CITY	STATE	ZIP CODE
P.O. Box 3484	Dillon	CO	80435-3484

8. ADDITIONAL FACILITY INFORMATION

8.1 Legal Description of Outfalls. (Attach additional sheets if necessary.) On attached page

For Universal Transverse Mercator (UTM), use Zone 15 North referenced to North American Datum 1983 (NAD83)

001 _____¼ _____¼ Sec _____ T _____ R _____ _____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

002 _____¼ _____¼ Sec _____ T _____ R _____ _____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

003 _____¼ _____¼ Sec _____ T _____ R _____ _____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

004 _____¼ _____¼ Sec _____ T _____ R _____ _____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

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 4911 and NAICS 221112 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: Land Disturbance Permit, Solid Waste Permit

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
Jared Morrision, Director of Water and Waste Programs	785-508-2443
SIGNATURE Jared Morrison	DATE SIGNED 10/23/23

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH

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

GENERAL INFORMATION (PLEASE SEE INSTRUCTIONS)

1.0 NAME OF FACILITY

Sibley Station

1.1 THIS FACILITY IS OPERATING UNDER MISSOURI STATE OPERATING PERMIT (MSOP) NUMBER:

MO-0004871

1.2 IS THIS A NEW FACILITY? PROVIDE CONSTRUCTION PERMIT (CP) NUMBER IF APPLICABLE.

Not Applicable

1.3 Describe the nature of the business, in detail. Identify the goods and services provided by the business. Include descriptions of all raw, intermediate, final products, byproducts, or waste products used in the production or manufacturing process, stored outdoors, loaded or transferred and any other pertinent information for potential sources of wastewater or stormwater discharges.

Former steam electric generation station that has been fully decommissioned. The only remaining assets include a on-site landfill and associated leachate pond.

FLOWS, TYPE, AND FREQUENCY

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

2.1 For each outfall (1) below, provide: (2) a description of all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, stormwater runoff, and any other process or non-process wastewater, (3) the average flow and maximum flow (put max in parentheses) contributed by each operation and the sum of those operations, (4) the treatment received by the wastewater, and (5) the treatment type code. Continue on additional sheets if necessary.

1. OUTFALL NO.	2. OPERATION(S) CONTRIBUTING FLOW; INCLUDE ALL PROCESSES AND SUB PROCESSES AT EACH OUTFALL	3. AVERAGE FLOW AND (MAXIMUM FLOW), INCLUDE UNITS.	4. TREATMENT DESCRIPTION	5. TREATMENT CODES FROM TABLE A
020	Utility Waste Landfill Leachate Collection Pond	NA (2.72)	Sedimentation, Neutralization	1-U, 2-K
021	Non-Contact Stormwater		No Treatment	4-A
022	Non-Contact Stormwater		No Treatment	4-A
023	Non-Contact Stormwater		No Treatment	4-A
024	Non-Contact Stormwater		No Treatment	4-A
025	Non-Contact Stormwater		No Treatment	4-A

Attach additional pages if necessary.

2.2 INTERMITTENT DISCHARGES

Except for stormwater runoff, leaks, or spills, are any of the discharges described in items 2.0 or 2.1 intermittent or seasonal?

☐ Yes *(complete the following table)* ☑ No *(go to section 2.3)*

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

2.3 PRODUCTION

A. Does an effluent limitation guideline (ELG) promulgated by EPA under section 304 of the Clean Water Act apply to your facility? Indicate the part and subparts applicable.

☑ Yes 40 CFR 423 Subpart(s) 12-13 ☐ No *(go to section 2.5)*

B. Are the limitations in the effluent guideline(s) expressed in terms of production (or other measure of operation)? Describe in C below.

☐ Yes *(complete C.)* ☑ No *(go to section 2.5)*

C. If you answered "yes" to B, list the quantity representing an actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline and indicate the affected outfalls.

A. OUTFALL(S)	B. QUANTITY PER DAY	C. UNITS OF MEASURE	D. OPERATION, PRODUCT, MATERIAL, ETC. *(specify)*

2.4 IMPROVEMENTS

A. Are you required by any federal, state, or local authority to meet any implementation schedule for the construction, upgrading, or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ Yes *(complete the following table)* ☑ No *(go to 2.6)*

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

B. Optional: provide below or attach additional sheets describing water pollution control programs or other environmental projects which may affect discharges. Indicate whether each program is underway or planned, and indicate actual or planned schedules for construction. This may include proposed bmp projects for stormwater.

2.5 SLUDGE MANAGEMENT

Describe the removal of any industrial or domestic biosolids or sludges generated at your facility. Include names and contact information for any haulers used. Note the frequency, volume, and methods (incineration, landfilling, composting, etc) used. See Form A for additional forms which may need to be completed.

NA

DATA COLLECTION AND REPORTING REQUIREMENTS FOR APPLICANTS

3.0 EFFLUENT (AND INTAKE) CHARACTERISTICS (SEE INSTRUCTIONS)

A. & B. See instructions before continuing – complete one Table 1 for **each outfall** (and intake) – annotate the outfall (intake) number or designation in the space provided. The facility is not required to complete intake data unless required by the department or rule.

C. Use the space below to list any pollutants listed in the instructions section 3.0 C. Table B which you know or have reason to believe is discharged or may be discharged from any outfall not listed in parts 3.0 A or B on Table 1. For every pollutant listed, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	3. OUTFALL(S)	4. ANALYTICAL RESULTS (INCLUDE UNITS)

3.1 Whole Effluent Toxicity Testing

A. To your knowledge, have any Whole Effluent Toxicity (WET) tests been performed on the facility discharges (or on receiving waters in relation to your discharge) within the last three years?

☐ Yes (go to 3.1 B) ☑ No (go to 3.2)

3.1 B

Disclose wet testing conditions, including test duration (chronic or acute), the organisms tested, and the testing results. Provide any results of toxicity identification evaluations (TIE) or toxicity reduction evaluations (TRE) if applicable. Please indicate the conclusions of the test(s) including any pollutants identified as causing toxicity and steps the facility is taking to remedy the toxicity.

3.2 CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported herein, above, or on Table 1 performed by a contract laboratory or consulting firm?

☑ Yes (list the name, address, telephone number, and pollutants analyzed by each laboratory or firm.) ☐ No *(go to 4.0)*

A. LAB NAME	**B. ADDRESS**	**C. TELEPHONE** *(area code and number)*	**D. POLLUTANTS ANALYZED** *(list or group)*
Pace Analytical Services	9608 Loiret Blvd. Lenexa, KS 66219	913-599-5665	Metals, Volatile Organics
Pace Analytical Services	Ormond Beach, FL Indianapolis, IN	(386) 672-5668	Organic Compounds Dioxin Screen

4.0 STORMWATER

4.1
Do you have industrial stormwater discharges from the site? If so, attach a site map outlining drainage areas served by each outfall. Indicate the following attributes within each drainage area: pavement or other impervious surfaces; buildings; outdoor storage areas; material loading and unloading areas; outdoor industrial activities; structural stormwater control measures; hazardous waste treatment, storage, and disposal units; and wells or springs in the area.

OUTFALL NUMBER	TOTAL AREA DRAINED (PROVIDE UNITS)	TYPES OF SURFACES (VEGETATED, STONE , PAVED, ETC)	BEST MANAGEMENT PRACTICES EMPLOYED; INCLUDE STRUCTURAL BMPS AND TREATMENT DESIGN FLOW FOR BMPS DESCRIBE HOW FLOW IS MEASURED
21	6	vegetated, gravel	non-contact stormwater. area is vegetated with rip rap
22	1	vegetated, gravel	non-contact stormwater. area is vegetated with rip rap
23	6	vegetated, gravel	non-contact stormwater. area is vegetated with rip rap
24	0.5	vegetated, gravel	non-contact stormwater. area is vegetated with rip rap
25	7	vegetated, gravel	nnon-contact stormwater. area is vegetated with rip rap

4.2 STORMWATER FLOWS
Provide the date of sampling with the flows, and how the flows were estimated.

No flow data. Outfalls infrequently discharge and discharge for a limited time.

SIGNATORY REQUIREMENTS

5.0 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
Jared Morrision, Director of Water and Waste Programs	785-508-2443
SIGNATURE (SEE INSTRUCTIONS) Jared Morrison	DATE SIGNED 10/23/23

Non-discharging dip samples were taken

SEE INSTRUCTIONS; PLEASE PRINT OR TYPE.
You may report some or all of this information on separate sheet *(use similar format)* instead of completing these pages.

FORM C TABLE 1 FOR 3.0 - ITEMS A AND B

EFFLUENT (AND INTAKE) CHARACTERISTICS — THIS OUTFALL IS: Utility Waste Landfill Leachate Collection Pond — OUTFALL NO. 020

3.0 PART A – You must provide the results of at least one analysis for every pollutant in Part A. Complete one table for each outfall or proposed outfall. See instructions.

1. POLLUTANT	2. VALUES							3. UNITS *(specify if blank)*	
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			
A. Biochemical Oxygen Demand, 5-day (BOD_5)	3.9	131.0					1	mg/L	lbs
B. Chemical Oxygen Demand (COD)	26.0	873.3					1	mg/L	lbs
C. Total Organic Carbon (TOC)	6.9	231.76					1	mg/L	lbs
D. Total Suspended Solids (TSS)	14.2	476.96			7.56	253.93	5	mg/L	lbs
E. Ammonia as N	<0.10	<3.36					1	mg/L	
F. Flow	VALUE 4.0248		VALUE		VALUE 2.473		4	MILLIONS OF GALLONS PER DAY (MGD)	
G. Temperature *(winter)*	VALUE		VALUE		VALUE			°F	
H. Temperature *(summer)*	VALUE		VALUE		VALUE			°F	
I. pH	MINIMUM 8.69		MAXIMUM 8.97		AVERAGE 8.848		4	STANDARD UNITS (SU)	

3.0 PART B – Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark Column 2A for any pollutant, you must provide the results for at least one analysis for the pollutant. Complete one table for each outfall (intake). Provide results for additional parameters not listed here in Part 3.0 C.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. VALUES							4. UNITS	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS
			CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS			
Subpart 1 – Conventional and Non-Conventional Pollutants											
A. Alkalinity ($CaCO_3$)	x		MINIMUM 143	<4803.17	MINIMUM		MINIMUM		1	mg/L	lbs
B. Bromide (24959-67-9)	x		13.7	460.16					1	mg/L	lbs
C. Chloride (16887-00-6)	x		59.5	1998.52			52.3	1756.68	5	mg/L	lbs
D. Chlorine, Total Residual	x		0.052	1.75					1	mg/L	lbs
E. Color	x		5.0						1	units	
F. Conductivity	x		3130						1	umhos/cm	
F. Cyanide, Amenable to Chlorination		x	<0.010	<0.34					1	mg/L	lbs

Non-discharging dip samples were taken

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. VALUES							4. UNITS	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS
			CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS			
Subpart 1 – Conventional and Non-Conventional Pollutants (Continued)											
G. *E. coli*		x	<10						1	mpn/100ml	
H. Fluoride (16984-48-8)	x		0.84	28.21					1	mg/L	lbs
I. Nitrate plus Nitrate *(as N)*	x		0.18	6.05					1	mg/L	lbs
J. Kjeldahl, Total (as N)	x		0.98	32.92					1	mg/L	lbs
K. Nitrogen, Total Organic *(as N)*	X		0.88	29.56					1	mg/L	lbs
L. Oil and Grease		x	<5.0	<167.94			<5.0	<164.94	5	mg/L	lbs
M. Phenols, Total		x	<4.8	<0.16					1	ug/L	lbs
N. Phosphorus *(as P),* Total (7723-14-0)		x	<0.10	<3.36			<0.10	<3.36	5	mg/L	lbs
O. Sulfate *(as SO^4)* (14808-79-8)	X		1270	42657.50					1	mg/l	lbs
P. Sulfide *(as S)*		x	<0.050	<1.68					1	mg/L	lbs
Q. Sulfite (as SO^3) (14265-45-3)		x	<2.0	<67.18					1	mg/L	lbs
R. Surfactants		x	<0.20	<6.72					1	mg/L	lbs
S. Trihalomethanes, Total		x	<1.0	<0.03					1	ug/L	lbs
Subpart 2 – Metals											
1M. Aluminum, Total Recoverable (7429-90-5)	x		372	12.49					1	ug/L	lbs
2M. Antimony, Total Recoverable (7440-36-9)	x		1.1	0.04					1	ug/L	lbs
3M. Arsenic, Total Recoverable (7440-38-2)	x		19.0	0.64			9.4	0.32	5	ug/L	lbs
4M. Barium, Total Recoverable (7440-39-3)	x		40.8	1.37					1	ug/L	lbs
5M. Beryllium, Total Recoverable (7440-41-7)		x	<0.50	<0.02					1	ug/L	lbs
6M. Boron, Total Recoverable (7440-42-8)	x		23600	792.69			20980	704.69	5	ug/L	lbs
7M. Cadmium, Total Recoverable (7440-43-9)	x		2.0	0.07					1	ug/L	lbs
8M. Chromium III Total Recoverable (16065-83-1)	x		5.8	0.19					1	ug/L	lbs
9M. Chromium VI, Dissolved (18540-29-9)		x	<0.010	<0.34					1	ug/L	lbs
10M. Cobalt, Total Recoverable (7440-48-4)		x	<5.0	<0.17					1	ug/L	lbs

Non-discharging dip samples were taken

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. VALUES							4. UNITS	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS
			CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS			
Subpart 2 – Metals (Continued)											
11M. Copper, Total Recoverable (7440-50-8)	x		1.6	0.05					1	ug/L	lbs
12M. Iron, Total Recoverable (7439-89-6)		x	<50.0	<1.68					1	ug/L	lbs
13M. Lead, Total Recoverable (7439-92-1)		x	<1.0	<0.03					1	ug/L	lbs
14M. Magnesium, Total Recoverable (7439-95-4)	x		13400	450.09					1	ug/L	lbs
15M. Manganese, Total Recoverable (7439-96-5)	x		20.6	0.69					1	ug/L	lbs
16M. Mercury, Total Recoverable (7439-97-6)		x	<0.20	<0.01			<0.20	<0.01	5	ug/L	lbs
17M. Methylmercury (22967926)		x									
18M. Molybdenum, Total Recoverable (7439-98-7)	x		7210	242.17			5920	198.84	5	ug/L	lbs
19M. Nickel, Total Recoverable (7440-02-0)		x	<1.0	<0.03					1	ug/L	lbs
20M. Selenium, Total Recoverable (7782-49-2)	x		22.8	0.77			15.28	0.51	5	ug/L	lbs
21M. Silver, Total Recoverable (7440-22-4)		x	<0.50	<0.02					1	ug/L	lbs
22M. Thallium, Total Recoverable (7440-28-0)		x	<1.0	<0.03					1	ug/L	lbs
23M. Tin, Total Recoverable (7440-31-5)		x	<50.0	<1.68					1	ug/L	lbs
24M. Titanium, Total Recoverable (7440-32-6)		x	<10.0	<0.34					1	ug/L	lbs
25M. Zinc, Total Recoverable (7440-66-6)		x	<10.0	<0.34					1	ug/L	lbs
Subpart 3 – Radioactivity											
1R. Alpha Total	x		6.96 ± 4.15						1	pCi/L	
2R. Beta Total	x		40.9 ± 7.99						1	pCi/L	
3R. Radium Total	x		0.191 ± 0.717						1	pCi/L	
4R. Radium 226 plus 228 Total	x		0.191 ± 0.717						1	pCi/L	

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM D – APPLICATION FOR DISCHARGE PERMIT – PRIMARY INDUSTRIES

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

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

1.00 NAME OF FACILITY

Sibley Generating Station

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

MO -0004871

This form is to be filled out in addition to forms A and C "Application for Discharge Permit" for the Industries listed below:

INDUSTRY CATEGORY

Adhesives and sealants
Aluminum forming
Auto and other laundries
Battery manufacturing
Coal mining
Coil coating
Copper forming
Electric and electronic compounds
Electroplating
Explosives manufacturing
Foundries
Gum and wood chemicals
Inorganic chemicals manufacturing
Iron and steel manufacturing
Leather tanning and finishing
Landfill
Mechanical products manufacturing
Nonferrous metals manufacturing
Ore mining
Organic chemicals manufacturing
Paint and ink formulation
Pesticides
Petroleum refining
Pharmaceutical preparations
Photographic equipment and supplies
Plastic and synthetic materials manufacturing
Plastic processing
Porcelain enameling
Printing and publishing
Pulp and paperboard mills
Rubber processing
Soap and detergent manufacturing
Steam electric power plants
Textile mills
Timber products processing

Non-discharging dip samples were taken

APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES

TABLE II

NPDES # (*IF ASSIGNED*)	OUTFALL NUMBER
MO-0004871	020

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-A for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-B for each pollutant you know or have reason to believe is present. Mark "X" in column 2-C for each pollutant you believe to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (*all seven pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	A. TEST-ING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)		✔		1.1	0.04					1	ug/L	lbs			
2M. Arsenic, Total (7440-38-2)		✔		19.0	0.64			9.4	0.32	5	ug/L	lbs			
3M. Beryllium, Total (7440-41-7)			✔	<0.50	<0.02					1	ug/L	lbs			
4M. Cadmium, Total (7440-43-9)		✔		2.0	0.07					1	ug/L	lbs			
5M. Chromium III (16065-83-1)		✔		5.8	0.19					1	ug/L	lbs			
6M. Chromium VI (18540-29-9)			✔	<0.010	<0.34					1	mg/l	lbs			
7M. Copper, Total (7440-50-8)		✔		1.6	0.05					1	ug/L	lbs			
8M. Lead, Total (7439-92-1)			✔	<1.0	<0.03					1	ug/L	lbs			
9M. Magnesium Total (7439-95-4)		✔		13400	450.09					1	ug/L	lbs			
10M. Mercury, Total (7439-97-6)			✔	<0.20	<0.002			<0.20	<0.01	5	ug/L	lbs			
11M. Molybdenum Total (7439-98-7)		✔		7210	242.17			5920	198.84	5	ug/L	lbs			
12M. Nickel, Total (7440-02-0)			✔	<1.0	<0.03					1	ug/L	lbs			
13M. Selenium, Total (7782-49-2)		✔		22.8	0.77			15.28	0.51	5	ug/L	lbs			
14M. Silver, Total (7440-22-4)			✔	<0.50	<0.02					1	ug/L	lbs			
15M. Thallium, Total (7440-28-0)			✔	<1.0	<0.03					1	ug/L	lbs			
16M. Tin Total (7440-31-5)			✔	<50.0	<1.68					1	ug/L	lbs			
17M. Titanium Total (7440-32-6)			✔	<10.0	<0.34					1	ug/L	lbs			
18M. Zinc, Total (7440-66-6)			✔	<10.0	<0.34					1	ug/L	lbs			

Non-discharging dip samples were taken

CONTINUED FROM PAGE 3

19M. Cyanide, Amenable to Chlorination	☐	☐	☑	<0.010	<0.34					1	mg/L	lbs			
20M. Phenols, Total	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
DIOXIN																
2,3,7,8 – Tetra – chlorodibenzo-P-Dioxin (1764-01-6)	☐	☐	☑	**DESCRIBE RESULTS** Not Present												

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	☐	☐	☑							1	ug/L	lbs			
2V. Acrylonitrile (107-13-1)	☐	☐	☑							1	ug/L	lbs			
3V. Benzene (71-43-2)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
4V. Bis (*Chloromethyl*) Ether (542-88-1)	☐	☐	☑							1	ug/L	lbs			
5V. Bromoform (75-25-2)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
6V. Carbon Tetrachloride (56-23-5)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
7V. Chlorobenzene (108-90-7)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
8V. Chlorodibromomethane (124-48-1)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
9V. Chloroethane (75-00-3)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
10V. 2-Chloroethylvinyl Ether (110-75-8)	☐	☐	☑							1	ug/L	lbs			
11V. Chloroform (67-66-3)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
12V. Dichlorobromomethane (75-27-4)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
13V. Dichloro-difluoromethane (75-71-8)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
14V. 1,1 – Dichloroethane (75-34-3)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
15V. 1,2 – Dichloroethane (107-06-2)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
16V. 1,1 – Dichloroethylene (75-35-4)	☐	☐	☑							1	ug/L	lbs			
17V. 1,3 – Dichloropropane (78-87-5)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
18V. 1,2 –Dichloropropylene (542-75-6)	☐	☐	☑							1	ug/L	lbs			
19V. Ethylbenzene (100-41-4)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
20V. Methyl Bromide (74-83-9)	☐	☐	☑	<5.0	<0.17					1	ug/L	lbs			
21V. Methyl Chloride (74-87-3)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			

Non-discharging dip samples were taken

NPDES # (*IF ASSIGNED*)	OUTFALL NUMBER
MO-0004871	020

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC.MS FRACTION – VOLATILE COMPOUNDS *(continued)*															
22V. Methylene Chloride (75-09-2)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
23V. 1,1,2,2 – Tetra-chloroethane (79-34-5)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
24V. Tetrachloroethylene (127-18-4)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
25V. Toluene (108-88-3)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
26V. 1,2 – Trans Dichloroethylene (156-60-5)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
27V. 1,1,1 – Tri – chloroethane (71-55-6)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
28V. 1,1,2 – Tri-chloroethane (79-00-5)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
29V. Trichloro – ethylene (79-01-6)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
30V. Trichloro – fluoromethane (75-69-4)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
31V. Vinyl Chloride (75-01-4)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2 – Chlorophenol (95-57-8)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
2A. 2,4 – Dichloro – phenol (120-83-2)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
3A. 2,4 – Dimethyl – phenol (105-67-9)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
4A. 4,6 – Dinitro - O-Cresol (534-52-1)	☐	☐	☑	<24.0	<0.81					1	ug/L	lbs			
5A. 2,4 – Dinitro – phenol (51-28-5)	☐	☐	☑	<48.1	<1.62					1	ug/L	lbs			
6A. 2-Nitrophenol (88-75-5)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
7A. 4-Nitrophenol (100-02-7)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
8A. P – Chloro – M Cresol (59-50-7)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
9A. Pentachloro – phenol (87-86-5)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
10A. Phenol (108-952)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
11A. 2,4,6 – Trichloro-phenol (88-06-2)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
12A. 2 - methyl – 4,6 dinitrophenol (534-52-1)	☐	☐	☑	<24.0	<0.81					1	ug/L	lbs			

Non-discharging dip samples were taken

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
2B. Acenaphtylene (208-96-8)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
3B. Anthracene (120-12-7)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
4B. Benzidine (92-87-5)	☐	☐	☑	<48.1	<1.62					1	ug/L	lbs			
5B. Benzo (a) Anthracene (56-55-3)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
6B. Benzo (a) Pyrene (50-32-8)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
7B. 3,4 – Benzofluoranthene (205-99-2)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
8B. Benzo (ghi) Perylene (191-24-2)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
9B. Benzo (k) Fluoranthene (207-08-9)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
11B. Bis (2-Chloroethyl) Ether (111-44-4)	☐	☐	☑	<5.8	<0.19					1	ug/L	lbs			
12B. Bis (2-Chloroisopropyl) Ether (39638-32-9)	☐	☐	☑	<5.8	<0.19					1	ug/L	lbs			
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	☐	☐	☑	<4.8	<0.16					1	ug/l	lbs			
15B. Butyl Benzyl Phthalate (85-68-7)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
16B. 2-Chloronaphthalene (91-58-7)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
18B. Chrysene (218-01-9)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
19B. Dibenzo (a.h) Anthracene (53-70-3)	☐	☐	☑	<4.8	<0.16					1	ug/l	lbs			
20B. 1,2 – Dichlorobenzene (95-50-1)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
21B. 1,3 – Dichlorobenzene (541-73-1)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			

Non-discharging dip samples were taken

CONTINUED FROM PAGE 5

NPDES # (*IF ASSIGNED*)	OUTFALL NUMBER
MO-0004871	020

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
22B. 1, 4-Dichlorobenzene (106-46-7)	☐	☐	☑	<1.0	<0.03					1	ug/L	lbs			
23B. 3, 3'-Dichlorobenzidine (91-94-1)	☐	☐	☑	<19.2	<0.64					1	ug/L	lbs			
24B. Diethyl Phthalate (84-66-2)	☐	☐	☑	<9.6	<0.32					1	ug/l	lbs			
25B. Dimethyl Phthalate (131-11-3)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
26B. Di-N-butyl Phthalate (84-74-2)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
27B. 2,4-Dinitrotoluene (121-14-2)	☐	☐	☑	<5.8	<0.19					1	ug/L	lbs			
28B. 2,6-Dinitrotoluene (606-20-2)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
29B. Di-N-Octyphthalate (117-84-0)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
30B. 1,2-Diphenylhydrazine (*as Azobenzene)* (122-66-7)	☐	☐	☑							1	ug/L	lbs			
31B. Fluoranthene (206-44-0)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
32B. Fluorene (86-73-7)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
33B. Hexachlorobenzene (87-68-3)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
34B. Hexachlorobutadiene (87-68-3)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
35B. Hexachloro-cyclopentadiene (77-47-4)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
36B. Hexachloroethane (67-72-1)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
37B. Indeno (1,2,3-c-d) Pyrene (193-39-5)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
38B. Isophorone (78-59-1)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
39B. Naphthalene (91-20-3)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
40B. Nitrobenzene (98-95-3)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			
41B. N-Nitro-sodimethylamine (62-75-9)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs			

Non-discharging dip samples were taken

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	A. TES-ING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
42B. N-Nitroso N-Propylamine (621-64-7)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs	<5.0	<19.7	1
43B. N-Nitro-sodiphenylamine (86-30-6)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs	<5.0	<19.7	1
44B. Phenanthrene (85-01-8)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs	<5.0	<19.7	1
45B. Pyrene (129-00-0)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs	<5.0	<19.7	1
46B. 1,2,4-Tri chlorobenzene (120-82-1)	☐	☐	☑	<4.8	<0.16					1	ug/L	lbs	<5.0	<19.7	1
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)	☐	☐	☑												
2P. α-BHC (319-84-6)	☐	☐	☑												
3P. β-BHC (319-84-6)	☐	☐	☑												
4P. γ-BHC (58-89-9)	☐	☐	☑												
5P. δ-BHC (319-86-8)	☐	☐	☑												
6P. Chlordane (57-74-9)	☐	☐	☑												
7P. 4,4'-DDT (50-29-3)	☐	☐	☑												
8P. 4,4'-DDE (72-55-9)	☐	☐	☑												
9P. 4,4'-DDD (72-54-8)	☐	☐	☑												
10P. Dieldrin (60-57-1)	☐	☐	☑												
11P. α-Endosulfan (115-29-7)	☐	☐	☑												
12P. β-Endosultan (115-29-7)	☐	☐	☑												
13P. Endosulfan Sulfate (1031-07-8)	☐	☐	☑												
14P. Endrin (72-20-8)	☐	☐	☑												
15P. Endrin Aldehyde (7421-93-4)	☐	☐	☑												
16P. Heptachlor (76-44-8)	☐	☐	☑												

CONTINUED FROM PAGE 7

NPDES # (*IF ASSIGNED*): MO-0004871 | OUTFALL NUMBER: 020

Non-discharging dip samples were taken

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICISES *(continued)*															
17P. Heptachlor Epoxide (1024-57-3)	☐	☐	☑												
18P. PCB-1242 (53469-21-9)	☐	☐	☑												
19P. PBC-1254 (11097-69-1)	☐	☐	☑												
20P. PCB-1221 (11104-28-2)	☐	☐	☑												
21P. PCB-1232 (11141-16-5)	☐	☐	☑												
22P. PCB-1248 (12672-29-6)	☐	☐	☑												
23P. PCB-1260 (11096-82-5)	☐	☐	☑												
24P. PCB-1016 (12674-11-2)	☐	☐	☑												
25P. Toxaphene (8001-35-2)	☐	☐	☑												
J. RADIOACTIVITY															
(1) Alpha Total	☐	☑	☐	6.96 ± 4.15						1	pCi/L				
(2) Beta Total	☐	☑	☐	40.9 ± 7.99						1	pCi/L				
(3) Radium Total	☐	☑	☐	0.191 ± 0.71						1	pCi/L				
(4) Radium 226 Total	☐	☑	☐	0.191 ± 0.41						1	pCi/L				

2.00 POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. IS ANY POLLUTANT LISTED IN ITEM 1.30 A SUBSTANCE OR A COMPONENT OF A SUBSTANCE WHICH YOU DO OR EXPECT THAT YOU WILL OVER THE NEXT FIVE YEARS USE OR MANUFACTURE AS AN INTERMEDIATE OR FINAL PRODUCT OR BYPRODUCT?

☐ **YES** *(LIST ALL SUCH POLLUTANTS BELOW)* ■ **NO** *(GO TO B)*

B. ARE YOUR OPERATIONS SUCH THAT YOUR RAW MATERIALS, PROCESSES OR PRODUCTS CAN REASONABLE BE EXPECTED TO VARY SO THAT YOUR DISCHARGES OF POLLUTANTS MAY DURING THE NEXT FIVE YEARS EXCEED TWO TIMES THE MAXIMUM VALUES REPORTED IN ITEM 1.30?

☐ **YES** *(COMPLETE C BELOW)* ■ **NO** *(GO TO SECTION 3.00)*

C. IF YOU ANSWERED "YES" TO ITEM B, EXPLAIN BELOW AND DESCRIBE IN DETAIL THE SOURCES AND EXPECTED LEVELS OF SUCH POLLUTANTS THAT YOU ANTICIPATE WILL BE DISCHARGED FROM EACH OUTFALL OVER THE NEXT FIVE YEARS, TO THE BEST OF YOUR ABILIITY AT THIS TIME. CONTINUE ON ADDITIONAL SHEETS IF YOU NEED MORE SPACE.

3.00 CONTRACT ANALYSIS INFORMATION

WERE ANY OF THE ANALYSES REPORTED IN 1.30 PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM?

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

☐ **NO** *(GO TO SECTION 4.00)*

A. NAME	B. ADDRESS	C. TELEPHONE *(area code and number)*	D. POLLUTANTS ANALYZED *(list)*
Pace Analytical Services	9608 Loiret Blvd.	(913) 599-5665	Radioactivity, Metals, Volatile
Pace Analytical Services	Ormond Beach, FL	(386) 672-5668	Organic Compounds
Pace Analytical Services	Indianapolis,IN	(317) 228-3100	Dioxin Screen

4.00 CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	PHONE NUMBER (AREA CODE AND NUMBER)
Jared Morrision, Director of Water and Waste Programs	785-508-2443
SIGNATURE Jared Morrison	DATE SIGNED 10/23/23

FORM A – APPLICATION FOR NONDOMESTIC PERMIT UNDER MISSOURI CLEAN WATER LAW

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)

020 NE 1/4 NW 1/4 Sec 1 T 50N R 30W Jackson County
UTM Coordinates Easting (X): 399055.12 Northing (Y): 4336881.40

021 NE 1/4 NW 1/4 Sec 1 T 50N R 30W Jackson County
UTM Coordinates Easting (X): 399343 Northing (Y): 4336730

022 NE 1/4 NW 1/4 Sec 1 T 50N R 30W Jackson County
UTM Coordinates Easting (X): 399749 Northing (Y): 4336614

023 NE 1/4 NW 1/4 Sec 1 T 50N R 30W Jackson County
UTM Coordinates Easting (X): 399612 Northing (Y): 4336436

024 NE 1/4 NW 1/4 Sec 1 T 50N R 30W Jackson County
UTM Coordinates Easting (X): 399567 Northing (Y): 4336320

025 NE 1/4 NW 1/4 Sec 1 T 50N R 30W Jackson County
UTM Coordinates Easting (X): 399337 Northing (Y): 4336551


Sibley Station
NPDES Outfalls 2022
Missouri River
Sibley
Outfall 020
021
025
022
023
024
N
2000 ft
Google Earth

Sibley Generating Station
Water Balance