

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

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

Permit No.	MO-0115924
Owner:	Independence Power and Light
Address:	P.O. Box 1019, Independence MO 64501
Continuing Authority:	same as above
Address:	same as above
Facility Name:	Independence Blue Valley Power Plant
Facility Address:	21500 East Truman Road, Independence MO 64501
Legal Description:	see page two
UTM Coordinates:	see page two
Receiving Stream:	see page two
First Classified Stream and ID:	see page two
USGS Basin & Sub-watershed No.:	see page two

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

FACILITY DESCRIPTION

SIC # 4911; NAICS # 221112. The Blue Valley Power Plant (facility) has outdoor storage and indoor warehousing of electric equipment, a fueling island, and pole storage operations for Independence Power and Light. The facility ceased electric generation in 2020; of the three former electric generation units, Blue Valley Units 1 and 2 ceased operations in 2018 and Blue Valley Unit 3 ceased operation on June 1, 2020. Coal ash residuals remain in place within a capped impoundment. A groundwater monitoring network installed in 2019 surrounds the CCR impoundments and consists of three upgradient monitoring wells and five downgradient monitoring wells. Stormwater from a portion of the facility and process and nonprocess wastewater is sent to the Rock Creek Water Reclamation Facility. All discharges from the site to waters of the state are stormwater only. See page two for additional information.

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

March 1, 2022
Effective Date

February 28, 2027
Expiration Date

Chris Wieberg, Director, Water Protection Program

FACILITY DESCRIPTION (CONTINUED)

OUTFALL #001 – Stormwater from Power Plant; Area 1 drainage; Best Management Practices (BMPs).

Legal Description: SW¼, NW¼, Sec.03, T49N, R31W, Jackson County
UTM Coordinates: X = 385167, Y = 4327786
Receiving Stream: Tributary to Spring Branch
First Classified Stream and ID: 100K Extent-Remaining Stream (C) WBID # 3960
USGS Basin & Sub-watershed No.: Burr Oak Creek-Little Blue River 10300101-0207
Design Flow: 1.15 MGD
Average Flow: 0.182 MGD
Actual Flow: dependent upon precipitation

FEATURE #002 – historic ash pond discharge; discharge from this outfall to waters of the state is not authorized; the facility has capped the ash ponds.

OUTFALL #003 – Stormwater from Power Plant; Area 3 drainage; stormwater pond, BMPs. This is the only area where wooden power poles are stored.

Legal Description: SE¼, NW¼, Sec.03, T49N, R31W, Jackson County
UTM Coordinates: X = 385724, Y = 4327746
Receiving Stream: Tributary to Little Blue River
First Classified Stream and ID: Little Blue River (P) WBID # 0422; 303(d) listed
USGS Basin & Sub-watershed No.: Little Blue River 10300101-0208
Design Flow: 1.39 MGD
Average Flow: 0.185 MGD
Actual Flow: dependent upon precipitation

OUTFALL #004 – Non-Industrial Stormwater from Power Plant; Area 4 drainage; no NPDES requirements, removed May 2018.

Legal Description: NE¼, NW¼, Sec.03, T49N, R31W, Jackson County
UTM Coordinates: X = 385827, Y = 4328442

OUTFALL #005 – Stormwater from Power Plant; Area 5 drainage; BMPs.

Legal Description: SE¼, NW¼, Sec.03, T49N, R31W, Jackson County
UTM Coordinates: X = 385567, Y = 4327696
Receiving Stream: Tributary to Little Blue River
First Classified Stream and ID: Little Blue River (P) WBID # 0422; 303(d) listed
USGS Basin & Sub-watershed No.: Little Blue River 10300101-0208
Design Flow: 0.737 MGD
Average Flow: 0.141 MGD
Actual Flow: dependent upon precipitation

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL #001, #003, AND #005 <i>Stormwater Only</i>		TABLE A-1 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				
The facility is authorized to discharge from outfall(s) as specified. The final effluent limitations shall become effective on March 1, 2022 and remain in effect until expiration of the permit. Discharges shall be controlled, limited and monitored by the facility as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL LIMITATIONS		BENCH- MARKS	MONITORING REQUIREMENTS	
		DAILY MAXIMUM	MONTHLY AVERAGE		MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: A						
PHYSICAL						
Flow	MGD	*		-	once/quarter ◇	24 Hr Est.
CONVENTIONAL						
Chemical Oxygen Demand	mg/L	**		60	once/quarter ◇	grab
Oil & Grease	mg/L	**		10	once/quarter ◇	grab
pH †	SU	**		6.5 to 9.0	once/quarter ◇	grab
Total Suspended Solids ‡	mg/L	**		50	once/quarter ◇	grab
OTHER						
Pentachlorophenol (outfall #003 only) X	µg /L	**		98	once/quarter ◇	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>JULY 28, 2022</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

* Monitoring and reporting requirement only

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

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

‡ BMPs at the site shall be operated as designed and any stormwater discharge from the BMPs in excess of the 10 year, 24 hour rainfall event shall not be subject to the TSS benchmark.

X This permit establishes monitoring for pentachlorophenol and the requirement to use EPA Method 625 (gas chromatography and mass spectroscopy – GC/MS) or 40 CFR 136 method with similar detection limit. The detection limit of Method 625 is 2.5 µg/L with a practical quantitation limit of ~5 µg/L as reported by the Department's laboratory. The facility is expected to use this method or similar. Because the method detection limit and practical quantitation limit are below the requirements enumerated in this permit, there will be no minimum level (ML) established for this parameter.

◇ 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 28 th
Second	April, May, June	Sample at least once during any month of the quarter	July 28 th
Third	July, August, September	Sample at least once during any month of the quarter	October 28 th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 th

B. STANDARD CONDITIONS

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

C. SPECIAL CONDITIONS

1. Stormwater Pollution Prevention Plan (SWPPP).

The facility's SIC code or description is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2) and hence shall implement a Stormwater Pollution Prevention Plan (SWPPP) which must be prepared and implemented upon permit effective date. The SWPPP must be kept on-site and not sent to the Department unless specifically requested. The SWPPP must be reviewed and updated annually or if site conditions affecting stormwater change. The facility shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in: *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002 March 2021)

https://www.epa.gov/sites/production/files/2021-03/documents/swppp_guide_industrial_2021_030121.pdf The purpose of the SWPPP and the Best Management Practices (BMPs) listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was ineffective at providing the necessary protections for which it was designed. Corrective action describes the steps the facility took to eliminate the deficiency.

The SWPPP must include:

- (a) A listing of specific contaminants and their control measures (BMPs) and a narrative explaining how BMPs are implemented to control and minimize the amount of contaminants potentially entering stormwater.
- (b) A map with all outfalls and structural BMPs marked.
- (c) A schedule for at least once per month site inspections and brief written reports. The inspection report must include precipitation information for the entire period since last inspection, as well as observations and evaluations of BMP effectiveness. A BMP is considered to be disrupted if it is rendered ineffective as a result of damage or improper maintenance. Categorization of a deficiency is reliant on the length of time required to correct each disrupted BMP. Corrective action after discovering a disrupted BMP must be taken as soon as possible. Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
 - (1) Operational deficiencies are disrupted BMPs which the facility is able to and must correct within 7 calendar days.
 - (2) Minor structural deficiencies are disrupted BMPs which the facility is able to and must correct within 14 calendar days.
 - (3) Major structural deficiencies (deficiencies projected to take longer than 14 days to correct) are disrupted BMPs which must be reported as an uploaded attachment through the eDMR system with the DMRs. The initial report shall consist of the deficiency noted, the proposed remedies, the interim or temporary remedies (including proposed timing of the placement of the interim measures), and an estimate of the timeframe needed to wholly complete the repairs or construction. If required by the Department, the facility shall work with the regional office to determine the best course of action. The facility should consider temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
 - (4) All actions taken to correct the deficiencies shall be included with the written report, including photographs, and kept with the SWPPP. Additionally, corrective action of major structural deficiencies shall be reported as an uploaded attachment through the eDMR system with the DMRs.
 - (5) BMP failure causing discharge through an unregistered outfall is considered an illicit discharge and must be reported in accordance with Standard Conditions Part I.
 - (6) Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to Department personnel upon request. Electronic versions of the documents and photographs are acceptable.
- (d) A provision for designating a responsible individual for environmental matters and a provision for providing training to all personnel involved in housekeeping, material handling (including but not limited to loading and unloading), storage, and staging of all operational, maintenance, storage, and cleaning areas. Proof of training shall be submitted upon request by the Department.

2. Site-wide minimum Best Management Practices (BMPs). At a minimum, the facility shall adhere to the following:

- (a) Provide good housekeeping practices on the site to keep trash from entry into waters of the state. Dumpsters should remain closed when not in use.
- (b) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, warehouse activities, and other areas, to prevent the contamination of stormwater from these substances.
- (c) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
- (d) Store all paint, solvents, petroleum products, petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so these materials are not exposed to stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater. Spill records should be retained on-site.

C. SPECIAL CONDITIONS (CONTINUED)

- (e) Provide sediment and erosion control sufficient to prevent or minimize sediment loss off of the property, and to protect embankments from erosion.
 - (f) Remove sediment from stormwater sediment pond(s) no less than every ten years, or more frequently dependent on the amount of sediment received; sediment accumulated shall be no more than 20% total volume or as prescribed in the engineering design, whichever is less. Records must be retained since last cleanout and submitted with the application for renewal.
 - (g) Wash water for vehicles, building(s), or pavement must be handled in a no-discharge manner (infiltration, hauled off-site, etc.). Describe the no-discharge method used and include all pertinent information (quantity/frequency, soap use, effluent destination, BMPs, etc.) in the application for renewal. If wash water is not produced, note this instead.
 - (h) Fire protection test water must be handled in a no-discharge manner (infiltration, hauled off-site, etc.). Describe the no-discharge method used and include all pertinent information (quantity/frequency, source water, effluent destination, BMPs, etc.) in the application for renewal. If fire protection test water is not produced, note this instead.
 - (i) After snow or ice, if the facility applies sand/salt to the pavement of parking lots, sidewalks, or stairs, the facility shall sweep the lots to remove sand/salt as soon as possible after snow or ice melt, collect excess solids, and minimize and control the discharge of solids into stormwater inlets. Salt and sand shall be stored in a manner minimizing mobilization in stormwater (for example: under roof, in covered container, in secondary containment, under tarp, etc.).
3. Stormwater Benchmarks. This permit stipulates numeric pollutant benchmarks applicable to the facility's stormwater discharges.
- (a) Benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation. Stormwater monitoring, numeric benchmark compliance, and visual inspections shall be used to determine the overall effectiveness of the BMPs identified in the SWPPP.
 - (b) If a sample exceeds a benchmark concentration, the facility must review the SWPPP and BMPs to determine what improvements or additional controls are needed to reduce pollutant concentrations in future stormwater discharges.
 - (c) Every time a numeric benchmark exceedance occurs, a Corrective Action Report (CAR) must be completed. A CAR is a document recording the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. CARs must be retained with the SWPPP and be available to the Department upon request. This permit may require CARs be submitted to the Department upon permit renewal; see Renewal Requirements section below.
 - (d) Failure to take corrective action to address numeric benchmark exceedance is a permit violation.
 - (e) Stormwater benchmarks and required minimum BMPs as described in this permit are enforceable permit conditions. Any requested change(s) to numeric benchmark values or deviation from minimum BMP requirements must be established through the permitting process. Assessment, evaluation, and implementation of specific BMPs to meet numeric benchmarks or minimum BMP requirements, must be addressed through the SWPPPs and CARs.
4. Proper and continued operation and maintenance pursuant to 40 CFR 122.41(e). At all times the facility shall properly operate, maintain, and control all systems of treatment and control (and related appurtenances) which are installed or used by the 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.
5. Groundwater Monitoring Program: The permittee has implemented a groundwater monitoring program at the site because coal combustion residuals were left in situ within impoundments which were capped in 2017. To date the facility has completed the: Site Characterization Workplan (December 17, 2018), the Site Characterization Report (March 17, 2021), and the final Groundwater Monitoring, Sampling, and Analysis Plan (GMSAP) (July 20, 2021). The facility is currently implementing the GMSAP. In order to accomplish this, the permittee:
- a) May cease collecting groundwater data under this special condition after 8 discrete independent samples are collected.
 - b) Will use the data from the initial eight groundwater samples collected at the site to assess the subsequent steps to be taken toward establishing any site specific target levels that may be identified, if deemed necessary.
 - c) Intends to utilize the document issued by the Department in June 2021, *Closed Coal Combustion Residuals Storage Permit Implementation Guide* to determine the type of permit actions to be used for the CCR impoundments.
 - d) May choose to complete a demonstration report prior to the next permit renewal pursuant to 10 CSR 20-7.015(7)(E)6.A. to seek alternative groundwater limitations.

C. SPECIAL CONDITIONS (CONTINUED)

6. Petroleum Secondary Containment.

The drainage area around the secondary containment area and the interior of the containment area shall be inspected quarterly. Solids, sludges, and soluble debris shall not be allowed to accumulate in the secondary containment.

- (a) The interior of the secondary containment area shall be checked at least quarterly for signs of leaks, spills, and releases of petroleum.
- (b) All petroleum captured in the secondary containment area shall be expeditiously removed and the source of the petroleum determined. Leaks or otherwise compromised equipment or appurtenances shall be promptly addressed/repaired.
- (c) Before releasing water accumulated in petroleum secondary containment areas, the water and area must be examined for hydrocarbon odor and presence of sheen to protect the general criteria found at 10 CSR 20-7.031(4).
- (d) Unimpacted stormwater (i.e. free from hydrocarbon odor and presence of sheen), should be drained from the secondary containment as soon as reasonably possible after a precipitation event.
- (e) If subparts (a) and (b) above were not followed, impacted stormwater shall not be discharged from the secondary containment and shall instead be managed in accordance with legally approved methods for disposal of process wastewater, such as being sent to an accepting wastewater treatment facility.
- (f) If subparts (a) and (b) were followed, impacted stormwater can only be drained from the secondary containment after removal of all odor or sheen utilizing appropriate methods.
- (g) The area surrounding the secondary containment must be free of signs of vegetative stress or other indicia of petroleum discharge.
- (h) The area below the outlet of the secondary containment area must be maintained to minimize soil washout, such as with stabilized vegetation, rip rap, or by releasing accumulated water slowly.
- (i) Records of all inspections, testing, and/or treatment of water accumulated in secondary containment shall be available on demand to the Department. Electronic records retention is acceptable. These records must be included in the SWPPP.

7. Spills, Overflows, and Other Unauthorized Discharges.

- (a) Any spill, overflow, or other discharge(s) not specifically authorized 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.

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

9. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with 644.051.16 RSMo for permit shield, and the CWA §402(k) for toxic substances. This permit may be reopened and modified, or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under CWA §§301(b)(2)(C) and (D), §304(b)(2), and §307(a)(2), if the effluent standard or limitation so issued or approved contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or controls any pollutant not already limited in the permit. This permit may be modified, revoked and reissued, or terminated for cause, including determination new pollutants found in the discharge not identified in the application for the new or revised permit. The filing of a request by the facility for a permit modification, termination, notice of planned changes, or anticipated non-compliance does not stay any permit condition.

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

11. 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.

C. SPECIAL CONDITIONS (CONTINUED)

12. Reporting of Non-Detects.
 - (a) Compliance analysis conducted by the facility or any contracted laboratory shall be conducted in such a way the precision and accuracy of the analyzed result can be enumerated. See sufficiently sensitive test method requirements in Standard Conditions Part I, §A, No. 4 regarding proper testing and detection limits used for sample analysis. For the purposes of this permit, the definitions in 40 CFR 136 apply; method detection limit (MDL) and laboratory-established reporting limit (RL) are used interchangeably in this permit. The reporting limits established by the laboratory must be below the lowest effluent limits established for the specified parameter (including any parameter's future limit after an SOC) in the permit unless the permit provides for an ML.
 - (b) The facility shall not report a sample result as "non-detect" without also reporting the MDL. Reporting "non-detect" without also including the MDL will be considered failure to report, which is a violation of this permit.
 - (c) For the daily maximum, the facility shall report the highest value; if the highest value was a non-detect, use the less than "<" symbol and the laboratory's highest method detection limit (MDL) or the highest reporting limit (RL); whichever is higher (e.g. <6).
 - (d) When calculating monthly averages, zero shall be used in place of any value(s) not detected. Where all data used in the average are below the MDL or RL, the highest MDL or RL shall be reported as "<#" for the average as indicated in item (c).
13. Failure to pay fees associated with this permit is a violation of the Missouri Clean Water Law (644.055 RSMo).
14. This permit does not cover land disturbance activities.
15. This permit does not apply to fertilizer products receiving a current exemption under the Missouri Clean Water Law and regulations in 10 CSR 20-6.015(3)(B)8, and are land applied in accordance with the exemption.
16. This permit does not allow stream channel or wetland alterations unless approved by Clean Water Act §404 permitting authorities.
17. This permit does not authorize in-stream treatment, the placement of fill materials in flood plains, placement of solid materials into any waterway, the obstruction of stream flow, or changing the channel of a defined drainage course.
18. All records required by this permit may be maintained electronically per 432.255 RSMo. These records should be maintained in a searchable format.
19. Changes in Discharges of Toxic Pollutant.

In addition to the reporting requirements under 40 CFR 122.41, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director per 40 CFR 122.42(a)(1) and (2) as soon as recognizing:

 - (a) An activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
 - (3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
 - (4) One milligram per liter (1 mg/L) for antimony;
 - (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (6) The notification level established by the Department in accordance with 40 CFR 122.44(f).
 - (b) Any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
 - (1) Five hundred micrograms per liter (500 µg/L);
 - (2) One milligram per liter (1 mg/L) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
 - (4) The level established by the Director in accordance with 40 CFR 122.44(f).
 - (c) Authorization of new or expanded pollutant discharges may be required under a permit modification or renewal, and may require an antidegradation review.
20. This permit does not authorize the facility to accept, treat, or discharge wastewater from other sources unless explicitly authorized herein. If the facility would like to accept, treat, or discharge wastewater from another activity or facility, the permit must be modified to include external wastewater pollutant sources in the permit.

C. SPECIAL CONDITIONS (CONTINUED)

21. Any discharges (or qualified activities such as land application) not expressly authorized in this permit, and not clearly disclosed in the permit application, cannot become authorized or shielded from liability under CWA section 402(k) or Section 644.051.16, RSMo, by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including any other permit applications, funding applications, the SWPPP, discharge monitoring reporting, or during an inspection. Submit a permit modification application, as well as an antidegradation determination if appropriate, to request authorization of new or expanded discharges.
22. Renewal Application Requirements.
- (a) This facility shall submit an appropriate and complete application to the Department no less than 180 days prior to the expiration date listed on page 1 of the permit.
 - (b) Application materials shall include complete Form A, and Form C. If the form names have changed, the facility should ensure they are submitting the correct forms as required by regulation.
 - (c) The facility shall submit the SWPPP and all supporting documentation with the next renewal.
 - (d) The facility may use the electronic submission system to submit the application to the Program, if available.
 - (e) This facility must submit all corrective action reports completed for the last permit term if a benchmark exceedance occurred.

D. NOTICE OF RIGHT TO APPEAL

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

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

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL OF
MO-0115924
INDEPENDENCE BLUE VALLEY POWER PLANT

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

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

PART I. FACILITY INFORMATION

Facility Type: Industrial, non-major, groundwater and stormwater only >1 MGD
SIC Code(s): 4911
NAICS Code(s): 221112
Application Date: 03/23/2021
Modification Date: March 2017 and August 2018
Expiration Date: 10/31/2021
Last Inspection: 08/11/2014

FACILITY DESCRIPTION:

Former electrical generator; current activities include outdoor storage and indoor warehousing of electric equipment, a fueling island, and pole storage operations for Independence Power and Light. The facility ceased electric generation in 2020; of the three former electric generation units, Blue Valley Units 1 and 2 ceased operations in 2018 and Blue Valley Unit 3 ceased operation on June 1, 2020. The facility also includes a closed ash pond system. Stormwater from a portion of the facility and process and nonprocess wastewater is sent to the Rock Creek Water Reclamation Facility. All discharges from the site to waters of the state are stormwater only. A groundwater monitoring network installed in 2019 surround the CCR impoundments and consists of three upgradient monitoring wells and five downgradient monitoring wells.

IPL constructed a stormwater detention pond in 2020 upgradient of outfall #003 and downgradient of the power pole storage area as a BMP for pentachlorophenol in stormwater from the drainage area that serves outfall #003. The pond is natural, unlined and graded depression approximately 60 feet by 105 feet with a volume of 30,000 gallons. Stormwater can enter the pond through a rocked channel sloped by the facility fence, a sloped area to the north of the pond or by overland flow through vegetation.

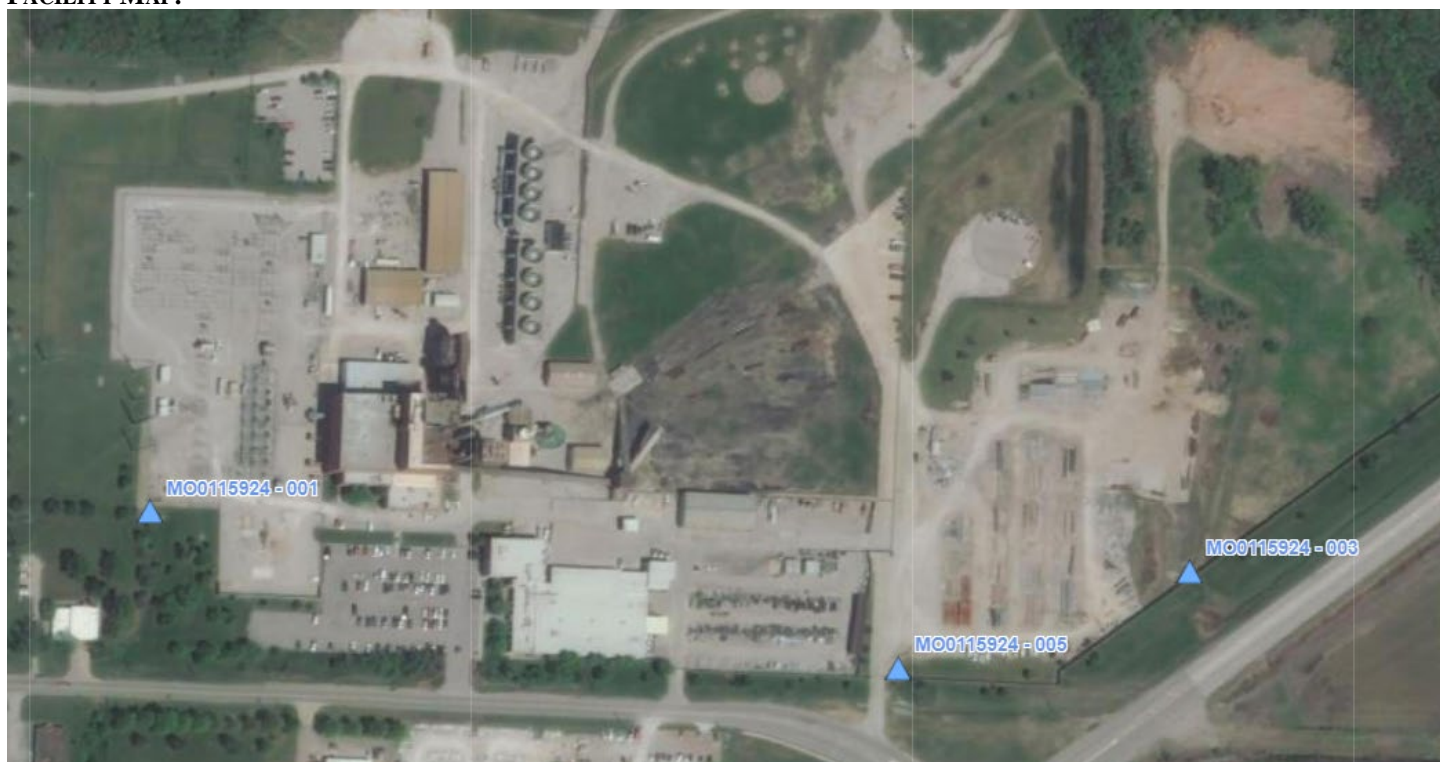
The major rating has changed to minor at this permit. The facility has closed the ash ponds and all wastewater is sent to the regional WWTP.

PERMITTED FEATURES TABLE:

OUTFALL	AVERAGE FLOW	DESIGN FLOW	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.182 MGD	1.15 MGD	BMPs: vegetated ditch	plant area 1 stormwater only
#003	0.185 MGD	1.39 MGD	BMPs: retention pond, straw wattles, filtration booms	plant area 3 stormwater only
#005	0.141 MGD	0.737 MGD	BMPs	plant area 5 stormwater only; and stormwater from secondary petroleum containment

Previous billing for this permit was incorrect; the fees for this permit are for stormwater >1 MGD pursuant to 10 CSR 20-6.011(2)(C)2.

FACILITY MAP:



FACILITY PERFORMANCE HISTORY & COMMENTS:

The electronic discharge monitoring reports were reviewed for the last five years. The benchmarks were maintained appropriately for chemical oxygen demand, oil and grease, total suspended solids, and pH. However, the benchmark for pentachlorophenol was exceeded several times during the last permit term. The facility indicated the long term average was 24.94 µg/L. See the fact sheet Part IV for details regarding these parameters.

CONTINUING AUTHORITY:

This facility is owned by the city therefore does not require registration with the secretary of state. This facility is a Level 3 pursuant to 10 CSR 20-6.010(2)(B)3.

OTHER ENVIRONMENTAL PERMITS:

In accordance with 40 CFR 122.21(f)(6), the Department evaluated this facility holds no other permits.

PART II. RECEIVING WATERBODY INFORMATION

RECEIVING WATERBODY TABLE:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES	DISTANCE TO SEGMENT	12-DIGIT HUC
#001	Tributary to 100K Extent Remaining Stream	n/a	n/a	GEN	0.0	10300101-0207 Burr Oak Creek-Little Blue River
	100K Extent Remaining Stream	C	3960	HHP (HHF), IRR, LWP (LWW), SCR, WBC-B, WWH (AQL)	0.3 mi	
#003	Tributary to Little Blue River	n/a	n/a	GEN	0.0 mi	10300101-0208 Little Blue River
	Little Blue River	P	0422	HHP (HHF), IRR, LWP (LWW), SCR, WBC-B, WWH (AQL)	1.3 mi	
#005	Tributary to Little Blue River	n/a	n/a	GEN	0.0 mi	
	Little Blue River	P	0422	HHP (HHF), IRR, LWP (LWW), SCR, WBC-B, WWH (AQL)	1.4 mi	

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

WBID: Waterbody Identification Number: Missouri Use Designation Dataset per 10 CSR 20-7.031(1)(Q) and (S) as 100K Extant-Remaining Streams or newer; data can be found as an ArcGIS shapefile on MSDIS at http://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_shp.zip; New C streams described on the dataset per 10 CSR 20-7.031(2)(A)3 as 100K Extent Remaining Streams.

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

Designated Uses:

10 CSR 20-7.031(1)(C)1: **ALP** – Aquatic Life Protection (formerly AQL); current uses are defined to ensure the protection and propagation of fish shellfish and wildlife, further subcategorized as: WWH – Warm Water Habitat; CLH – Cool Water Habitat; CDH – Cold Water Habitat; EAH – Ephemeral Aquatic Habitat; MAH – Modified Aquatic Habitat; LAH – Limited Aquatic Habitat. This permit uses ALP effluent limitations in 10 CSR 20-7.031 Table A1-B3 for all habitat designations unless otherwise specified.

10 CSR 20-7.031(1)(C)2: Recreation in and on the water

WBC is Whole Body Contact recreation where the entire body is capable of being submerged;

WBC-A – whole body contact recreation supporting swimming uses and has public access;

WBC-B – whole body contact recreation not included in WBC-A;

SCR = Secondary Contact Recreation (like fishing, wading, and boating)

10 CSR 20-7.031(1)(C)3 to 7:

HHP (formerly HHF) – Human Health Protection as it relates to the consumption of fish and drinking of water;

IRR – irrigation for use on crops utilized for human or livestock consumption, includes aquifers per 10 CSR 20-7.031(6)(A);

LWW – Livestock and Wildlife Watering (current narrative use is defined as LWP = Livestock and Wildlife Protection), includes aquifers per 10 CSR 20-7.031(6)(A);

DWS – Drinking Water Supply, includes aquifers per 10 CSR 20-7.031(6)(A);

IND – industrial water supply

10 CSR 20-7.031(1)(C)8 to 11: Wetlands (10 CSR 20-7.031 Tables A1-B3) do not have corresponding habitat use criteria for these defined uses: WSA – storm- and flood-water storage and attenuation; WHP – habitat for resident and migratory wildlife species; WRC – recreational, cultural, educational, scientific, and natural aesthetic values and uses; WHC – hydrologic cycle maintenance.

10 CSR 20-7.015(7) and 10 CSR 20-7.031(6): **GRW** = Groundwater

Other Applicable Criteria:

10 CSR 20-7.031(4): **GEN** – general criteria; acute toxicity criteria applicable to all waters even those lacking designated uses

10 CSR 20-7.031(5)(N)6: **NNC** – lake numeric nutrient criteria apply

Water Quality Standards Search https://apps5.mo.gov/mocwis_public/waterQualityStandardsSearch.do

WATERS OF THE STATE DESIGNATIONS:

Waters of the state are divided into seven categories per 10 CSR 20-7.015(1)(B)1 through 7. The applicable water of the state category is listed below. Missouri's technology-based effluent regulations are found in [10 CSR 20-7.015] and are implemented in 10 CSR 20-7.015(2) through (8). When implementing technology regulations, considerations are made for the facility type, discharge type, and category of waters of the state. Effluent limitations may not be applicable to certain waters of the state, facility type, or discharge type. In these cases, effluent limitations may be based on a best professional judgment evaluation. The best professional judgment evaluation will take site specific conditions into consideration; including facility type, the receiving water body classification, and type of discharge. Stormwater discharges and land application sites are not directly subject to limitations found in 10 CSR 20-7.015, but may be subject to limitations determined by the best professional judgment evaluation. Effluent limitation derivations are discussed in PART IV: EFFLUENTS LIMITS DETERMINATIONS.

- ✓ Metropolitan No-Discharge areas and streams; identified in Table J of 10 CSR 20-7.031 and regulated per 10 CSR 20-7.031(7)
- ✓ Subsurface Water; identified at 10 CSR 20-7.015(7), including underground injection control permits, and regulated by 10 CSR 20-7.031(6)
- ✓ All other waters; identified at 10 CSR 20-7.015(B)7 and 10 CSR 20-7.015(8)

EXISTING WATER QUALITY & IMPAIRMENTS:

The receiving waterbody(s) segment(s), upstream, and downstream confluence water quality was reviewed. The Department's water quality data database was reviewed. https://apps5.mo.gov/mocwis_public/wqa/waterbodySearch.do and <https://apps5.mo.gov/wqa/> Impaired waterbodies which may be impacted by discharges from this facility were determined. Impairments include waterbodies on the 305(b) or 303(d) list and those waterbodies or watersheds under a TMDL. <https://dnr.mo.gov/water/what-were-doing/water-planning/quality-standards-impaired-waters-total-maximum-daily-loads/tmdls> Section 303(d) of the federal Clean Water Act requires each state identify waters not meeting water quality standards and for which adequate water pollution controls have not been required. <https://dnr.mo.gov/water/what-were-doing/water-planning/quality-standards-impaired-waters-total-maximum-daily-loads/impaired-waters> Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock, and wildlife. The 303(d) list helps state and federal agencies keep track of impaired waters not addressed by normal water pollution control programs. A TMDL is a calculation of the maximum amount of a given pollutant a water body can absorb before its water quality is affected; hence, the purpose of a TMDL is to determine the pollutant loading a specific waterbody can assimilate without exceeding water quality standards. If a water body is determined to

be impaired as listed on the §303(d) list, then a watershed management plan or TMDL for that watershed may be developed. The TMDL shall include the WLA calculation.

- ✓ The Little Blue River is a Metropolitan No-Discharge Stream and is impaired for *E. coli* from urban runoff and is on the 303(d) list.

WATERBODY MONITORING REQUIREMENTS:

- ✓ No waterbody monitoring requirements are recommended at this time.

WATERBODY MIXING CONSIDERATIONS:

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

LITTLE BLUE RIVER: PERMANENT STREAM

OUTFALL	LOW FLOW VALUES				PEAK STORMWATER FLOW*		
	1Q10	7Q10	30Q10	60Q10	0.25 INCH	1 INCH	2 INCHES
#003	0.793 cfs	1.15 cfs	2.36 cfs	3.55 cfs	517 cfs	2069 cfs	4139 cfs

* Peak stormwater flow was calculated using the rational equation at <https://www.lmnoeng.com/Hydrology/rational.php> using a coefficient of 0.4 for: 0.14% impervious surfaces, cultivated land, residential, and business areas, and 194 square mile watershed.

PART III. RATIONALE AND DERIVATION OF PERMIT CONDITIONS

ANTIBACKSLIDING:

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

- ✓ Limitations in this operating permit reissuance conform to the anti-backsliding provisions of CWA §402(o), and 40 CFR 122.44.
 - ✓ 40 CFR 122.44(l)(2)(i); material and substantial alterations or additions to the permitted facility occurred after permit issuance justify the application of a less stringent effluent limitation.
 - The facility has closed their ash ponds and ceased generating electricity.
 - ✓ 40 CFR 122.44(l)(i)(B)(1); information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) which would have justified the application of a less stringent effluent limitation.
 - Precipitation reporting was removed. This data is readily available and unnecessary to be submitted on the DMRs.
 - ✓ 40 CFR 122.44(l)(i)(B)(2); the Department determined technical mistakes or mistaken interpretations of law were made in issuing the permit under CWA §402(a)(1)(b).
 - The previous permit special 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 facility 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.
 - For all outfalls, there is no RP for putrescent bottom deposits preventing full maintenance of beneficial uses because nothing disclosed by the facility indicates putrescent wastewater would be discharged from the facility.

- For all outfalls, there is no RP for unsightly or harmful bottom deposits preventing full maintenance of beneficial uses because nothing disclosed by the facility 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 all outfalls, there is no RP for oil in sufficient amounts to be unsightly preventing full maintenance of beneficial uses because nothing disclosed by the facility indicates oil will be present in sufficient amounts to impair beneficial uses.
 - For all outfalls, there is no RP for scum and floating debris in sufficient amounts to be unsightly preventing full maintenance of beneficial uses because nothing disclosed by the facility indicates scum and floating debris will be present in sufficient amounts to impair beneficial uses.
- (C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.
 - For all outfalls, there is no RP for unsightly color or turbidity in sufficient amounts preventing full maintenance of beneficial uses because nothing disclosed by the facility indicates unsightly color or turbidity will be present in sufficient amounts to impair beneficial uses.
 - For all outfalls, there is no RP for offensive odor in sufficient amounts preventing full maintenance of beneficial uses because nothing disclosed by the facility indicates offensive odor will be present in sufficient amounts to impair beneficial uses.
- (D) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life.
 - The permit writer considered specific toxic pollutants when writing this permit, including the consideration of WET testing. Numeric effluent limitations are included for those pollutants which could be discharged in toxic amounts. These effluent limitations are protective of human health, animals, and aquatic life. Specific toxic pollutants are discussed below in Derivation and Discussion of Limits, and where appropriate, numeric effluent limitations added.
- (E) Waters shall maintain a level of water quality at their confluences to downstream waters that provides for the attainment and maintenance of the water quality standards of those downstream waters, including waters of another state.
 - This criteria was not assessed for antibacksliding as this is a new requirement, approved by the EPA on July 30, 2019.
- (F) 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.
- (G) 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.
- (H) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.
 - For all outfalls, there is no RP for physical changes impairing the natural biological community because nothing disclosed by the facility indicates this is occurring.
 - It has been established any chemical changes are covered by the specific numeric effluent limitations established in the permit.
- (I) 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 260.200 RSMo, except as the use of such materials is specifically permitted pursuant to 260.200 through 260.247 RSMo.
 - 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 <https://dnr.mo.gov/document-search/antidegradation-implementation-procedure> Per [10 CSR 20-7.015(4)(A)], new discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream, or connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

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

BEST MANAGEMENT PRACTICES:

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

COST ANALYSIS FOR COMPLIANCE (CAFCom):

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

- ✓ The Department is not required to determine cost analysis for compliance because the permit contains no new conditions or requirements conveying a new cost to the facility.

CHANGES IN DISCHARGES OF TOXIC POLLUTANT:

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

COMPLIANCE AND ENFORCEMENT:

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

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

DISCHARGE MONITORING REPORTING – ELECTRONIC (eDMR) SUBMISSION SYSTEM:

The U.S. Environmental Protection Agency (EPA) promulgated a final rule on October 22, 2015, to modernize Clean Water Act reporting for municipalities, industries, and other facilities by requiring electronic data reporting. To comply with the federal rule, the Department is requiring all facilities to submit discharge monitoring data and reports online. To review historic data, the Department's database has a publically facing search engine, available at https://apps5.mo.gov/mocwis_public/dmrDisclaimer.do

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

Per 40 CFR 127.15 and 127.24, permitted facilities may request a temporary waiver for up to 5 years or a permanent waiver from electronic reporting from the Department. To obtain an electronic reporting waiver, a facility must first submit an eDMR Waiver Request form available on the Department's web page. A request must be made for each operating permit. An approved waiver is not transferable. The Department must review and notify the facility within 120 calendar days of receipt if the waiver request has been approved or rejected [40 CFR 124.27(a)]. During the Department review period as well as after a waiver is granted, the facility must continue submitting a hard-copy of any reports required by their permit. The Department will enter data submitted in hard-copy from those facilities allowed to do so, and electronically submit the data to the EPA on behalf of the facility.

- ✓ This facility has not been granted a waiver, nor would this facility qualify for a waiver.

DOMESTIC WASTEWATER, SLUDGE, AND BIOSOLIDS:

Domestic wastewater is defined as wastewater originating primarily from the sanitary conveyances of bathrooms and kitchens. Domestic wastewater excludes stormwater, wash water, animal waste, process and ancillary wastewater.

- ✓ Not applicable; this facility discharges domestic wastewater to an off-site permitted wastewater treatment facility (POTW).

Sewage sludge is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for productive use (i.e. fertilizer) and after having pathogens removed.

Additional information: <http://extension.missouri.edu/main/DisplayCategory.aspx?C=74> (WQ422 through WQ449).

- ✓ Not applicable; the facility does not manage domestic wastewater on-site.

EFFLUENT LIMITATIONS:

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

FEDERAL EFFLUENT LIMITATION GUIDELINES:

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. Effluent guidelines are not always established for every pollutant present in a point source discharge. In many instances, EPA promulgates effluent guidelines for an indicator pollutant. Industrial facilities complying with the effluent guidelines for the indicator pollutant will also control other pollutants (e.g. pollutants with a similar chemical structure). For example, EPA may choose to regulate only one of several metals present in the effluent from an industrial category, and compliance with the effluent guidelines will ensure similar metals present in the discharge are adequately controlled. All are technology based limitations which must be met by the applicable facility at all times. 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).

- ✓ The facility previously had an associated ELG (40 CFR 423) but no longer generates electricity nor stores coal at the site.

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 to address the reasonable potential. In discharges where reasonable potential does not exist, the permit may include monitoring to later determine the discharge's potential to impact the narrative criteria. Additionally, 644.076.1 RSMo, as well as Part I §D – Administrative Requirements of Standard Conditions included in this permit state it shall be unlawful for any person to cause or allow any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of §§644.006 to 644.141 of the Missouri Clean Water Law or any standard, rule, or regulation promulgated by the commission. See Part IV for specific determinations.

GROUNDWATER MONITORING:

Groundwater is a water of the state according to 644.016(27) RSMo, is subject to regulations at 10 CSR 20-7.015(7) and 10 CSR 20-7.031(6), and must be protected accordingly.

- ✓ The permittee has implemented a groundwater monitoring program at the site because coal combustion residuals were left in situ within impoundments which were capped in 2017. During the previous permit term, the facility successfully completed development of a Site Characterization Workplan by December 17, 2018, which was approved by the Department on April 12, 2019. The Site Characterization Workplan was developed in compliance with the December 10, 2010, *Guidance for Conducting a Detailed Hydrogeologic Site Characterization and Designing a Groundwater Monitoring Program* and work at the site has been performed under the guidance of a registered geologist. This facility is monitoring the groundwater at the site because coal combustion residuals were left in place; the CCR ponds are now capped. During the last permit term, the facility successfully completed, by December 17, 2018, a Site Characterization Workplan; by September 17, 2020 they submitted a Site Characterization Report detailing the findings from completion of the Site Characterization; and by March 17, 2021 they

submitted a draft Groundwater Monitoring, Sampling, and Analysis Plan (GMSAP). The facility has also submitted the final Groundwater Monitoring, Sampling, and Analysis Plan (GMSAP) ahead of schedule.

- ✓ The facility is currently in the process of implementing the GMSAP and submits groundwater analytical data to the Department. Once 8 statistically independent events are completed, the facility may stop collecting groundwater data for the Department; groundwater data may still need to be collected for any applicable regulations the facility is subject to, such as 40 CFR 257 Subpart D; not implemented in this permit as that regulation is self-implementing. The facility has disclosed the closure of the three former ash ponds was performed in compliance with the federal Coal Combustion Residual (CCR) Rule (40 CFR Part 257 Subpart D, paragraph 100. https://www.ci.independence.mo.us/PL/CCRRuleCompliance_BVGS

LAND APPLICATION:

Land application, or surficial dispersion of wastewater and/or sludge, is performed by facilities as an alternative to discharging.

Requirements for these types of operations are found in 10 CSR 20-6.015; authority to regulate these activities is from 644.026 RSMo.

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

LAND DISTURBANCE:

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

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

MAJOR WATER USER:

Any surface or groundwater user with a water source and the equipment necessary to withdraw or divert 100,000 gallons (or 70 gallons per minute) or more per day combined from all sources from any stream, river, lake, well, spring, or other water source is considered a major water user in Missouri. <https://dnr.mo.gov/water/business-industry-other-entities/reporting/major-water-users> All major water users are required by law to register water use annually (Missouri Revised Statutes Chapter 256.400 Geology, Water Resources and Geodetic Survey Section). <https://dnr.mo.gov/document-search/frequently-asked-major-water-user-questions-pub2236/pub2236>

- ✓ Not applicable; this facility cannot withdraw water from the state in excess of 70 gpm or 0.1 MGD.

MODIFICATION REQUESTS:

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

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

MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4):

This permit allows discharge to waters of the state. The discharges this permit allows may flow into and through the city's stormwater collection system. Regulated MS4s are managed by public entities, cities, municipalities, or counties. Phase I MS4s are Kansas City, Independence, and Springfield. Phase II MS4s are determined by population or location in an urbanized area. Regulated MS4s are required to develop and maintain a stormwater management program. These programs have requirements for developing and implementing a plan to detect and eliminate illicit discharges to the storm sewer system. Phase I MS4s also maintain oversight programs for industrial and high risk runoff. Regulated MS4s may keep a list of all of the other regulated dischargers (wastewater and stormwater) flowing through their system. If this facility discharges into a separate storm sewer system, the facility should make contact with the owner/operator of that system to coordinate with them. Regulated MS4 operators may request to inspect facilities

discharging into their system; a list of regulated MS4s can be viewed at <https://dnr.mo.gov/document-search/missouris-regulated-municipal-separate-storm-sewer-systems-ms4s> or search by permit ID: MOR04 at https://apps5.mo.gov/mocwis_public/permitSearch.do to determine if this facility needs to contact a local stormwater authority.

NUTRIENT MONITORING:

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

- ✓ This is a stormwater only permit therefore not subject to provisions found in 10 CSR 20-7.015 per 10 CSR 20-7.015(1)(C).

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

- ✓ This is a stormwater only permit therefore not subject to provisions found in 10 CSR 20-7.015 per 10 CSR 20-7.015(1)(C).

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. Sludge generated by OWS is a waste pursuant to 10 CSR 25-11.279 requiring specific management standards pursuant to self-implementing regulations of 40 CFR Part 279.

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

OPERATOR CERTIFICATION REQUIREMENTS:

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

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

PERMIT SHIELD:

The permit shield provision of the Clean Water Act (Section 402(k)) and Missouri Clean Water Law (644.051.16 RSMo) provides that when a permit holder is in compliance with its NPDES permit or MSOP, it is effectively in compliance with certain sections of the Clean Water Act, and equivalent sections of the Missouri Clean Water Law. In general, the permit shield is a legal defense against certain enforcement actions, but is only available when the permittee is in compliance with its permit and satisfies other specific conditions, including having completely disclosed all discharges and all facility processes and activities to the Department at time of application. It is the permittee's responsibility to ensure that all potential pollutants, waste streams, discharges, and activities, as well as wastewater land application, storage, and treatment areas, are all fully disclosed to the Department at the time of application or during the draft permit review process. Subsequent requests for authorization to discharge additional pollutants, expanded or newly disclosed flows, or for authorization for previously unpermitted and undisclosed activities or discharges, will likely require an official permit modification, including another public participation process.

PRETREATMENT:

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

- ✓ Applicable; this facility discharges wastewater to a POTW but reported the discharge is not subject to pretreatment effluent limitations.

REASONABLE POTENTIAL (RP):

Regulations per 10 CSR 20-7.015(9)(A)2 and 40 CFR 122.44(d)(1)(i) requires effluent limitations for all pollutants which are (or may be) discharged at a level causing or have the reasonable potential to cause (or contribute to) an in-stream excursion above narrative or numeric water quality standards. Per 10 CSR 20-7.031(4), general criteria shall be applicable to all waters of the state at all times; however, acute toxicity criteria may be exceeded by permit allowance in zones of initial dilution, and chronic toxicity criteria may be

exceeded by permit allowance in mixing zones. 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 use reasonable potential determinations (RPD) as provided in Sections 3.1.2, 3.1.3, and 3.2 of the TSD. An RPD consists of evaluating visual observations, non-numeric information, or small amounts of numerical data (such as 1 data point supplied in the application). A stormwater RPD consists of reviewing application data and/or discharge monitoring data and comparing those data to narrative or numeric water quality criteria. RPD decisions are based on minimal numeric samples, the type of effluent proposed for discharge, or the unavailability of numerical RPA for a parameter, such as pH, or oil and grease. Absent effluent data, effluent limits are derived without consideration of effluent variability and is assumed to be present unless found to be absent to meet the requirements of antidegradation review found in 10 CSR 20-7.031(3) and reporting of toxic substances pursuant to 40 CFR 122.44(f).

Permit writers use the Department's permit writer's manual (<https://dnr.mo.gov/water/business-industry-other-entities/technical-assistance-guidance/wastewater-permit-writers-manual>), the EPA's permit writer's manual (<https://www.epa.gov/npdes/npdes-permit-writers-manual>), program policies, and best professional judgment. 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, inspection reports, stream water quality information, stream flows, uses assigned to each waterbody, and all applicable site specific information and data gathered by the facility through discharge monitoring reports and renewal (or new) application sampling. 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 facility; 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.

Secondly, permit writers use mathematical reasonable potential analysis (RPA) using the *Technical Support Document for Water Quality Based Toxics Control (TSD)* methods (EPA/505/2-90-001) for continuous discharges. The TSD RPA method cannot be performed on stormwater as the flow is intermittent. See additional considerations under Part II WATERBODY MIXING CONSIDERATIONS and Part III WASTELOAD ALLOCATIONS. Wasteload allocations are determined utilizing the same equations and statistical methodology.

- ✓ No statistical RPAs were performed for this permit, as the conditions for stormwater were based on standardized benchmarks, the effluent limits are not based on effluent variability, or where variability is not used for certain water quality limits such as pH or oil and grease.

RENEWAL REQUIREMENTS:

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

SAMPLING FREQUENCY JUSTIFICATION:

Sampling and reporting frequency was generally retained from previous permit. Sampling frequency for stormwater-only outfalls is typically quarterly even though BMP inspection occurs monthly or more often dependent on site needs. The facility may sample more frequently if additional data is required to determine if best management operations and technology are performing as expected.

SAMPLING TYPE JUSTIFICATION:

Sampling type was continued from the previous permit. The sampling types are representative of the discharges, and are protective of water quality. Discharges with altering effluent 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. For further information on sampling and testing methods see 10 CSR 20-7.015(9)(D)2.

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, effluent limits, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. SOC's are allowed under 40 CFR 122.47 and 10 CSR 20-7.031(11) providing certain conditions are met. An SOC is not allowed:

- For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed in accordance with 40 CFR 125.3.

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

In order to provide guidance in developing SOC's, and to attain a greater level of consistency, the Department issued a policy on development of SOC's 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.

SPILLS, OVERFLOWS, AND OTHER UNAUTHORIZED DISCHARGE REPORTING:

Per 260.505 RSMo, any emergency involving a hazardous substance must be reported to the Department's 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest possible moment after discovery. The Department may require the submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply whether or not the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the noncompliance reporting requirement found in Standard Conditions Part I.

<https://revisor.mo.gov/main/OneSection.aspx?section=260.500&bid=13989&hl=>

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

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

SLUDGE – INDUSTRIAL:

Industrial sludge is solid, semi-solid, or liquid residue generated during the treatment of industrial process or non-process wastewater in a treatment works; including but not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment process; scum and solids filtered from water supplies and backwashed; and any material derived from industrial sludge. Industrial sludge could also be derived from lagoon dredging or other similar maintenance activities. Certain oil sludges, like those from oil water separators, are subject to self-implementing federal regulations under 40 CFR 279 for used oils.

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

STANDARD CONDITIONS:

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

STORMWATER PERMITTING: LIMITATIONS AND BENCHMARKS:

Because of the fleeting nature of stormwater discharges, the Department, under the direction of EPA guidance, has determined monthly averages are capricious measures of stormwater-only discharges. The *Technical Support Document for Water Quality Based Toxics Control* (EPA/505/2-90-001; 1991) §3.1 indicates most procedures within the document apply only to water quality based approaches, not end-of-pipe technology-based controls. Hence, stormwater-only outfalls will generally only contain a maximum daily limit (MDL), a benchmark, or a monitoring requirement as dictated by site specific conditions, the BMPs in place, the BMPs proposed, past performance of the facility, and the receiving water's current quality.

Sufficient rainfall to cause a discharge for one hour or more from a facility would not necessarily cause significant flow in a receiving stream. Acute Water Quality Standards (WQSs) are based on one hour of exposure, and must be protected at all times. Therefore, industrial stormwater facilities with toxic contaminants present in the stormwater may have the potential to cause a violation of acute WQSs if toxic contaminants occur in sufficient amounts. In this instance, the permit 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 without real-time ad-hoc monitoring. The amount of stormwater discharged from the facility will vary based on current and previous rainfall, soil saturation, humidity, detention time, BMPs, surface permeability, etc. Flow in the receiving stream will vary based on climatic conditions, size of watershed, area of surfaces with reduced permeability (houses, parking lots, and the like) in the watershed, hydrogeology, topography, etc. Decreased permeability may increase the stream flow dramatically over a short period of time (flash).

Numeric benchmark values are based on site specific requirements taking in to account a number of factors but cannot be applied to any process water discharges. First, the technology in place at the site to control pollutant discharges in stormwater is evaluated. 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 facility may not be eligible for benchmarks.

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

Benchmarks require the facility to monitor, and if necessary, replace and update stormwater control measures. Benchmark concentrations are not effluent limitations. A benchmark exceedance, therefore, is not a permit violation; however, failure to take corrective action is a violation of the permit. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the facility in knowing when additional corrective actions may be necessary to comply with the conditions of the permit.

BMP inspections typically occur more frequently than sampling. Sampling frequencies are based on the facility's ability to comply with the benchmarks and the requirements of the permit. Inspections 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 action 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):

A SWPPP must be prepared by the facility 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.

Pursuant to 40 CFR 122.44(k), Best Management Practices (BMPs) must be used to control or abate the discharge of pollutants when: 1) Authorized under §304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) Authorized under §402(p) of the CWA for the control of stormwater discharges; 3) Numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. A BMP may take the form of a numeric benchmark. In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in 2015 and again in 2021 https://www.epa.gov/sites/default/files/2021-03/documents/swppp_guide_industrial_2021_030121.pdf BMPs are measures or practices used to reduce the amount of pollution entering waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to 1) identify sources of pollution or contamination, and 2) select and carry out actions which prevent or control the pollution of storm water discharges. Additional information can be found in *Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-006; September 1992).

Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the facility 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 (<https://dnr.mo.gov/document-search/antidegradation-implementation-procedure>).

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

If parameter-specific numeric benchmark exceedances continue to occur and the facility feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the facility can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which 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/water/business-industry-other-entities/permits-certification-engineering-fees/wastewater>

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

SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:

Please review Standard Conditions Part 1, §A, No. 4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 and/or 40 CFR 136 unless alternates are approved by the Department and incorporated within this permit. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure the selected methods are able to quantify the presence of pollutants in any given discharge at concentrations low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. The reporting limits established by the chosen laboratory must be below the lowest effluent limits established for the specified parameter (including any parameter’s future limit after an SOC) in the permit unless the permit provides for an ML or if the facility provides a written rationale to the Department. It is the permittee’s responsibility to ensure the laboratory has adequate equipment and controls in place to quantify the pollutant. Inflated reporting limits will not be accepted by the Department if the reporting limit is above the parameter value stipulated in the permit. A method is “sufficiently sensitive” when; 1) the method quantifies the pollutant below the level of the applicable water quality criterion or; 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015 and or 40 CFR 136. These methods are also required for parameters listed as monitoring only, as the data collected may be used to determine if numeric limitations need to be established. A facility is responsible for working with their contractors to ensure the analysis performed is sufficiently sensitive.

UNDERGROUND INJECTION CONTROL (UIC):

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

✓ Not applicable; the facility 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 specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141. Thermal variances are regulated separately and are found under 644.

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010; definitions], the WLA is the maximum amount of pollutant each discharger is allowed to discharge into the receiving stream without endangering water quality. Only streams with available load allocations can be granted discharge allowances. Outfalls afforded mixing allocations provide higher limits as the receiving stream is able to accept more pollutant loading without causing adverse impacts to the environment or aquatic life.

✓ Not applicable, this is a stormwater only permit therefore WLAs were not calculated. See section on stormwater permitting as applying WLAs to stormwater is not normally applicable per TSD §3.1.

WASTELOAD ALLOCATION (WLA) MODELING:

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

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

PART IV. EFFLUENT LIMIT DETERMINATIONS

OUTFALL #001, #003, AND #005 – STORMWATER ONLY

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAXIMUM LIMIT	BENCH- MARK	PREVIOUS BENCHMARKS	MINIMUM SAMPLING FREQUENCY	REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL							
FLOW	MGD	*	-	SAME	ONCE/QUARTER	QUARTERLY	24 HR. ESTIMATE
CONVENTIONAL							
COD	mg/L	**	60	SAME	ONCE/QUARTER	QUARTERLY	GRAB
OIL & GREASE	mg/L	**	10	SAME	ONCE/QUARTER	QUARTERLY	GRAB
pH [†]	SU	**	6.5 to 9.0	SAME	ONCE/QUARTER	QUARTERLY	GRAB
TSS	mg/L	**	50	SAME	ONCE/QUARTER	QUARTERLY	GRAB
OTHER							
PENTACHLOROPHENOL OUTFALL #003 ONLY	µg/L	**	98	**19	ONCE/QUARTER	QUARTERLY	GRAB

- * monitoring and reporting requirement only
- ** monitoring with associated benchmark
- new parameter not established in previous state operating permit
- TR total recoverable

DERIVATION AND DISCUSSION OF LIMITS:

PHYSICAL:

Flow

In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to ensure compliance with permitted effluent limitations. If the facility is unable to obtain effluent flow, then it is the responsibility of the facility to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total flow in millions of gallons per day (MGD), quarterly monitoring continued from previous permit. The facility reported from 0.013 to 1.15 MGD at outfall #001, from 0.001 to 1.39 MGD at outfall #003, and from 0.0085 to 0.73 MGD at outfall #005 during the last permit term.

CONVENTIONAL:

Chemical Oxygen Demand (COD)

Monitoring with 60 mg/L daily maximum benchmark is continued from the previous permit 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 facility to identify increases in COD 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 facility reported from 2 to 136 mg/L at outfall #001, 10 to 60 mg/L at outfall #003, and 8 to 50 mg/L at outfall #005 during the last permit term. Outfall one had benchmark exceedances twice over the last permit term. After review of the long term data, the permit writer did not observe any long term problems with COD at the site. 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; continued from the previous permit per permit writer's best professional judgment based on the fueling and transportation activities at this site. The facility reported non-detects at all outfalls during the last permit term. 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 xylene, 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 facility 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. The benchmark this permit applies does not allow the facility to violate general criteria 10 CSR 20-7.015(4) even if data provided are below the benchmark.

pH

6.5 minimum to 9.0 maximum SU benchmarks are applicable to the stormwater outfalls; continued from the previous permit. The permit writer has determined there is no reasonable potential to negatively impact water quality therefore a benchmark is applied; continued from previous permit. The facility reported from 7.2 to 8.69 SU in the last permit term at all outfalls. pH is a fundamental water quality indicator. This benchmark serves to provide general information about the stormwater discharges at the site.

Total Suspended Solids (TSS)

Monitoring with a daily maximum benchmark of 50 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 facility to identify increases in TSS indicating uncontrolled materials leaving the site. Increased suspended solids in runoff can lead to decreased available oxygen for aquatic life and an increase of surface water temperatures in a receiving stream. Suspended solids can also be carriers of toxins, which can adsorb to the suspended particles; therefore, total suspended solids are a valuable indicator parameter for other pollution. The facility reported from 3 to 97 mg/L at outfall #001, 8 to 128 mg/L at outfall #003, and 2.3 to 48 mg/L at outfall #005 in the last permit term. The facility installed a basin serving outfall #003 in 2020 and this BMP is expected to further lower the TSS at outfall #003. The benchmark is generally achievable at this site through proper operational and maintenance of BMPs and falls within the range of values implemented in other permits having similar industrial activities.

OTHER:

Pentachlorophenol (PCP)

Bioaccumulative anthropogenic toxin; biocide; probable carcinogen. The facility reported from non-detect to 98 µg/L in the last permit term at outfall #003; long term average is 26.5 µg/L; only outfall #003 has this requirement. Pentachlorophenol is a parameter of concern from preserved power poles received and stored on site in the outfall #003 drainage area. The outfall discharges northeast following the Highway 78 roadway right-of-way 1.33 miles to the Little Blue River. The permit writer performed an analysis on the stormwater traveling out of the Little Blue River watershed just upstream of the connection point of the outfall's drainage point. The watershed area serving this outfall is 194 square miles; and the StreamStats tool analyzed this area as having 14% impervious surfaces, and 4.5% of the area has stormwater storage or retention available. This indicates that the Little Blue River in this area is not flashy, and has reserve available for high stormwater events of low frequency. The facility requested the benchmark be removed for a "monitoring only" requirement.

However, the constraints for pentachlorophenol are such that, while mixing cannot be afforded because of its bioaccumulative effects, the discharge is completely contingent on stormwater discharges from the site therefore some latitude is afforded to the facility. The facility constructed a stormwater detention pond in 2020 upgradient of outfall #003 and downgradient of the power pole storage area as a BMP for pentachlorophenol in stormwater from the drainage area. The pond is natural, unlined and graded depression approximately 60 feet by 105 feet with a volume of 30,000 gallons. Stormwater can enter the pond through a rock channel sloped by the facility fence, a sloped area to the north of the pond or by overland flow through vegetation. The three most recent quarterly sample events at outfall #003 have provided data that is below detection for PCP.

10 CSR 20-7.031(7) dictates no water contaminant except uncontaminated cooling water, permitted stormwater discharges in compliance with permit conditions, and excess wet-weather bypass discharges not interfering with beneficial uses shall be discharged to the watersheds of streams listed in Table F (metropolitan no-discharge streams). The facility was not in compliance with the pentachlorophenol benchmark during the last permit term, including after the installation of the basin, and the data received indicate that pentachlorophenol was discharged at more than 5x the assigned benchmark. The facility has disclosed the use of BMPs which appear sufficient to control pentachlorophenol in the last permit cycle, such as not accepting receipt of "wet" poles.

Because this is a stormwater only discharge, the permit writer evaluated other methods of compliance with both the BMPs and the water quality standards. In the permit issued in 2016, the derivation for limits was as follows: Water quality standards for protection of aquatic life are based on the pH of the effluent. According to the pH data for outfall #003, the pH of the stormwater ranges from 7.7 to 8.39 SU.

The median of this range is 8.2 SU. At a pH of 8.0, the AQL WQS is 14 µg/L; at a pH of 8.5 the limit is 23 µg/L. The permit writer has determined the median on the WQS to be 19 µg/L which was the limit for this parameter in 2016. However, in 2018,

the facility showed much improvement in the BMPs at the site, requested, and received a modification which changed the limit to a benchmark of 19 µg/L because this is only an intermittent stormwater discharge.

Permit limits must be issued for a parameter when reasonable potential is determined pursuant to 40 CFR 122.44(d)(iii); however, determining reasonable potential for stormwater is not a direct application of the limits because the times when the facility is discharging stormwater are the same times when the receiving stream are no longer at its lowest flow, but the stream flow is commensurate with the discharging flow. However, with pentachlorophenol, because it is a bioaccumulative pollutant, the Department would typically not afford mixing considerations based on the Technical Support Document (TSD; EPA 505/2-90-001) methods for calculating limits for toxic bioaccumulative parameters; the TSD methods are not supposed to be used on stormwater discharges, but there are no relevant documents relating to calculating permit limits for stormwater. The Interim Permitting Approach for Water-Quality-Based Effluent Limitations in Stormwater (EPA 833-D-96-001, Sept 1996) was reviewed but no demonstrative approaches were found.

Further search of bioaccumulative pollutants in stormwater yielded no relevant sources for industrial stormwater discharges. And there aren't any relevant documents to determine reasonable potential in industrial stormwater, either.

The distance to the receiving metropolitan no discharge stream is 1.3 miles, and although photo-degradation is expected to occur for pentachlorophenol over time, the transit time is presumed to be short, although not specifically quantified in this examination. The majority of photo-degradation of pentachlorophenol is anticipated to occur in the facility's stormwater retention pond.

While the historic aquatic toxicity permit limit of 19 µg/L could be re-implemented in the permit, a review of the bioaccumulative effects pursuant to the human health protection factor of 8 µg/L is examined as well. Additionally, the Missouri River is established for a drinking water use at 1 µg/L. The implications of all these uses assigned, including downstream uses pursuant to 10 CSR 20-7.031(4)(D) and (E) which is the applied narrative criteria, are applicable to all discharges – wastewater and stormwater. These identified uses require the permit writer to assess the discharges for reasonable potential to cause or contribute to any and all WQS, including protection of human health (consuming aquatic organisms), the environment, drinking, and any other non-numeric criteria.

If the permit were to directly apply the WQS, then the facility may be over-regulated because this is stormwater. If the permit were to continue with a monitoring only requirement, additional pollution would be added to the receiving streams and downstream river without any required pollution controls. Available bioaccumulative pollutant loading for the Little Blue River and the Missouri River was considered. The Missouri River has a TMDL established for PCBs and chlordane. PCBs are another similar pollutant and those pesticides are also bioaccumulative. PCBs and PCP have been shown to be present in newborn tissue of societies consuming fish and aquatic organisms <https://ehp.niehs.nih.gov/doi/abs/10.1289/ehp.02110411> but, no directly relevant studies (on Missouri populations) were found. The Missouri River's sturgeon's eggs are on the advisory list as do not consume, due to PCBs. This indicates that no further bioaccumulative pollutants should be permissible for discharge to the river.

Because the downstream uses must be attained, but the discharge is intermittent, the writer has determined utilizing the 1 µg/L drinking water (DRW) requirement as the starting point in determining probable downstream in-stream levels. This value was chosen because this is the value which should have been implemented in the 2016 permit.

The limit analysis consists of assigning a 0.25 inch baseline storm event to the watershed and the discharge. Because the discharge is completely contingent on precipitation, the permit writer has included a "mixing scenario" as well. At the 0.25 inch storm event, we make the conservative assumption this is the minimum stormwater discharge which will enter Little Blue River and the Missouri River from the site. The area serving the outfall #003 stormwater shed is 25.1 acres; and the stormwater discharge for a 0.25 inch event is expected to be 0.152 MGD (0.235 cfs), assuming a 0.9 coefficient ratio using <https://www.lmnoeng.com/Hydrology/rational.php> This information was entered into the typical RPA calculator also using the 0.25 inch event (517 cfs) for the 194 square mile watershed at the entry point for the affected outfall #003 stormwater as the minimum flow of the river (the 30Q10 calculation; which is used for drinking water and human health protection calculations). A background of total bioaccumulative pollutants at 0.5 µg/L was assumed present.

Chronic HHP: 1 µg/L

Chronic WLA: $C_e = ((0.235 \text{ cfsDF} + 129.25 \text{ cfsMZ}) * 1 - (129.25 \text{ cfsMZ} * 0.5 \text{ background})) / 0.235 \text{ cfsDF} = 275.791$

Given the above scenario, the calculation shows there is no reasonable potential to cause an exceedance of the in-stream calculation. Even taking into account the high variability of stormwater and the data variability itself, the probable long term average of the stormwater would not impact the downstream uses.

The Department may establish a numeric benchmark based on the site specific technology installed. Typically, site specific benchmarks for uncommon pollutants, such as PCP, utilize the relevant data to provide the 95th percentile of the data as a benchmark. Given very few data points were submitted after the basin was installed, the benchmark will be established at the

maximum data value obtained in the first quarter, 2021 at 98 µg/L. This benchmark value supplies a target for stormwater management techniques at the site for this pollutant. However, three sampling events after this value were non-detects for this parameter.

PART V. ADMINISTRATIVE REQUIREMENTS

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

PERMIT SYNCHRONIZATION:

Permits are normally issued on a five-year term, but to achieve watershed synchronization some permits will need to be issued for less than the full five years as allowed by regulation. The intent is all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow the Department to explore a watershed based permitting effort at some point in the future. 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 because this is a stormwater only and groundwater monitoring permit. The entire 5-year permit term is necessary to complete the groundwater requirements.

PUBLIC NOTICE:

The Department shall give public notice a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in or with concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and facility must be notified of the denial in writing. <https://dnr.mo.gov/water/what-were-doing/public-notices> The Department must issue public notice of a pending operating permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wishing to submit comments regarding this proposed operating permit, please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments. All comments must be in written form.

- ✓ The Public Notice period for this operating permit was from 1/7/2022 to 2/7/2022. No comments were received.

DATE OF FACT SHEET: FEBRUARY 8, 2022

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.



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

Section C – Bypass/Upset Requirements

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

Section D – Administrative Requirements

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



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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittee 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.



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

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.



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
03/23/21

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 – 0115924, 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 Independence Blue Valley Power Plant		TELEPHONE NUMBER WITH AREA CODE (816) 325- 7500	
ADDRESS (PHYSICAL) 21500 East Truman Road	CITY Independence	STATE MO	ZIP CODE 64051

3. OWNER

NAME Independence Power and Light		TELEPHONE NUMBER WITH AREA CODE (816) 325-7500	
EMAIL ADDRESS jnail@indepmo.org			
ADDRESS (MAILING) P.O. Box 1019	CITY Independence	STATE MO	ZIP CODE 64051

4. CONTINUING AUTHORITY

NAME Independence Power and Light		TELEPHONE NUMBER WITH AREA CODE (816) 325-7500	
EMAIL ADDRESS jnail@indepmo.org			
ADDRESS (MAILING) P.O. Box 1019	CITY Independence	STATE MO	ZIP CODE 64051

5. OPERATOR CERTIFICATION

NAME Not applicable	CERTIFICATE NUMBER	TELEPHONE NUMBER WITH AREA CODE	
ADDRESS (MAILING)	CITY	STATE	ZIP CODE

6. FACILITY CONTACT

NAME Eric Holder	TITLE EHS Supervisor	TELEPHONE NUMBER WITH AREA CODE (816) 325-7455
E-MAIL ADDRESS eholder@indepmo.org		

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

NAME See "Supplemental Information"			
ADDRESS	CITY	STATE	ZIP CODE

8. ADDITIONAL FACILITY INFORMATION**8.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)**

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

001 SW 1/4 NW 1/4 Sec 3 T 49N R 31W Jackson County

UTM Coordinates Easting (X): 385204 Northing (Y): 4327719

002 SE 1/4 NW 1/4 Sec 3 T 49N R 31W Jackson County

UTM Coordinates Easting (X): 385547 Northing (Y): 4327684

003 SE 1/4 NW 1/4 Sec 3 T 49N R 31W Jackson County

UTM Coordinates Easting (X): 385724 Northing (Y): 4327746

004 1/4 Sec T R County

UTM Coordinates Easting (X): Northing (Y):

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. Note: Form D is not included as process wastewater is not generated at the facility.

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.

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 <http://dnr.mo.gov/env/wpp/edmr.htm> to access the Facility Participation Package.

☐ - You have completed and submitted with this permit application the required documentation to participate in the eDMR system.

☒ - You have previously submitted the required documentation to participate in the eDMR system and/or you are currently using the eDMR system.

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

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: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/>

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)

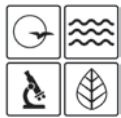
James Nail, Director

SIGNATURE

MO 780-1479 (02-19)

TELEPHONE NUMBER WITH AREA CODE
(816) 325-7566

DATE SIGNED
03/23/2021



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

Independence Blue Valley Power Plant

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

MO-0115924

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

No

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.

The Blue Valley Power Plant (facility) has outdoor storage and indoor warehousing of electric equipment, a fueling island, and pole storage operations for Independent Power and Light. The facility ceased electric generation in 2020; Of the three former electric generation units, Blue Valley Units 1 and 2 ceased operations in 2018 and Blue Valley Unit 3 ceased operation on June 1, 2020.

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 be 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
001	Stormwater	0.182, 1.15 MGD	BMPs (see Section 4.1)	4A
003	Stormwater	0.185, 1.39 MGD	Stormwater pond, BMPs (4.1)	4A
005	Stormwater	0.141, 0.737 MGD	BMPs (see Section 4.1)	4A

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 _____ Subpart(s) _____ ☐ 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.

Not applicable

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)
Pentachlorophenol	Power pole coating	003	Average: 24.94 ug/L

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.

Not applicable

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)
Teklab, Inc.	5445 Horseshoe Lake Rd Collinsville, IL 62234	(618) 344-1004	All stormwater parameters

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
001	10	Vegetation, pavement, gravel	Vegetated ditch
003	22	Vegetation, pavement, gravel	Stormwater retention pond, straw wattles, and filtration booms
005	5.5	Vegetation, pavement	Secondary containment

4.2 STORMWATER FLOWS

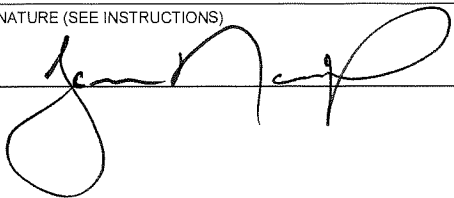
Provide the date of sampling with the flows, and how the flows were estimated.

Quarterly sampling as required by permit; flows estimated through rainfall amounts and drainage areas

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
James Nail, Director	(816) 32507566
SIGNATURE (SEE INSTRUCTIONS)	DATE SIGNED
	03/23/2021

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: 001		OUTFALL NO. 001	
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 <i>(specify if blank)</i>			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS		
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					
A. Biochemical Oxygen Demand, 5-day (BOD ₅)	--	--	--	--	--	--	--	--	--	--	
B. Chemical Oxygen Demand (COD)	136	--	--	--	27.2	--	15	mg/L	--		
C. Total Organic Carbon (TOC)	--	--	--	--	--	--	--	--	--		
D. Total Suspended Solids (TSS)	97.0	--	--	--	25.7	--	15	mg/L	--		
E. Ammonia as N	--	--	--	--	--	--	--	--	--		
F. Flow	VALUE 1.15		VALUE --		VALUE 0.182		15	MILLIONS OF GALLONS PER DAY (MGD)			
G. Temperature <i>(winter)</i>	VALUE --		VALUE --		VALUE --		--	°F			
H. Temperature <i>(summer)</i>	VALUE --		VALUE --		VALUE --		--	°F			
I. pH	MINIMUM 7.77		MAXIMUM 8.48		AVERAGE 8.08		15	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 <i>(if available)</i>	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. CONCENTRATION	B. MASS
			CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS			
Subpart 1 – Conventional and Non-Conventional Pollutants											
A. Alkalinity (CaCO ₃)		X	MINIMUM		MINIMUM		MINIMUM				
B. Bromide (24959-67-9)		X									
C. Chloride (16887-00-6)		X									
D. Chlorine, Total Residual		X									
E. Color		X									
F. Conductivity		X									
F. Cyanide, Amenable to Chlorination		X									

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	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. <i>E. coli</i>		X									
H. Fluoride (16984-48-8)		X									
I. Nitrate plus Nitrate <i>(as N)</i>		X									
J. Kjeldahl, Total <i>(as N)</i>		X									
K. Nitrogen, Total Organic <i>(as N)</i>		X									
L. Oil and Grease	X		6.00	--	--	--	5.12	--	15	mg/L	--
M. Phenols, Total		X									
N. Phosphorus <i>(as P)</i> , Total (7723-14-0)		X									
O. Sulfate <i>(as SO⁴)</i> (14808-79-8)		X									
P. Sulfide <i>(as S)</i>		X									
Q. Sulfite <i>(as SO³)</i> (14265-45-3)		X									
R. Surfactants		X									
S. Trihalomethanes, Total		X									
Subpart 2 – Metals											
1M. Aluminum, Total Recoverable (7429-90-5)		X									
2M. Antimony, Total Recoverable (7440-36-9)		X									
3M. Arsenic, Total Recoverable (7440-38-2)		X									
4M. Barium, Total Recoverable (7440-39-3)		X									
5M. Beryllium, Total Recoverable (7440-41-7)		X									
6M. Boron, Total Recoverable (7440-42-8)		X									
7M. Cadmium, Total Recoverable (7440-43-9)		X									
8M. Chromium III Total Recoverable (16065-83-1)		X									
9M. Chromium VI, Dissolved (18540-29-9)		X									
10M. Cobalt, Total Recoverable (7440-48-4)		X									

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	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									
12M. Iron, Total Recoverable (7439-89-6)		X									
13M. Lead, Total Recoverable (7439-92-1)		X									
14M. Magnesium, Total Recoverable (7439-95-4)		X									
15M. Manganese, Total Recoverable (7439-96-5)		X									
16M. Mercury, Total Recoverable (7439-97-6)		X									
17M. Methylmercury (22967926)		X									
18M. Molybdenum, Total Recoverable (7439-98-7)		X									
19M. Nickel, Total Recoverable (7440-02-0)		X									
20M. Selenium, Total Recoverable (7782-49-2)		X									
21M. Silver, Total Recoverable (7440-22-4)		X									
22M. Thallium, Total Recoverable (7440-28-0)		X									
23M. Tin, Total Recoverable (7440-31-5)		X									
24M. Titanium, Total Recoverable (7440-32-6)		X									
25M. Zinc, Total Recoverable (7440-66-6)		X									
Subpart 3 – Radioactivity											
1R. Alpha Total		X									
2R. Beta Total		X									
3R. Radium Total		X									
4R. Radium 226 plus 228 Total		X									

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: 003		OUTFALL NO. 003	
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 <i>(specify if blank)</i>			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS		
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					
A. Biochemical Oxygen Demand, 5-day (BOD ₅)	--	--	--	--	--	--	--	--	--	--	
B. Chemical Oxygen Demand (COD)	60.0	--	--	--	29.5	--	15	mg/L	--		
C. Total Organic Carbon (TOC)	--	--	--	--	--	--	--	--	--		
D. Total Suspended Solids (TSS)	117	--	--	--	43.5	--	15	mg/L	--		
E. Ammonia as N	--	--	--	--	--	--	--	--	--		
F. Flow	VALUE 1.39		VALUE --		VALUE 0.185		15	MILLIONS OF GALLONS PER DAY (MGD)			
G. Temperature <i>(winter)</i>	VALUE --		VALUE --		VALUE --		--	°F			
H. Temperature <i>(summer)</i>	VALUE --		VALUE --		VALUE --		--	°F			
I. pH	MINIMUM 7.56		MAXIMUM 8.58		AVERAGE 7.99		15	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 <i>(if available)</i>	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. CONCENTRATION	B. MASS
			CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS			
Subpart 1 – Conventional and Non-Conventional Pollutants											
A. Alkalinity (CaCO ₃)		X	MINIMUM		MINIMUM		MINIMUM				
B. Bromide (24959-67-9)		X									
C. Chloride (16887-00-6)		X									
D. Chlorine, Total Residual		X									
E. Color		X									
F. Conductivity		X									
F. Cyanide, Amenable to Chlorination		X									

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	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. <i>E. coli</i>		X									
H. Fluoride (16984-48-8)		X									
I. Nitrate plus Nitrate <i>(as N)</i>		X									
J. Kjeldahl, Total <i>(as N)</i>		X									
K. Nitrogen, Total Organic <i>(as N)</i>		X									
L. Oil and Grease	X		6.00	--	--	--	4.97	--	15	mg/L	--
M. Phenols, Total		X									
N. Phosphorus <i>(as P)</i> , Total (7723-14-0)		X									
O. Sulfate <i>(as SO⁴)</i> (14808-79-8)		X									
P. Sulfide <i>(as S)</i>		X									
Q. Sulfite <i>(as SO³)</i> (14265-45-3)		X									
R. Surfactants		X									
S. Trihalomethanes, Total		X									
Subpart 2 – Metals											
1M. Aluminum, Total Recoverable (7429-90-5)		X									
2M. Antimony, Total Recoverable (7440-36-9)		X									
3M. Arsenic, Total Recoverable (7440-38-2)		X									
4M. Barium, Total Recoverable (7440-39-3)		X									
5M. Beryllium, Total Recoverable (7440-41-7)		X									
6M. Boron, Total Recoverable (7440-42-8)		X									
7M. Cadmium, Total Recoverable (7440-43-9)		X									
8M. Chromium III Total Recoverable (16065-83-1)		X									
9M. Chromium VI, Dissolved (18540-29-9)		X									
10M. Cobalt, Total Recoverable (7440-48-4)		X									

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	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									
12M. Iron, Total Recoverable (7439-89-6)		X									
13M. Lead, Total Recoverable (7439-92-1)		X									
14M. Magnesium, Total Recoverable (7439-95-4)		X									
15M. Manganese, Total Recoverable (7439-96-5)		X									
16M. Mercury, Total Recoverable (7439-97-6)		X									
17M. Methylmercury (22967926)		X									
18M. Molybdenum, Total Recoverable (7439-98-7)		X									
19M. Nickel, Total Recoverable (7440-02-0)		X									
20M. Selenium, Total Recoverable (7782-49-2)		X									
21M. Silver, Total Recoverable (7440-22-4)		X									
22M. Thallium, Total Recoverable (7440-28-0)		X									
23M. Tin, Total Recoverable (7440-31-5)		X									
24M. Titanium, Total Recoverable (7440-32-6)		X									
25M. Zinc, Total Recoverable (7440-66-6)		X									
Subpart 3 – Radioactivity											
1R. Alpha Total		X									
2R. Beta Total		X									
3R. Radium Total		X									
4R. Radium 226 plus 228 Total		X									

Refer to Section 2.2 and Section 3.3 of the supplemental narrative for pentachlorophenol monitoring data

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: 005		OUTFALL NO. 005	
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 <i>(specify if blank)</i>			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS		
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					
A. Biochemical Oxygen Demand, 5-day (BOD ₅)	--	--	--	--	--	--	--	--	--	--	
B. Chemical Oxygen Demand (COD)	50.0	--	--	--	23.5	--	15	mg/L	--		
C. Total Organic Carbon (TOC)	--	--	--	--	--	--	--	--	--		
D. Total Suspended Solids (TSS)	48.0	--	--	--	22.9	--	15	mg/L	--		
E. Ammonia as N	--	--	--	--	--	--	--	--	--		
F. Flow	VALUE 0.737		VALUE --		VALUE 0.141		15	MILLIONS OF GALLONS PER DAY (MGD)			
G. Temperature <i>(winter)</i>	VALUE --		VALUE --		VALUE --		--	°F			
H. Temperature <i>(summer)</i>	VALUE --		VALUE --		VALUE --		--	°F			
I. pH	MINIMUM 7.20		MAXIMUM 8.45		AVERAGE 7.97		15	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 <i>(if available)</i>	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. CONCENTRATION	B. MASS
			CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS			
Subpart 1 – Conventional and Non-Conventional Pollutants											
A. Alkalinity (CaCO ₃)		X	MINIMUM		MINIMUM		MINIMUM				
B. Bromide (24959-67-9)		X									
C. Chloride (16887-00-6)		X									
D. Chlorine, Total Residual		X									
E. Color		X									
F. Conductivity		X									
F. Cyanide, Amenable to Chlorination		X									

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	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. <i>E. coli</i>		X									
H. Fluoride (16984-48-8)		X									
I. Nitrate plus Nitrate <i>(as N)</i>		X									
J. Kjeldahl, Total <i>(as N)</i>		X									
K. Nitrogen, Total Organic <i>(as N)</i>		X									
L. Oil and Grease	X		6.00	--	--	--	5.02	--	15	mg/L	--
M. Phenols, Total		X									
N. Phosphorus <i>(as P)</i> , Total (7723-14-0)		X									
O. Sulfate <i>(as SO⁴)</i> (14808-79-8)		X									
P. Sulfide <i>(as S)</i>		X									
Q. Sulfite <i>(as SO³)</i> (14265-45-3)		X									
R. Surfactants		X									
S. Trihalomethanes, Total		X									
Subpart 2 – Metals											
1M. Aluminum, Total Recoverable (7429-90-5)		X									
2M. Antimony, Total Recoverable (7440-36-9)		X									
3M. Arsenic, Total Recoverable (7440-38-2)		X									
4M. Barium, Total Recoverable (7440-39-3)		X									
5M. Beryllium, Total Recoverable (7440-41-7)		X									
6M. Boron, Total Recoverable (7440-42-8)		X									
7M. Cadmium, Total Recoverable (7440-43-9)		X									
8M. Chromium III Total Recoverable (16065-83-1)		X									
9M. Chromium VI, Dissolved (18540-29-9)		X									
10M. Cobalt, Total Recoverable (7440-48-4)		X									

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	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									
12M. Iron, Total Recoverable (7439-89-6)		X									
13M. Lead, Total Recoverable (7439-92-1)		X									
14M. Magnesium, Total Recoverable (7439-95-4)		X									
15M. Manganese, Total Recoverable (7439-96-5)		X									
16M. Mercury, Total Recoverable (7439-97-6)		X									
17M. Methylmercury (22967926)		X									
18M. Molybdenum, Total Recoverable (7439-98-7)		X									
19M. Nickel, Total Recoverable (7440-02-0)		X									
20M. Selenium, Total Recoverable (7782-49-2)		X									
21M. Silver, Total Recoverable (7440-22-4)		X									
22M. Thallium, Total Recoverable (7440-28-0)		X									
23M. Tin, Total Recoverable (7440-31-5)		X									
24M. Titanium, Total Recoverable (7440-32-6)		X									
25M. Zinc, Total Recoverable (7440-66-6)		X									
Subpart 3 – Radioactivity											
1R. Alpha Total		X									
2R. Beta Total		X									
3R. Radium Total		X									
4R. Radium 226 plus 228 Total		X									



NPDES Permit Renewal Application Supplemental Report

Permit No. MO-0115924

Prepared for
Independence Blue Valley Power Plant

March 2021

NPDES Permit Renewal Application Supplemental Report

March 2021

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1 Introduction

This document is an addendum to the permit renewal application forms for Independence Blue Valley Power Plant's (facility) National Pollutant Discharge Elimination System (NPDES) Missouri State Operating Permit (MSOP), MO-0115924. The facility is owned and operated by Independence Power and Light (IPL) and is located in Independence, Missouri. The purpose of this document is to provide supplemental information and request specific revisions to the MSOP with the renewal application, which are included in Section 2.

2 Supplemental Information

This section provides supplemental information for the following Missouri Department of Natural Resources (MDNR) application forms:

- Form A – Application for Nondomestic Permit Under Missouri Clean Water Law, Form No. 780-1479 (Form A); and
- Form C – Application for Discharge Permit – Manufacturing, Commercial, Mining, Silviculture Operations, and Stormwater, Form No. 780-1514 (Form C).

Note that Form D has not been included in the application because the facility no longer discharges process wastewater. The three large steam power generation units (BV1, 2 and 3) at the facility have been removed from service and are no longer in use. The following section headings below correspond to the forms provide in this application.

2.1 Form A

2.1.1 Item 7

7. Downstream landowner(s).

Outfall 001 and 005 discharge to a drainage ditch along Truman Road and Highway 78 prior (within City right-of-way) to discharging to the Little Blue River. There are no downstream landowners from Outfall 001 and 005.

Outfall 003 discharges to an unnamed tributary of the Little Blue River between parcels 24-310-98081-00-0-00-000 and 17-940-97-01-00-0-00-000. These parcels are currently undeveloped or being used for agriculture. The downstream landowner from Outfall 003 is:

Little Blue Valley (West) LLC
C/O Legal Services
1001 W. Walnut
Independence, MO 64050

2.1.2 Item 9.G

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

Figure 1 in Attachment A is a map of the facility location that shows the facility outfalls and the receiving stream. It should be noted that Figure 1 does not represent current site conditions as it depicts the former ash impoundments as they were before capping and closure in 2017.

2.2 Form C

3.0 Part A. Effluent characteristics.

All discharges from the site are stormwater only. Parameters without data on Form C are not expected to be present in the facility's stormwater.

Table 1 includes pentachlorophenol sampling data for Outfall 003 from November 2016 through December 2020. The current MSOP has a stormwater monitoring benchmark of 19 µg/L for pentachlorophenol at Outfall 003. IPL requests that a "monitoring only" requirement replace the current benchmark; Section 3.3 further describes this request.

Table 1 Outfall 003 pentachlorophenol sampling data

Parameter	Maximum Daily Value (µg /L)	Long-Term Average (µg/L) ¹	Number of Samples	Number of Samples below Laboratory Reporting Limit
Pentachlorophenol	77	22	15	5

¹ Sample results reported below the laboratory's reporting limit of 10 µg/L were assumed at half the reporting limit for the long-term average calculation.

4.1. Industrial stormwater discharges and best management practices.

IPL constructed a stormwater detention pond in 2020 upgradient of Outfall 003 and downgradient of the power pole storage area as a BMP for pentachlorophenol in stormwater from the drainage area that serves Outfall 003 (refer to Section 3.3). The pond is natural, unlined and graded depression approximately 60 feet by 105 feet with a volume of 30,000 gallons. Stormwater can enter the pond through a rocked channel sloped by the facility fence, a sloped area to the north of the pond or by overland flow through vegetation. Figure 2-1 is a photo of the stormwater detention pond. Figure 2-2 is an aerial photo of the stormwater detention pond area prior to the pond's construction. Figure 2-3 is an aerial photo of the stormwater area after construction.

4.1. Industrial stormwater drainage map.

Figure 2 in Attachment A is a map of the facility's drainage areas served by each outfall.



Figure 2-1 Stormwater detention pond upgradient of Outfall 003



Figure 2-2 Stormwater detention pond area prior to construction



Figure 2-3 Stormwater detention pond area post construction

3 Requested Permit Revisions

The following sections address permit revision requests for the MSOP renewal.

3.1 Revised Facility Description

The facility ceased energy generation on June 1, 2020 and does not intend to restart. IPL requests the following revisions (in blue) to the facility description in the MSOP:

~~"The Blue Valley Power Plant (facility) has electric equipment warehousing, a fueling island, and pole storage operations for Independent Power and Light. The facility ceased electric generation in 2020; of the three former electric generation units, Blue Valley Units 1 and 2 ceased operations in 2018 and Blue Valley Unit 3 ceased operation on June 1, 2020. Stormwater from a portion of the facility and process and non-process wastewater is sent to the Rock Creek Water Reclamation Facility. All discharges from the site to waters of the state are stormwater only. Natural gas fired electric power plant with a transmission and distribution service center and substation. Only stormwater discharges are allowed to waters of the state. Process water is sent to the local wastewater treatment facility."~~

3.2 Facility Flow Diagram

The facility's flow diagram in the current MSOP is no longer applicable as the facility's generating units are inactive. Figure 2 (in Attachment A) is a map of the facility's drainage areas.

3.3 Monitoring for Pentachlorophenol

IPL requests that the numeric benchmark for pentachlorophenol at Outfall 003 be replaced with a "monitoring only" requirement. The facility has implemented additional best management practices (BMPs) to reduce pollutant concentrations at Outfall 003 since the last MSOP issuance, and requests that MDNR consider these BMPs in lieu of a numerical benchmark. BMPs implemented in the drainage area for Outfall 003 include:

- Construction of a permanent stormwater retention pond upgradient of Outfall 003 (and downgradient of the pole storage area);
- Power pole inspections for drips or staining; pole deliveries that are considered "wet" are sent back to the manufacturer;
- Structural controls are used in drainage area 3 to remove pollutants, which include, but are not limited to:
 - Straw wattles; and
 - Pig® Filtrexx® FilterSox with MetaLoxx™ (these replaced filter booms).
- More frequent spot checks of this area, in addition to monthly stormwater inspections.

3.4 Groundwater

IPL's existing MSOP (Special Condition 16) requires the facility to implement an effective groundwater monitoring program to evaluate the potential impact of the facility's coal ash impoundments on groundwater quality. For this requirement, the facility is required to develop a Groundwater Monitoring Sampling and Analysis Plan (GMSAP), which will be the guiding document for the groundwater monitoring program. The GMSAP was submitted to MDNR on March 17, 2021. The MSOP requires the GMSAP to receive approval from MDNR and be fully implemented prior to December 17, 2022. IPL requests that MDNR modify language in the permit to include implementation of the GMSAP sampling frequency, which is proposed to be quarterly for two years and then semi-annually thereafter.

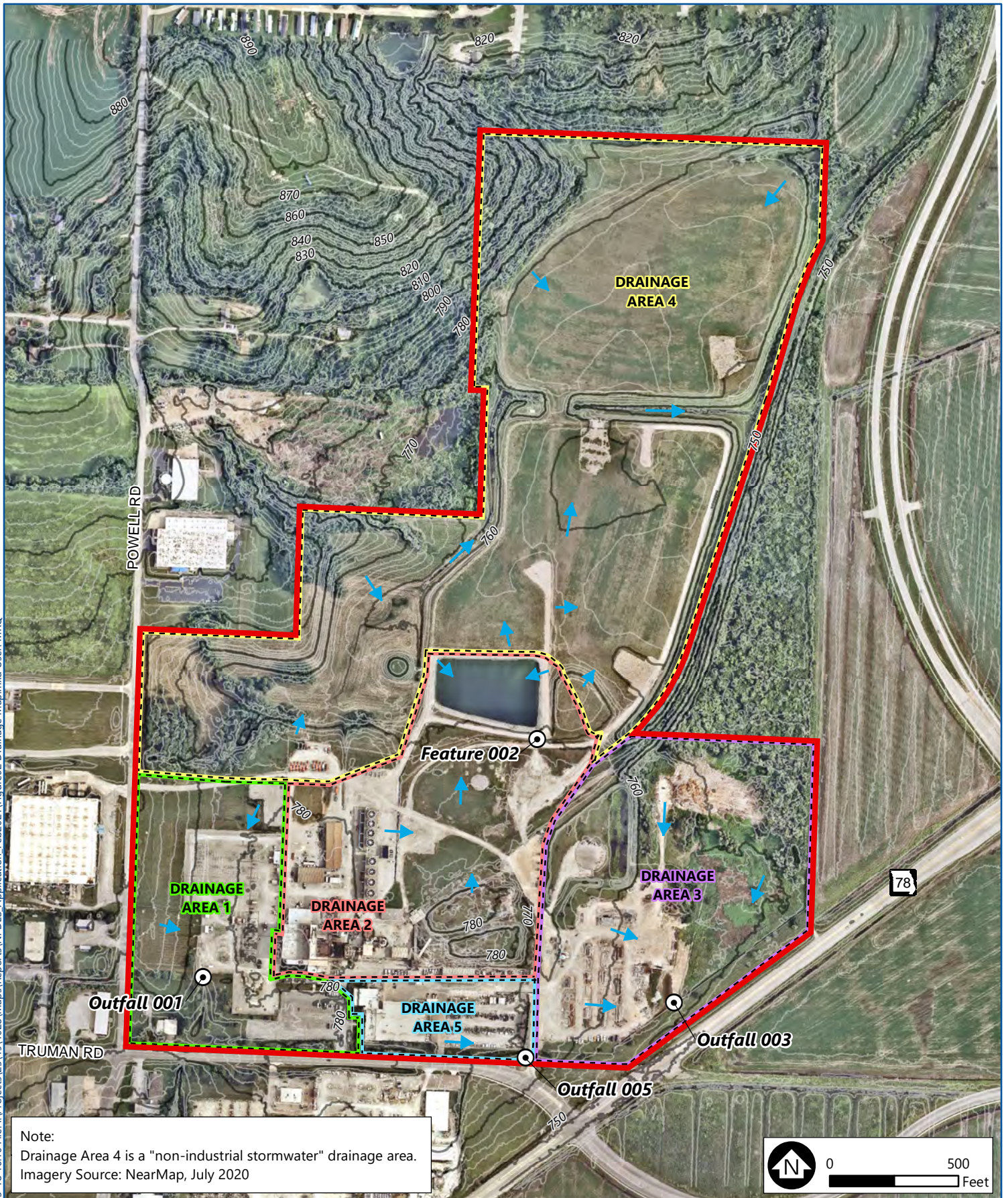
IPL requests that the MSOP refer to the GMSAP for groundwater monitoring, sampling, and analysis requirements to centralize the location of the facility's groundwater requirements. Proposed sampling parameters from the GMSAP and groundwater quality data from the monitoring wells are included in Attachment B. Information on the facility's closure of the three former ash ponds and compliance with the federal Coal Combustion Residual (CCR) Rule (40 CFR Part 257 Subpart D, paragraph 100) can be found at the following website:

https://www.ci.independence.mo.us/PL/CCRRuleCompliance_BVGS

Attachment A Site Figures

Figure 1 Site Location

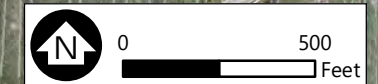
Figure 2 Drainage Map



- Stormwater Outfall Location
- Stormwater Flow Direction
- Property Boundary
- Drainage Area 1

- Drainage Area 2
- Drainage Area 3
- Drainage Area 4
- Drainage Area 5

- Ground Elevation
- 10-foot Contour
- 2-foot Contour



DRAINAGE MAP
Independence Blue Valley
Power Plant
Independence, MO
FIGURE 2

Attachment B

Proposed groundwater sampling parameters and existing
groundwater quality data

Table 1
Constituents of Concern - Groundwater Sampling
Blue Valley Power Plant
Independence, MO

Location			MW-01	MW-02	MW-03	MW-04	MW-05	MW-06	MW-07	MW-08
Sampling Method			Low-Flow	Low-Flow	Low-Flow	Low-Flow	Low-Flow	Passive	Passive	Passive
Parameter	Total or Dissolved	Units								
General Parameters										
Carbon, total organic	N/A	mg/l	x	x	x	x	x	x	x	x
Chemical Oxygen Demand	N/A	mg/l	x	x	x	x	x	x	x	x
Chloride	N/A	mg/l	x	x	x	x	x	x	x	x
Fluoride	N/A	mg/l	x	x	x	x	x	x	x	x
Hardness, as CaCO3	N/A	ug/l	x	x	x	x	x	x	x	x
Nitrogen, nitrate + nitrite, as N	N/A	mg/l	x	x	x	x	x	x	x	x
Nitrogen, nitrate, as N	N/A	mg/l	x	x	x	x	x	x	x	x
Nitrogen, nitrite, as N	N/A	mg/l	x	x	x	x	x	x	x	x
Solids, total dissolved	N/A	mg/l	x	x	x	x	x	x	x	x
Sulfate, as SO4	N/A	mg/l	x	x	x	x	x	x	x	x
Metals										
Aluminum	Dissolved	ug/l	x	x	x	x	x	x	x	x
Antimony	Dissolved	ug/l	x	x	x	x	x	x	x	x
Arsenic	Dissolved	ug/l	x	x	x	x	x	x	x	x
Barium	Dissolved	ug/l	x	x	x	x	x	x	x	x
Beryllium	Dissolved	ug/l	x	x	x	x	x	x	x	x
Boron	Dissolved	ug/l	x	x	x	x	x	x	x	x
Cadmium	Dissolved	ug/l	x	x	x	x	x	x	x	x
Chromium	Dissolved	ug/l	x	x	x	x	x	x	x	x
Chromium, hexavalent	Dissolved	mg/l	x	x	x	x	x	x	x	x
Chromium, trivalent	Dissolved	mg/l	x	x	x	x	x	x	x	x
Cobalt	Dissolved	ug/l	x	x	x	x	x	x	x	x
Copper	Dissolved	ug/l	x	x	x	x	x	x	x	x
Iron	Dissolved	ug/l	x	x	x	x	x	x	x	x
Lead	Dissolved	ug/l	x	x	x	x	x	x	x	x
Lithium	Dissolved	ug/l	x	x	x	x	x	x	x	x
Magnesium	Dissolved	ug/l	x	x	x	x	x	x	x	x
Manganese	Dissolved	ug/l	x	x	x	x	x	x	x	x
Mercury	Dissolved	ug/l	x	x	x	x	x	x	x	x
Molybdenum	Dissolved	ug/l	x	x	x	x	x	x	x	x
Nickel	Dissolved	ug/l	x	x	x	x	x	x	x	x
Selenium	Dissolved	ug/l	x	x	x	x	x	x	x	x
Silver	Dissolved	ug/l	x	x	x	x	x	x	x	x
Sodium	Dissolved	ug/l	x	x	x	x	x	x	x	x
Thallium	Dissolved	ug/l	x	x	x	x	x	x	x	x
Zinc	Dissolved	ug/l	x	x	x	x	x	x	x	x
Aluminum	Total	ug/l	x	x	x	x	x	x	x	x
Antimony	Total	ug/l	x	x	x	x	x	x	x	x
Arsenic	Total	ug/l	x	x	x	x	x	x	x	x
Barium	Total	ug/l	x	x	x	x	x	x	x	x
Beryllium	Total	ug/l	x	x	x	x	x	x	x	x
Boron	Total	ug/l	x	x	x	x	x	x	x	x
Cadmium	Total	ug/l	x	x	x	x	x	x	x	x
Calcium	Total	ug/l	x	x	x	x	x	x	x	x
Chromium	Total	ug/l	x	x	x	x	x	x	x	x
Chromium, hexavalent	Total	mg/l	x	x	x	x	x	x	x	x
Chromium, trivalent	Total	mg/l	x	x	x	x	x	x	x	x
Cobalt	Total	ug/l	x	x	x	x	x	x	x	x
Copper	Total	ug/l	x	x	x	x	x	x	x	x
Iron	Total	ug/l	x	x	x	x	x	x	x	x
Lead	Total	ug/l	x	x	x	x	x	x	x	x
Lithium	Total	ug/l	x	x	x	x	x	x	x	x
Magnesium	Total	ug/l	x	x	x	x	x	x	x	x
Manganese	Total	ug/l	x	x	x	x	x	x	x	x
Mercury	Total	ug/l	x	x	x	x	x	x	x	x
Molybdenum	Total	ug/l	x	x	x	x	x	x	x	x
Nickel	Total	ug/l	x	x	x	x	x	x	x	x
Selenium	Total	ug/l	x	x	x	x	x	x	x	x
Silver	Total	ug/l	x	x	x	x	x	x	x	x
Sodium	Total	ug/l	x	x	x	x	x	x	x	x
Thallium	Total	ug/l	x	x	x	x	x	x	x	x
Zinc	Total	ug/l	x	x	x	x	x	x	x	x

Location Sample Date Sample Type					MW-7 8/08/2019 N	MW-8 8/08/2019 N	MW-9 8/08/2019 N	MW-10 8/08/2019 N	MW-11 8/09/2019 N	TW-1 8/09/2019 N	TW-2 9/05/2019 N	TW-4 8/09/2019 N	TW-5 9/05/2019 N
Parameter	Total or Dissolved	Units	EPA Maximum Contaminant Levels	EPA Maximum Contaminant Levels 40 CFR 257.95(h)(2)									
Effective Date			04/01/2012	04/01/2012									
Exceedance Key			Bold	<u>Underline</u>									
General Parameters													
Carbon, total organic	NA	mg/l			< 1.0	< 1.0	1.7	5.5	1.1	3.5	2.7	19.5	3.4
Chemical Oxygen Demand	NA	mg/l			19.9	12.4	12.2	29.8	--	--	10.8	--	30.8
Chloride	NA	mg/l			53.2	33.7	18.6	2.9	48.8	67.8	34.8	1.8	34.2
Fluoride	NA	mg/l	4		0.23	< 0.20	0.50	0.30	< 0.20	0.52	1.1	0.36 *	1.1
Halides, total organic	NA	mg/l			--	--	--	--	--	--	< 0.100	--	< 0.100
Halides, total organic	NA	ug/l			< 100	< 100	< 100	< 100	< 100	< 100	--	< 100	--
Hardness, as CaCO3	NA	ug/l			471000	568000	493000	246000	271000	198000	50000	78900	49300
Nitrogen, nitrate + nitrite, as N	NA	mg/l	10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.10	< 0.10	< 0.10
Nitrogen, nitrate, as N	NA	mg/l	10		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.10	< 0.10	< 0.10
Nitrogen, nitrite, as N	NA	mg/l	1		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Solids, total dissolved	NA	mg/l			721	752	634	434	467	728	608	968	611
Sulfate, as SO4	NA	mg/l			271	220	12.4	2.4	2.0	88.7	37.8	3.0	38.5
Metals													
Aluminum	Dissolved	ug/l			< 75.0	< 75.0	< 75.0	< 75.0	< 75.0	< 75.0	< 75.0	92.4	< 75.0
Antimony	Dissolved	ug/l	6		< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0
Arsenic	Dissolved	ug/l	10		< 10.0	13.2	29.3	32.8	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Barium	Dissolved	ug/l	2000		198	1020	637	555	387	99.9	49.4	161	44.6
Beryllium	Dissolved	ug/l	4		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Boron	Dissolved	ug/l			1570	< 100	< 100	122	< 100	724	1440	< 100	1350
Cadmium	Dissolved	ug/l	5		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium	Dissolved	ug/l	100		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	11.1	< 5.0
Chromium, hexavalent	Dissolved	mg/l	0.1 (14)		< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010 *	0.014	< 0.010
Chromium, trivalent	Dissolved	mg/l	0.1 (14)		< 0.010	< 0.010	< 0.010	< 0.010	--	--	< 0.010	--	< 0.010
Cobalt	Dissolved	ug/l		6	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Copper	Dissolved	ug/l	1300 TT(12)		< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Iron	Dissolved	ug/l			4360	11900	6780	21300	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0
Lead	Dissolved	ug/l	15 TT(12)	15	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Lithium	Dissolved	ug/l		40	12.1	18.2	< 10.0	19.2	< 10.0	32.7	11.4	447	10.3
Magnesium	Dissolved	ug/l			23800	33600	36800	16000	19500	13100	4060	< 50.0	3770
Manganese	Dissolved	ug/l			8410	4390	2390	817	1190	171	58.3	< 5.0	53.8
Mercury	Dissolved	ug/l	2		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.37	< 0.20
Molybdenum	Dissolved	ug/l		100	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	23.0	< 20.0	22.9
Nickel	Dissolved	ug/l			8.9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Selenium	Dissolved	ug/l	50		< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0
Silver	Dissolved	ug/l			< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0
Sodium	Dissolved	ug/l			23600	11000	78300	63400	44700	225000	219000	88600	203000
Thallium	Dissolved	ug/l	2		< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Zinc	Dissolved	ug/l			< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0
Aluminum	Total	ug/l			112	222	199	683	877	13600	369	384	252
Antimony	Total	ug/l	6		< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0
Arsenic	Total	ug/l	10		< 10.0	11.3	30.6	37.0	< 10.0	15.1	< 10.0	< 10.0	< 10.0
Barium	Total	ug/l	2000		205	1010	630	564	402	191	59.1	197	52.6
Beryllium	Total	ug/l	4		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Boron	Total	ug/l			1460	< 100	< 100	127	< 100	720	1370	< 100	1400
Cadmium	Total	ug/l	5		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Calcium	Total	ug/l			149000	172000	137000	71900	76400	49600	13300	31300	13000
Chromium	Total	ug/l	100		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	32.0	< 5.0	11.9	< 5.0
Chromium, hexavalent	Total	mg/l	0.1 (14)		< 0.010	< 0.010	< 0.010	< 0.010 *	< 0.010	< 0.010	< 0.010 *	0.015	< 0.010
Chromium, trivalent	Total	mg/l	0.1 (14)		< 0.010	< 0.010	< 0.010	< 0.010	--	--	< 0.010	--	< 0.010
Cobalt	Total	ug/l		6	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	8.4	< 5.0	< 5.0	< 5.0
Copper	Total	ug/l	1300 TT(12)		< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	25.1	< 10.0	< 10.0	< 10.0
Iron	Total	ug/l			4810	14300	7530	22100	852	21300	536	524	304
Lead	Total	ug/l	15 TT(12)	15	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	11.1	< 10.0	< 10.0	< 10.0
Lithium	Total	ug/l		40	12.8	19.3	< 10.0	19.7	< 10.0	62.5	< 10.0	464	< 10.0
Magnesium	Total	ug/l			23900	33500	36400	16200	19500	18100	4070	188	4060
Manganese	Total	ug/l			8480	4330	2370	883	1210	515	69.6	16.0	60.0
Mercury	Total	ug/l	2		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Molybdenum	Total	ug/l		100	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	23.2	< 20.0	25.1
Nickel	Total	ug/l			7.8	< 5.0	< 5.0	< 5.0	< 5.0	28.2	< 5.0	< 5.0	< 5.0

Location Sample Date Sample Type					MW-7 8/08/2019 N	MW-8 8/08/2019 N	MW-9 8/08/2019 N	MW-10 8/08/2019 N	MW-11 8/09/2019 N	TW-1 8/09/2019 N	TW-2 9/05/2019 N	TW-4 8/09/2019 N	TW-5 9/05/2019 N
Parameter	Total or Dissolved	Units	EPA Maximum Contaminant Levels	EPA Maximum Contaminant Levels 40 CFR 257.95(h)(2)									
Effective Date			04/01/2012	04/01/2012									
Exceedance Key			Bold	<u>Underline</u>									
Selenium	Total	ug/l	50		< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0	< 15.0
Silver	Total	ug/l			< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0	< 7.0
Sodium	Total	ug/l			22000	11000	75100	63400	44800	218000	213000	90600	215000
Thallium	Total	ug/l	2		< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Zinc	Total	ug/l			< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	194	55.0	< 50.0
Radiochemical Parameters													
Radium 226	NA	pCi/l	5 (13)		1.48 +/- 0.878	2.47 +/- 1.01	2.63 +/- 1.13	1.67 +/- 0.820	1.51 +/- 0.696	1.86 +/- 0.791	0.976 +/- 0.732	3.24 +/- 1.57	2.20 +/- 1.05
Radium 228	NA	pCi/l	5 (13)		< 0.778	< 0.757	< 0.817	< 1.16	< 0.817	< 0.745	< 1.10	< 1.51	< 1.15