

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

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

Permit No. MO-0000337

Owner: The Buick Resource Recycling Facility LLC
Address: 18594 Highway KK, Boss, MO 65440

Continuing Authority: The Doe Run Resources Corporation D/B/A The Doe Run Company
Address: 1801 Park 270 Drive, St. Louis, MO 63146

Facility Name: Buick Resource Recycling Facility
Facility Address: 18594 Highway KK, Boss, MO 65440

Legal Description: Sec. 14, T34N, R02W, Iron County
UTM Coordinates: see page 2

Receiving Stream: Tributary to Crooked Creek
First Classified Stream and ID: Outfall #002: 8-20-13 MUDD V1.0; Outfall #003: 8-20-13 MUDD V1.0 (losing)
Second Classified Stream and ID: Crooked Creek (P) WBID#1928; 303(d) List
USGS Basin & Sub-watershed No.: 07140102-0402

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

FACILITY DESCRIPTION

Recycling Facility: SIC # 3314; NAICS # 331429, recycling of lead bearing materials, primarily lead acid batteries; to produce lead metal, lead alloys, metallic drosses, and other byproducts. No-discharge facility. All wastewater and stormwater sent to Buick Mine and Mill Facility, MO-0002003.

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

April 1, 2019
Effective Date


Edward B. Galbraith, Director, Division of Environmental Quality

March 31, 2024
Expiration Date


Chris Wieberg, Director, Water Protection Program

FACILITY DESCRIPTION (CONTINUED)

OUTFALL #001 – SIC #3341 – industrial process wastewater, stormwater, domestic wastewater, purge water from groundwater well sampling, landfill leachate; internal pretreatment facility that transfers partially treated stormwater and process wastewater to the Buick Mine/Mill (MO-0002003) for further treatment and eventual discharge to Strother Creek. The treatment consists of physical settling in the six million gallon above-ground concrete collection tank. No sampling requirements.

Legal Description: SE ¼, SW ¼, Sec. 14, T34N, R2W, Iron County
UTM Coordinates: X = 664868; Y = 4166819
Design flow: 2.88 MGD maximum flow based on 2000 gpm from the collection basins.
Average flow: 0.720 MGD – all discharges sent to Buick Mine/Mill

OUTFALL #002 – industrial stormwater – SIC #3341

Emergency overflow from stormwater retention basin (002-A), Impoundment E. Stormwater flows from equipment storage, flux storage, the former Magmont mill area, and unused property. The retention basin will be operated in a no-discharge fashion by pumping to the plant water make-up tanks for reuse and/or the Buick Mine/Mill treatment plant.

Legal Description: NE ¼, SW ¼, Sec. 14, T34N, R2W, Iron County
UTM Coordinates: X = 665082, Y = 4167458
Basin A (#02A): X = 665095, Y = 4167669

OUTFALL #003 – industrial stormwater– SIC #3341

Emergency overflow from above-ground concrete stormwater tank; basins 003-B (existing) and 003-C (to be constructed). Physical settling. --Contents include industrial process wastewater; run off of stormwater associated with industrial activity; miscellaneous non-scope flows; treated sanitary wastewater; and leachate from the secondary slag landfill.

Legal Description: NW ¼, SW ¼, Sec. 14, T34N, R2W, Iron County
UTM Coordinates: X = 664446, Y = 4167376
Basin B (#03B): X = 664479, Y = 4167356
Basin C (#03B): X = 664533, Y = 4167299

OUTFALL #004 – Renamed S1 in the past.

OUTFALL #005 – Aerated Lagoon –#3341

Internal outfall – discharges to Buick Mine Mill. No sampling requirements.

Legal Description: NW ¼, SW ¼, Sec. 14, T34N, R2W, Iron County
UTM Coordinates: X = 664511, Y = 4167324
Design Flow: 0.0288

S1 – Downstream monitoring location - eliminated

Located at the low water bridge crossing Crooked Creek.

Legal Description: NW¼, NW ¼, Sec. 31, T35N, R2W, Crawford County
UTM Coordinates: X = 658940, Y = 4175370

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

EFFLUENT PARAMETERS	UNITS	MONITORING REQUIREMENTS				
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
		TABLE A-1 FINAL MONITORING REQUIREMENTS FOR BASINS				
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on April 1, 2019 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:						
PHYSICAL						
Freeboard	feet	*		*	once/month	Measured
Precipitation (Basin A only)	in/day	*		*	once/day	24 hr. total
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>MAY 28, 2019</u> .						

EFFLUENT PARAMETERS	UNITS	MONITORING REQUIREMENTS				
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
		TABLE A-2 FINAL MONITORING REQUIREMENTS FOR EMERGENCY AND UNAUTHORIZED DISCHARGES				
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on April 1, 2019 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:						
PHYSICAL						
Flow	MGD	*		*	once/discharge ◊	24 hr. total
CONVENTIONAL						
pH ^Ω	SU	*		*	once/discharge ◊	grab
Total Suspended Solids	mg/L	*		*	once/discharge ◊	grab
METALS						
Antimony, Total Recoverable	µg/L	*		*	once/discharge ◊	grab
Arsenic, Total Recoverable	µg/L	*		*	once/discharge ◊	grab
Cadmium, Total Recoverable	µg/L	*		*	once/discharge ◊	grab
Copper, Total Recoverable	µg/L	*		*	once/discharge ◊	grab
Iron, Total Recoverable	µg/L	*		*	once/discharge ◊	grab
Lead, Total Recoverable	µg/L	*		*	once/discharge ◊	grab
Selenium, Total Recoverable	µg/L	*		*	once/discharge ◊	grab
Zinc, Total Recoverable	µg/L	*		*	once/discharge ◊	grab
OTHER						
Chloride	mg/L	*		*	once/discharge ◊	grab
Sulfate	mg/L	*		*	once/discharge ◊	grab
Chloride plus Sulfate	mg/L	*		*	once/discharge ◊	grab
Whole Effluent Toxicity [∞]	TUa	1.0		-	once/discharge [∞]	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>BY THE 28TH DAY OF THE MONTH FOLLOWING DISCHARGE</u> .						

- * Monitoring and reporting requirement only.
- Ω The facility will report the minimum and maximum values. pH is not to be averaged.
- ◊ Once per discharge event means the facility will sample at least once when the basin is discharging. The report is due on the 28th day of the month following cessation of the discharge.
- ∞ Sampling and the accompanying limitations for Whole Effluent Toxicity shall occur during unauthorized discharges (special condition #2(c)). The facility is not required to sample for WET testing during emergency discharges (special condition #2(b)).

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. This permit does not allow wastewater discharges (to waters of the state) under this permit from outfalls #001 or #005 or any of the related appurtenances. All wastewater discharges or releases will be reported to the Southeast Regional Office during normal business hours or the Environmental Emergency Response spill-line at 573-634-2436 outside of normal business hours and within 24 hours of becoming aware of the discharge. As this is considered a spill, no sampling is required unless directed to do so by Department or EPA personnel.
2. Emergency and Unauthorized Discharges – Outfalls #002 and #003
 - (a) Monitoring. Any emergency or unauthorized discharge shall be monitored for the parameters in Table A-2 at least once during the discharge event. Additional monitoring may be required by the Department on a case-by-case basis. The facility shall submit test results, along with the number of days the storage basin(s) has discharged during the month, via the Electronic Discharge Monitoring Report (eDMR) Submission System by the 28th day of the month after the discharge ceases.
 - (b) Emergency Discharges. An emergency discharge from wastewater storage structures may only occur if rainfall exceeds the 10-year 365-day rainfall event (chronic) or the 25-year 24-hour rainfall event (catastrophic). The facility shall make all reasonable attempts to return the water level in the basin(s) to below the maximum operating level. Design Storm Maps and Tables can be found at http://ag3.agebb.missouri.edu/design_storm/.
 - (c) Unauthorized Discharges. Discharge for any other reason than what is stated in (b) of this Special Condition constitutes a permit violation and shall be reported in accordance with Standard Conditions Part 1 Section B.2. Unauthorized discharges are to be reported to the Southeast Regional Office during normal business hours or the Environmental Emergency Response spill-line at 573-634-2436 outside of normal business hours and within 24 hours of becoming aware of the discharge.
3. Acute Whole Effluent Toxicity (WET) tests shall be conducted as follows:
 - (a) Freshwater Species and Test Methods: Species and short-term test methods for estimating the acute toxicity of NPDES effluents are found in the most recent edition of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012; Table IA, 40 CFR Part 136). The permittee shall concurrently conduct 48-hour, static, non-renewal toxicity tests with the following species:
 - o The fathead minnow, *Pimephales promelas* (Acute Toxicity EPA Test Method 2000.0).
 - o The daphnid, *Ceriodaphnia dubia* (Acute Toxicity EPA Test Method 2002.0).
 - (b) Chemical and physical analysis of the effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping. Where upstream receiving water is not available or known to be toxic, other approved control water may be used.
 - (c) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.
 - (d) The Allowable Effluent Concentration (AEC) is 100%; the dilution series is: 100%, 50%, 25%, 12.5%, and 6.25%.
 - (e) All chemical and physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% effluent concentration.
 - (f) The facility must submit a full laboratory report for all toxicity testing. The report must include a quantification of acute toxic units ($TU_a = 100/LC_{50}$) reported according to the test methods manual chapter on report preparation and test review. The Lethal Concentration 50 Percent (LC_{50}) is the effluent concentration that would cause death in 50 percent of the test organisms at a specific time.
4. Electronic Discharge Monitoring Report (eDMR) Submission System
 - (a) Discharge Monitoring Reporting Requirements. The permittee must electronically submit compliance monitoring data via the eDMR system. In regards to Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit.

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

 - (1) Schedule of Compliance Progress Reports;
 - (2) Any additional report required by the permit excluding bypass reporting.

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

C. SPECIAL CONDITIONS (CONTINUED)

- (b) Other actions. The following shall be submitted electronically after such a system has been made available by the Department:
- (1) General Permit Applications/Notices of Intent to discharge (NOIs);
 - (2) Notices of Termination (NOTs);
 - (3) No Exposure Certifications (NOEs);
 - (4) Low Erosivity Waivers and Other Waivers from Stormwater Controls (LEWs); and
 - (5) Bypass reporting.
- (c) Electronic Submission: access the eDMR system, via: <https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>.
- (d) Waivers from Electronic Reporting. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the department in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. The Department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period the approved electronic reporting waiver is effective.
5. The facility's SIC code(s) or description is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2) hence shall implement a Stormwater Pollution Prevention Plan (SWPPP) which must be prepared and implemented upon permit issuance. The SWPPP must be kept on-site and should not be sent to the Department unless specifically requested. The SWPPP must be reviewed and updated every five years or as site conditions change. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in: *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in 2015 https://www.epa.gov/sites/production/files/2015-11/documents/swppp_guide_industrial_2015.pdf The purpose of the SWPPP and the Best Management Practices (BMPs) listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective preventing pollution [10 CSR 20-2.010(56)] of waters of the state. Corrective action means the facility took steps to eliminate the deficiency.
- The SWPPP must include:
- (a) A listing of specific contaminants and their control measures (or BMPs) and a narrative explaining how BMPs are implemented to control and minimize the amount of contaminants potentially entering stormwater.
 - (b) A schedule for at least once per month site inspections and brief written reports. The facility must have observations and evaluations of BMP effectiveness. Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes. The facility must have precipitation information available for the entire period since last inspection, and may be kept electronically.
 - i. Operational deficiencies must be corrected within seven (7) calendar days.
 - ii. Minor structural deficiencies must be corrected within fourteen (14) calendar days.
 - iii. Major structural deficiencies must be reported to the regional office within seven (7) days of discovery. The initial report shall consist of the deficiency noted, the proposed remedies, the interim or temporary remedies (including proposed timing of the placement of the interim measures), and an estimate of the timeframe needed to wholly complete the repairs or construction. The permittee will work with the regional office to determine the best course of action, including but not limited to temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
 - iv. All actions taken to correct the deficiencies shall be included with the written report, including photographs.
 - v. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to Department and EPA personnel upon request. Electronic versions of the documents are acceptable.
 - (c) A provision for designating an individual to be responsible for environmental matters.
 - (d) 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.
6. Permittee shall adhere to the following minimum Best Management Practices (BMPs):
- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, warehouse activities, and other areas and thereby prevent the contamination of stormwater from these substances.
 - (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
 - (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so 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

C. SPECIAL CONDITIONS (CONTINUED)

pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater. Any spills should be noted in the SWPPP.

- (d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
- (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property
- (f) Ensure adequate provisions are provided to prevent and to protect embankments from erosion.

7. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with §644.051.16, RSMo, and the CWA section 402(k); however, this permit may be reopened and modified, or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), §304(b)(2), and §307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or controls any pollutant not limited in the permit.

8. All outfalls and permitted features must be clearly marked in the field. The facility must continue to maintain signage for outfalls #001 (X = 664868; Y = 4166819) and #005 (X = 664511; Y = 4167324).

9. Changes in Discharges of Toxic Pollutant

In addition to the reporting requirements under §122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

- (a) That an activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
 - (3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
 - (4) One milligram per liter (1 mg/L) for antimony;
 - (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (6) The notification level established by the Department in accordance with 40 CFR 122.44(f).
- (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - (1) Five hundred micrograms per liter (500 µg/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with §122.21(g)(7).
 - (4) The level established by the Director in accordance with §122.44(f).

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

11. Reporting of Non-Detects

- (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way the precision and accuracy of the analyzed result can be enumerated.
- (b) The permittee shall not report a sample result as “non-detect” without also reporting the detection limit of the test or the reporting limit of the laboratory. Reporting as “non-detect” without also including the detection/reporting limit will be considered failure to report, which is a violation of this permit.
- (c) The permittee shall report the non-detect result using the less than “<” symbol and the laboratory’s detection/reporting limit (e.g. <6).
- (d) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter, then zero (0) is reported for the parameter.
- (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
- (f) When calculating monthly averages, one-half of the minimum detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the “<MDL” shall be reported as indicated in item (C).

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

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0000337
BUICK RESOURCES RECYCLING FACILITY**

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

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

PART I. FACILITY INFORMATION

Facility Type: Industrial – Major, Categorical
 SIC Code(s): 3314
 NAICS Code(s): 331492
 Application Date: 07/27/2015, 02/20/2017, 08/31/2018
 Modification Date: 06/24/2014
 Expiration Date: 01/23/2016

FACILITY DESCRIPTION:

Recycling Facility: SIC # 3314; NAICS # 331429, recycling of lead bearing materials, primarily lead acid batteries; to produce lead metal, lead alloys, metallic drosses, and other byproducts.

PERMITTED FEATURES TABLE:

OUTFALL	AVERAGE FLOW	DESIGN FLOW	TREATMENT LEVEL	EFFLUENT TYPE
#001	0	0	BMPs/no discharge	process wastewater – no sampling required
#002	0	0	BMPs/no discharge	stormwater and sump water
#003	0	0	BMPs/no discharge	stormwater and sump water
#004/SM1	0	0	BMPs/no discharge	in-stream monitoring – no sampling required
#005	0	0	BMPs/no discharge	domestic wastewater – no sampling required

FACILITY PERFORMANCE HISTORY & COMMENTS:

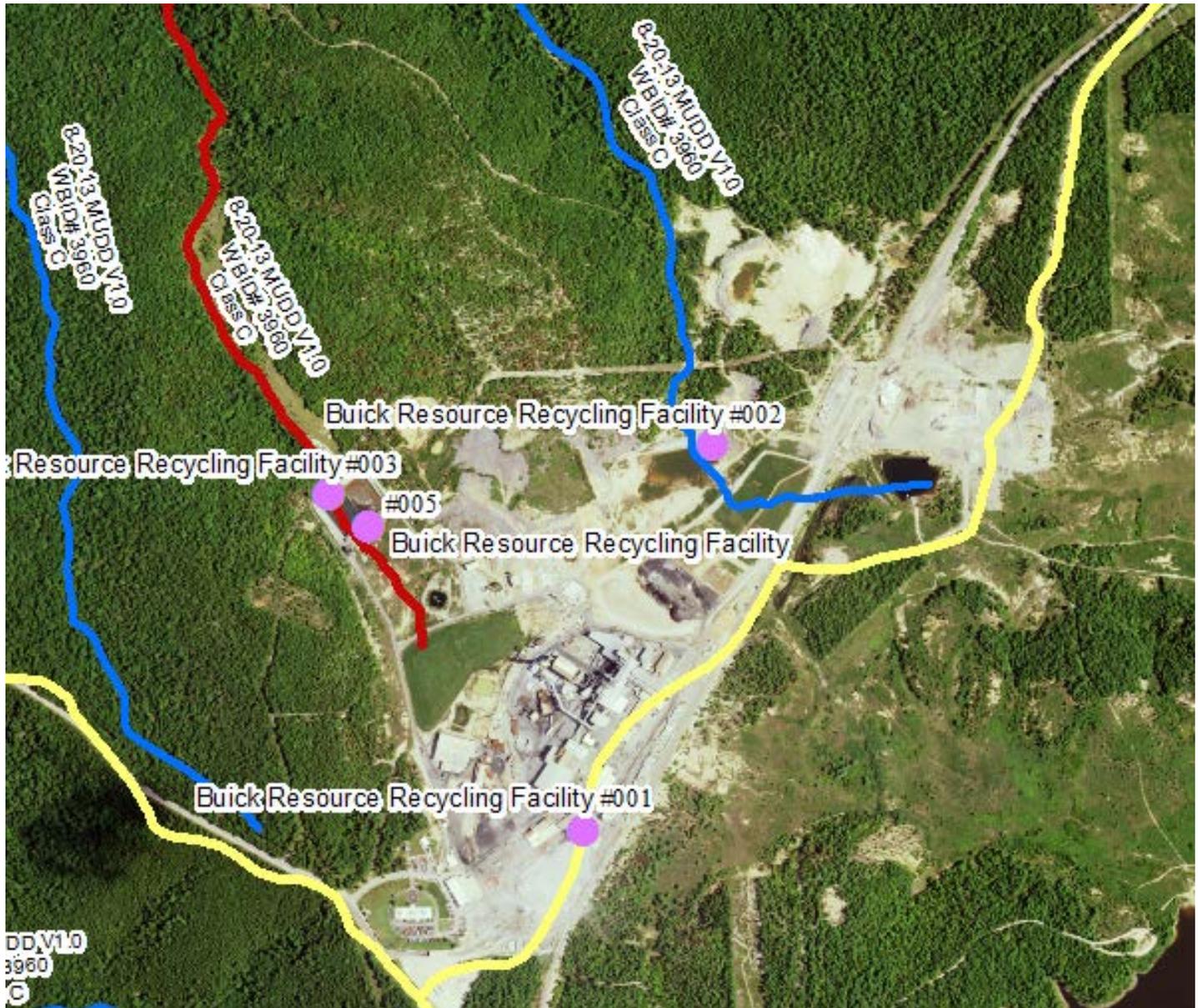
This permit removes requirements for sampling at outfalls #001 (X = 664868; Y = 4166819) and #005 (X = 664511; Y = 4167324) as these outfalls are piped to the Buick Mine and Mill facility (MO-0002003). Wastewater from this facility receives further treatment at the Mine and Mill prior to discharge to waters of the state. This permit is now a no-discharge permit. Outfall #004, also known as SM1 is an in-stream sampling point which is no longer required by this permit as there are no longer discharges from this facility. The facility has been working to correct the frequent overflows of the retention basin at outfall #003, and discharges from outfall #003 have shown toxicity in the past. The facility, during normal operations sends all of the wastewater and stormwater to the Mine and Mill for treatment and discharge. The renewal of this permit is concurrent with the modification of MO-0002003 because technology based limitations for this facility are being added to the other facility in a building-block method in accordance with chapter 5 of the EPA's permit writer's manual. No discharges (to waters of the state) are permitted from outfalls #001 or #005. See special condition #1 of the permit.

This permit adds operational monitoring for the basins associated with outfalls #002 and #003, and includes an additional basin constructed in 2019 for outfall #003 to comply with the no-discharge requirements of 10 CSR 20-6.015. These basins are labeled A, B, and the new one, C.

The electronic discharge monitoring reports were reviewed for the last five years. Discharges at outfall #002 have occurred three months in the last five years, and at outfall #003 occurred in 16 months. Discharges at outfall #003 have shown toxicity in the past; the permittee is rectifying the situation by adding another holding basin and will then hold the 25 year-24 hour storm event.

The area serving outfall #002 is equipment storage, flux storage, the former Magmont Mill area, and unused land. The area serving outfall #003 is industrial stormwater from the plant area. No other industrial stormwater discharges from this facility are permitted.

FACILITY MAP:



PART II. RECEIVING WATERBODY INFORMATION

RECEIVING WATERBODY'S WATER QUALITY:

The receiving waterbody has no concurrent water quality data available. See below.

303(D) LIST:

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

- ✓ Applicable; the second classified waterbody, Crooked Creek, is listed on the 2016 Missouri 303(d) list for cadmium, lead, and copper.
 - This facility is considered to be a source of the above listed pollutant(s). However, by transferring all of the wastewater to the Buick Mine and Mill for treatment, the stream is no longer receiving pollutant loading.

TOTAL MAXIMUM DAILY LOAD (TMDL):

A TMDL is a calculation of the maximum amount of a given pollutant a water body can absorb before its water quality is affected; hence, the purpose of a TMDL is to determine the pollutant loading a specific waterbody can assimilate without exceeding water quality standards. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan or TMDL may be developed. The TMDL shall include the WLA calculation. <http://dnr.mo.gov/env/wpp/tmdl/>

- ✓ Not applicable; this facility does not discharge to a waterbody/watershed with a TMDL.

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

Per Missouri's Effluent Regulations [10 CSR 20-7.015(1)(B)], waters of the state are divided into seven categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's effluent limitation table and further discussed in Part IV: Effluents Limits Determinations

- Missouri or Mississippi River
- Lake or Reservoir
- Losing
- Metropolitan No-Discharge
- Special Stream
- Subsurface Water
- All Other Waters

- ✓ No discharge

RECEIVING WATERBODY TABLE:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES	DISTANCE TO SEGMENT	12-DIGIT HUC
#002	Tributary to Crooked Creek 8-20-13 MUDD V1.0	C	3960	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)	0.0 mi	Crooked Creek - Huzzah Creek 07140102-0402
#003	Tributary to Crooked Creek 8-20-13 MUDD V1.0 (losing)	C	3960	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)	0.0 mi	

n/a not applicable

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

WBID = Waterbody Identification: Missouri Use Designation Dataset per 10 CSR 20-7.031(1)(Q) and (S) as 8-20-13 MUDD V1.0 or newer; data can be found as an ArcGIS shapefile on MSDIS at ftp://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_shp.zip; New C streams described on the dataset per 10 CSR 20-7.031(2)(A)3. as 100K Extent Remaining Streams.

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

10 CSR 20-7.031(1)(C)1.: **ALP** = Aquatic Life Protection (formerly AQL; current uses are defined to ensure the protection and propagation of fish shellfish and wildlife, further subcategorized as: WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat. This permit uses ALP effluent limitations in 10 CSR 20-7.031 Table A1-A2 for all habitat designations unless otherwise specified.

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

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

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

WBC-B = whole body contact recreation not supported in WBC-A;

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

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

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

IRR = irrigation for use on crops utilized for human or livestock consumption

LWW = Livestock and Wildlife Watering (current narrative use is defined as LWP = Livestock and Wildlife Protection);

DWS = Drinking Water Supply

IND = industrial water supply

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

10 CSR 20-7.031(6): GRW = Groundwater

MIXING CONSIDERATIONS:

For all 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.

RECEIVING WATERBODY MONITORING REQUIREMENTS:

No receiving water monitoring requirements are recommended at this time. The previous permit required in-stream monitoring. This is not continued as the facility no longer discharges wastewater from this facility.

PART III. RATIONALE AND DERIVATION OF EFFLUENT LIMITATIONS & PERMIT CONDITIONS

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

- ✓ Not applicable; the facility does not discharge to a losing stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

ANTIBACKSLIDING:

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

- ✓ Limitations in this operating permit for the reissuance conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.
 - ✓ Material and substantial alterations or additions to the permitted facility occurred after permit issuance justify the application of a less stringent effluent limitation.
 - The wastewater from outfalls #001 and #005 are sent to the Buick Mine and Mill facility (MO-0002003) for additional treatment, therefore the technology-based limitations imposed in the previous permit have been moved to receiving permit's outfalls.
 - The facility asserts outfalls' #002 and #003 basins now meet the requirements of 10 CSR 20-6.015. This was completed by increasing the storage capacity of both basins and implementing solids controls. The new impoundment, which would discharge through outfall #002, holds three times as much water as previously. Solids controls include a sump for solids and increasing the frequency of solids removal from the concrete basin. A second basin is being added to the outfall #003 area.
 - ✓ The Department determined technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
 - The previous permit special conditions contained a specific set of prohibitions related to general criteria found in 10 CSR 20-7.031(4); however, there was no determination as to whether the discharges have reasonable potential to cause or contribute to excursion of those general water quality criteria in the previous permit. 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. See GENERAL CRITERIA CONSIDERATIONS below.

- The previous permit's special conditions required sampling of total petroleum hydrocarbons (TPH) under the decision model to discharge stormwater having a sheen in secondary containment. The special condition has been revised in all permits beginning in 2015 to remove TPH as 40 CFR 136 does not contain any approved methods for the TPH parameter nor are there water quality standards for TPH. This permit requires oil and grease and BTEX (benzene, toluene, ethylbenzene, and xylene) sampling of the potentially contaminated stormwater in secondary containment. The facility need only sample for these constituents prior to release when a sheen or petroleum odor is present. This facility is not permitted to discharge secondary containment stormwater to waters of the state.
 - The previous permit special condition stated: "Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the SWPPP and made available to the department upon request."
This regulations has been rescinded; however, the permittee must continue to follow all statutes as found in RSMo 260.500-550.
- ✓ This permit reissuance conforms to 40 CFR 122.41(d)(1)(vii)(A).

ANTIDegradation REVIEW:

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

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

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

- ✓ Applicable; the facility must review and maintain stormwater BMPs as appropriate.
- ✓ Not applicable; the facility does not have stormwater discharges or the stormwater outfalls onsite have no industrial exposure.

CHANGES IN DISCHARGES OF TOXIC POLLUTANT:

This special condition reiterates the federal rules found in 40 CFR 122.44(f) and 122.42(a)(1). In these rules, the facility is required to report changes in amounts of toxic substances discharged. Toxic substances are defined in 40 CFR 122.2 as "...any pollutant listed as toxic under section 307(a)(1) or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing section 405(d) of the CWA." Section 307 of the clean water act then refers to those parameters found in 40 CFR 401.15. The permittee should also consider any other toxic pollutant in the discharge as reportable under this condition.

COMPLIANCE AND ENFORCEMENT:

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

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

EFFLUENT LIMITATION GUIDELINE:

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

- ✓ The facility has an associated Effluent Limit Guideline (ELG) which is applicable to the wastewater discharge at this site and is applied under 40 CFR 125.3(a). However, this facility does not discharge wastewater to waters of the state at this site; but sends wastewater to the Mine and Mill. ELG limitations are assessed at the Mine and Mill; MO-0002003.

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 State water quality standard, including State narrative criteria for water quality. The rule further states pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above a narrative criterion within an applicable State water quality standard, the permit shall contain a numeric effluent limitation to protect the specified narrative criterion. The previous permit included the narrative criteria as special conditions included in the permit absent any discussion of the discharge's reasonable potential to cause or contribute to an excursion of the criterion. In order to comply with this regulation, the permit writer has completed a reasonable potential determination on whether the discharge has reasonable potential to cause, or contribute to an excursion of the general criteria listed in 10 CSR 20-7.031(4). These specific requirements are listed below followed by derivation and discussion (the lettering matches the rule itself, under 10 CSR 20-7.031(4)). In instances where reasonable potential exists, the permit includes numeric limitations to address the

reasonable potential. In instances where reasonable potential does not exist, the permit may include monitoring to later determine the discharges potential to impact the receiving stream's narrative criteria. Finally, all of the previous permit narrative criteria prohibitions have been removed from the permit given they are addressed by numeric limits where reasonable potential exists. It should also be noted Section 644.076.1, RSMo as well as Section D – Administrative Requirements of Standard Conditions Part I of this permit state it shall be unlawful for any person to cause or 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.

- 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.
 - This is a no-discharge facility, there is no RP.
- Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses.
 - This is a no-discharge facility, there is no RP.
- Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.
 - This is a no-discharge facility, there is no RP.
- Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life.
 - This is a no-discharge facility, there is no RP.
- There shall be no significant human health hazard from incidental contact with the water.
 - This is a no-discharge facility, there is no RP.
- There shall be no acute toxicity to livestock or wildlife watering.
 - This is a no-discharge facility, there is no RP.
- Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.
 - This is a no-discharge facility, there is no RP.
- Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
 - There are no solid waste disposal activities or any operation which has reasonable potential to cause or contribute to the materials listed above being discharged through any outfall.

GROUNDWATER MONITORING:

Groundwater is a water of the state according to 10 CSR 20-2.010(82), and is subject to regulations at 10 CSR 20-7.015(7) and 10 CSR 20-7.031(6) and must be protected accordingly.

- ✓ This facility is not required to monitor groundwater for the water protection program.

MAJOR WATER USER:

Any surface or groundwater user with a water source and the equipment necessary to withdraw or divert 100,000 gallons (or 70 gallons per minute) or more per day combined from all sources from any stream, river, lake, well, spring, or other water source is considered a major water user in Missouri. All major water users are required by law to register water use annually (Missouri Revised Statutes Chapter 256.400 Geology, Water Resources and Geodetic Survey Section). <https://dnr.mo.gov/pubs/pub2337.htm>

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

NO-DISCHARGE LAND APPLICATION:

Land application of wastewater or sludge shall comply with the all applicable no-discharge requirements listed in 10 CSR 20-6.015 and all facility operations and maintenance requirements listed in 10 CSR 20-8.020(15). These requirements ensure appropriate operation of the no-discharge land application systems and prevent unauthorized and illicit discharges to waters of the state. Land applications by a contract hauler on fields the permittee has a spreading agreement on are not required to be in this permit. A spreading agreement does not constitute the field being rented or leased by the permittee as they do not have any control over management of the field.

- ✓ Not applicable; this permit does not authorize operation of a no-discharge land application system to treat wastewater or sludge.

REASONABLE POTENTIAL (RP):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants which are (or may be) discharged at a level causing or have the reasonable potential to cause (or contribute to) an in-stream excursion above narrative or numeric water quality standards. Per 10 CSR 20-7.031(4), general criteria shall be applicable to all waters of the state at all times; however, acute toxicity criteria may be exceeded by permit in zones of initial dilution, and chronic toxicity criteria may be exceeded by permit in mixing zones. If the permit writer determines any given pollutant has the reasonable potential to cause or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for the pollutant per 40 CFR Part 122.44(d)(1)(iii) and the most stringent limits per 10 CSR 20-7.031(9)(A).

- ✓ Not applicable; a mathematical RPA was not conducted for this facility; this is a no-discharge facility.

SCHEDULE OF COMPLIANCE (SOC):

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

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

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

✓ Not applicable; this permit does not contain a SOC.

SPILL REPORTING:

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

SLUDGE – DOMESTIC BIOSOLIDS:

Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for beneficial use (i.e. fertilizer). Sewage sludge is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information: <http://extension.missouri.edu/main/DisplayCategory.aspx?C=74> (WQ422 through WQ449).

✓ Not applicable; this condition is not applicable to the permittee for this facility.

SLUDGE – INDUSTRIAL:

Industrial sludge is solid, semi-solid, or liquid residue generated during the treatment of industrial process wastewater in a treatment works; including but not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment process; scum and solids filtered from water supplies and backwashed; and a material derived from industrial sludge.

✓ Not applicable; sludge is not land applied at this facility.

STANDARD CONDITIONS:

The standard conditions Part I attached to this permit incorporate all sections of 40 CFR 122.41(a) through (n) by reference as required by law. These conditions, in addition to the conditions enumerated within the standard conditions should be reviewed by the permittee to ascertain compliance with this permit, state regulations, state statues, federal regulations, and the Clean Water Act.

STORMWATER PERMITTING: LIMITATIONS AND BENCHMARKS:

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

Sufficient rainfall to cause a discharge for one hour or more from a facility would not necessarily cause significant flow in a receiving stream. Acute Water Quality Standards (WQSs) are based on one hour of exposure, and must be protected at all times. Therefore, industrial stormwater facilities with toxic contaminants present in the stormwater may have the potential to cause a violation of acute WQSs if toxic contaminants occur in sufficient amounts. In this instance, the permit writer may apply daily maximum limitations.

Conversely, it is unlikely for rainfall to cause a discharge for four continuous days from a facility; if this does occur however, the receiving stream will also likely sustain a significant amount of flow providing dilution. Most chronic WQSs are based on a four-day

exposure with some exceptions. Under this scenario, most industrial stormwater facilities have limited potential to cause a violation of chronic water quality standards in the receiving stream.

A standard mass-balance equation cannot be calculated for stormwater from this facility because the stormwater flow and flow in the receiving stream cannot be determined for conditions on any given day or storm event. The amount of stormwater discharged from the facility will vary based on current and previous rainfall, soil saturation, humidity, detention time, BMPs, surface permeability, etc. Flow in the receiving stream will vary based on climatic conditions, size of watershed, amount 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.

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). Reasonable potential determinations (RPDs; see REASONABLE POTENTIAL above) using best professional judgment are performed.

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

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

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

✓ Not applicable.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k), Best Management Practices (BMPs) must be used to control or abate the discharge of pollutants when: 1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; 3) Numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in 2015 https://www.epa.gov/sites/production/files/2015-11/documents/swppp_guide_industrial_2015.pdf, BMPs are measures or practices used to reduce the amount of pollution entering waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to 1) identify sources of pollution or contamination, and 2) select and carry out actions which prevent or control the pollution of storm water discharges. Additional information can be found in *Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-006; September 1992).

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

encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

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

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

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

If parameter-specific numeric benchmark exceedances continue to occur and the permittee feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the Department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification; the application is found at:

<https://dnr.mo.gov/forms/#WaterPollution>

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

UNDERGROUND INJECTION CONTROL (UIC):

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

✓ Not applicable; the permittee has not submitted materials indicating the facility will be performing UI at this site.

VARIANCE:

Per the Missouri Clean Water Law §644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no

event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the WLA is the amount of pollutant each discharger is allowed to discharge into the receiving stream without endangering water quality. Two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs) are reviewed. If one limit does not provide adequate protection for the receiving water, then the other must be used per 10 CSR 20-7.015(9)(A).

✓ Not applicable; wasteload allocations were not calculated.

WLA MODELING:

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

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

PART IV. EFFLUENT LIMITS DETERMINATIONS

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

This is a non-discharging permit therefore the facility has no numeric limitations within this permit. The facility shall monitor all discharges in accordance with Table A-2 of the permit any time when

OUTFALLS #002 (BASIN A) AND #003 (BASINS B AND C) – MAIN FEATURES

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL							
FLOW	MGD	*	*	SAME	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	24 HR. TOT
PRECIPITATION (BASIN A ONLY)	in/day	*	*	SAME	DAILY	ONCE/MONTH	MEASURED
BASIN FREEBOARD	feet	*	*	SAME	ONCE/MONTH	ONCE/MONTH	MEASURED
CONVENTIONAL							
pH ^Ω	SU	*	*	7.5-9.0	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	GRAB
TOTAL SUSPENDE SOLIDS (TSS)	mg/L	*	*	127/85	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	GRAB
METALS							
ANTIMONY, TR	µg/L	*	*	SEE BELOW	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	GRAB
ARSENIC, TR	µg/L	*	*	SEE BELOW	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	GRAB
CADMIUM, TR	µg/L	*	*	SEE BELOW	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	GRAB
COPPER, TR	µg/L	*	*	SEE BELOW	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	GRAB
IRON, TR	µg/L	*	*	SEE BELOW	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	GRAB
LEAD, TR	µg/L	*	*	SEE BELOW	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	GRAB
SELENIUM, TR	µg/L	*	*	SEE BELOW	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	GRAB
ZINC, TR	µg/L	*	*	SEE BELOW	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	GRAB
OTHER							
CHLORIDE	mg/L	*	*	*/*	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	GRAB
SULFATE	mg/L	*	*	*/*	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	GRAB
CHLORIDE PLUS SULFATE	mg/L	*	*	NEW	ONCE/DISCHARGE ◊	ONCE/DISCHARGE ◊	GRAB
WHOLE EFFLUENT TOXICITY [∞]	TUa	1.0	-	PASS/FAIL	ONCE/DISCHARGE [∞]	ONCE/DISCHARGE [∞]	GRAB

- * Monitoring and reporting requirement only
- Ω Report the minimum and maximum pH values; pH is not to be averaged
- TR Total Recoverable
- ◇ Once per discharge event means the facility will sample at least once when the basin is discharging. A daily sample is not required but encouraged. The report is due on the 28th day of the month following cessation of the discharge.
- ∞ Sampling and the accompanying limitations for Whole Effluent Toxicity shall occur during unauthorized (defined at special condition #2(c) discharges. The facility is not required to sample for WET during emergency discharges (defined at special condition #2(b).

DERIVATION AND DISCUSSION OF LIMITS:

PHYSICAL:

Flow

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

Freeboard

The facility will measure the amount of freeboard in each basin at least once each month and maintain sufficient empty volume to temper stormwater influx and prevent discharges.

Precipitation

Monitoring only requirement; measuring the amount of precipitation [(10 CSR 20-6.200(2)(C)1.E(VI)] during an event is necessary to ensure adequate stormwater management exists at the site. Knowing the amount of potential stormwater runoff can provide the permittee a better understanding of any specific control measures be employed to ensure protection of water quality. The facility will provide the 24 hour accumulation value of precipitation for each day of the month.

CONVENTIONAL:

Total Suspended Solids (TSS)

Monitoring required when discharging; previous permit limits were 127 mg/L daily maximum and 85 mg/L monthly average at outfall #002.

METALS:

The following metals shall be monitored when a discharge has occurred in accordance with Table A-2 of the permit: total recoverable antimony, arsenic, cadmium, copper, iron, lead, selenium, and zinc. These metals were continued from the previous permit. Barium was not continued; the values reported were well below the groundwater quality standard.

The following table shows the previous permit limits at outfall #003 and reported values for outfalls #002 and #003:

Parameter	Units	Daily Max.	Mon. Avg.	Minimum Reported #002	Maximum Reported #002	Minimum Reported #003	Maximum Reported #003
Antimony, Total Recoverable	lbs/day	5.59	2.28	n/a	n/a	0.034	7.3
Arsenic, Total Recoverable	lbs/day μg/L	0.28 33	0.14 16	n/a	n/a	0.0165 78	78.62 6,670
Barium, Total Recoverable	μg/L	*	*	n/a	n/a	24.7	157
Cadmium, Total Recoverable	μg/L	1.0	0.5	21.0	71.2	84	113
Copper, Total Recoverable	μg/L	39.8	19.8	93	218	24	670
Iron, Total Recoverable	μg/L	1639	817	n/a	n/a	96	11,400
Lead, Total Recoverable	lbs/day μg/L	0.18 21.4	0.09 10.6	n/a 674	n/a 1250	0.236 558	115 19,400

Parameter	Units	Daily Max.	Mon. Avg.	Minimum Reported #002	Maximum Reported #002	Minimum Reported #003	Maximum Reported #003
Selenium, Total Recoverable	µg/L	*	*	n/a	n/a	112	406
Zinc, Total Recoverable	lbs/day µg/L	2.6 307.3	1.3 153.1	n/a 462	n/a 1,760	0.0152 33.3	11.2 1,150

OTHER:

Chloride, Sulfate, and Chloride plus Sulfate

The facility shall sample for chloride, sulfate, and sum the results to provide the department with the total chlorides and sulfates.

Whole Effluent Toxicity (WET) Test, Acute

Monitoring is required to determine if reasonable potential exists for the discharge to cause toxicity within the receiving stream. A WET test is a quantifiable method to determine discharges from the facility cause toxicity to aquatic life by itself, in combination with, or through synergistic responses, when mixed with receiving stream water.

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

- ✓ Facility is a designated a Major
 - Facility continuously or routinely exceeds its design flow
 - Facility exceeds its design population equivalent (PE) for BOD₅ whether or not its design flow is being exceeded
 - Facility (whether primarily domestic or industrial) alters its production process throughout the year
- ✓ Facility handles large quantities of toxic substances, or substances toxic in large amounts
 - Facility has Water Quality-Based Effluent Limitations for toxic substances (other than NH₃)
 - Facility is a municipality with a Design Flow ≥ 22,500 GPD
- ✓ Other – no discharge facility; toxicity is exhibited frequently during discharge events.

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

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

Acute WLA: $C_e = ((\# \text{ cfs}_{DF} + \# \# \text{ cfs}_{ZID7Q10}) 0.3 \text{ TUa} - (\# \# \text{ cfs}_{ZID7Q10} * 0 \text{ TUa}_{\text{Background}})) \div \# \# \text{ cfs}_{DF}$

$C_e = 0.3 \text{ TUa}$ (if no mixing)

LTA_a: 0.3 TUa (0.321) = 0.0963 TUa [CV = 0.6, 99th Percentile]

MDL: 0.0963 TUa (3.11) = 0.3 TUa [CV = 0.6, 99th Percentile]

Where no mixing is allowed the acute criterion must be met at the end of the pipe. However, when using an LC₅₀ as the test endpoint, the acute toxicity test has an upper sensitivity level of 100% effluent, or 1.0 TUa. If less than 50% of the test organisms die at 100% effluent, the true LC₅₀ value for the effluent cannot be measured, effectively acting as a detection limit. Therefore, when the allowable effluent concentration is 100% a limit of **1.0 TUa** will apply.

The standard Allowable Effluent Concentration (AEC) for facilities discharging to unclassified, Class C, Class P (with default mixing considerations), or lakes [10 CSR 20-7.031(4)(A)4.B.(IV)(b)] is 100%. The standard dilution series for facilities discharging to waterbodies with no mixing considerations is 100%, 50%, 25%, 12.5%, & 6.25%.

PART V. SAMPLING AND REPORTING REQUIREMENTS

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

ELECTRONIC DISCHARGE MONITORING REPORT (EDMR) SUBMISSION SYSTEM:

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

Per 40 CFR 127.15 and 127.24, permitted facilities may request a temporary waiver for up to 5 years or a permanent waiver from electronic reporting from the Department. To obtain an electronic reporting waiver, a permittee must first submit an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. A request must be made for each facility. If more than one facility is owned or operated by a single entity, then the entity must submit a separate request for each facility based on its specific circumstances. An approved waiver is not transferable.

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

- ✓ The permittee/facility is currently using the eDMR data reporting system.
- ✓ The following identifiers were used:

Outfall:	Code:	Note:	Table:	Frequency:
#002	OA	Basin A – Operational Monitoring	A-1	monthly
#002	ED	Emergency Discharge	A-2 (no WET)	unscheduled
#002	UD	Unauthorized Discharge	A-2 (with WET)	unscheduled
#003	OB	Basin B – Operational Monitoring	A-1	monthly
#003	OC	Basin C – Operational Monitoring	A-1	monthly
#003	ED	Emergency Discharge	A-2 (no WET)	unscheduled
#003	UD	Unauthorized Discharge	A-2 (with WET)	unscheduled

SAMPLING FREQUENCY JUSTIFICATION:

Sampling frequency coincides with discharges.

SAMPLING TYPE JUSTIFICATION:

Sampling type was not continued from the previous permit. Composite sampling is not appropriate for emergency discharges.

SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:

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

PART VI. ADMINISTRATIVE REQUIREMENTS

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

PERMIT SYNCHRONIZATION:

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

- ✓ This permit is not being synchronized at this time because; this is a non-discharging permit therefore watershed synchronization is not required.

PUBLIC NOTICE:

The Department shall give public notice a draft permit has been prepared and its issuance is pending.

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

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

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

- ✓ The Public Notice period for this operating permit was from 11/9/2018 to 12/10/2018. No comments were received.
- ✓ The permit writer added the coordinates for Basins A, B, and C to the permit page 2 after the public notice comment period ended.
- ✓ The permit writer corrected the units for freeboard and precipitation from gallons to feet and from inches to inches per day respectively.

This permit is to be issued concurrently or after the Doe Run – Buick Mine/Mill (MO0002003) modification to account for wastewater flows being routed to the other facility.

DATE OF FACT SHEET: DECEMBER 13, 2018

COMPLETED BY:

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

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

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

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

Section B – Reporting Requirements

1. **Planned Changes.**
 - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42;
 - iii. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
 - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
 - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



STANDARD CONDITIONS FOR NPDES PERMITS
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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 permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



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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.



Maggie Crocker
Environmental Compliance Manager – Metals Division
mcrocker@doerun.com

August 31, 2018

Pam Hackler
Water Protection Program – NPDES Permits
Missouri Department of Natural Resources
1101 Riverside Drive
Jefferson City, MO 65101

**Re: MSOP Permit Application; Permit No. MO-0000337
The Doe Run Company – Buick Resource Recycling Facility**

Dear Ms. Hackler,

Per our meeting on August 22, 2018, the Buick Resource Recycling Facility (“BRRF”) is submitting the attached Missouri State Operating Permit (MSOP) application, FORM A and FORM C, as an update for the renewal of the facility’s MSOP Permit No. MO-0000337. As discussed, BRRF proposes that their permit should no longer contain outfalls aside from 002 and 003 which now qualify as no discharge outfalls (10 CSR 20-6.015), and outfalls 001 and 005 should no longer be considered outfalls or require monitoring or effluent limits. This amendment will reflect the facilities efforts to minimize discharges to Crooked Creek and eliminate redundant water treatment between BRRF and Buick Mine and Mill. The attached application and following discussion present the current and future changes in BRRF’s system since the submission of the original renewal application on 7/27/2015.

The premise of the updated application is that BRRF has increased stormwater storage capacity for outfall 002, decreased the risk of overflow from outfall 003 by implementing solids controls and increasing water storage capacity, and treatment of water at BRRF to meet effluent limits at outfalls 001 and 005, which are internal points in the treatment system, is redundant and unnecessary. In a previous permit modification outfall 002 at BRRF had been designated as a no discharge outfall with monitoring requirements that are only applicable during discharges that occur outside of major storm events. To consistently meet these requirements and to improve management of water onsite BRRF constructed a large earthen basin to contain stormwater from the 002 portion of BRRF’s watershed. This basin was reviewed by Art Goodin of the MDNR Southeast Regional Office in May of 2017. This collected water is transferred to Buick Mine and Mill for treatment prior to discharge. The new impoundment that would overflow to outfall 002 holds approximately three times as much water as the old impoundment and will hold more than a 25 year-24 hour storm event.

Outfall 003 is the overflow of a concrete retention basin at BRRF that receives stormwater and process water. In July 2016, BRRF received a letter requesting toxicity evaluations (TIE and TRE) for outfall 003 after failed WETS testing from overflow events. Following this letter BRRF and MDNR worked together to develop a work plan to minimize solids loading to the concrete storage basin and design additional water storage for the 003 portion of BRRF’s watershed. Since that time BRRF has improved solids management through the addition of a sump for solids collection prior to the concrete basin, and improved solids management practices including more regular solids removal from the basin.

18594 Highway KK
Boss, MO 65440
Telephone # 573-626-3499

Additionally, BRRF is working with Civil and Environmental Consultants to design additional water storage capacity in the form of another concrete basin. BRRF's current concrete basin will hold 6 million gallons (MG) of water, and BRRF plans to add an additional 4 MG of storage capacity in fiscal year 2019 (November 2018 – October 2019). Engineering design work is underway and construction is scheduled to begin as soon as November 2018. This new basin will be located just upgradient (southeast) of the existing concrete retention basin. Preliminary hydrology calculations are included with the application. The calculations show that only approximately 2.5 MG of additional storage are required to contain a storm event defined in the work plan, but BRRF has added capacity to the design as a safety factor to further improve the facility's ability to handle large storm events. Further, BRRF will increase pumping capacity to accommodate up to 2,000 gallons per minute (gpm) of flow that will be transferred to the Buick Mine and Mill waste water treatment plant from Outfall 003's water shed. Doe Run believes that these improvements will prevent overflow from outfall 003 except during catastrophic events.

Outfall locations 001 and 005 are internal monitoring locations at BRRF in Buick Mine and Mill's overall water treatment system; not discharges to regulated waters. Outfall 005 is a lagoon that discharges to the concrete retention basin which is then pumped to Buick Mine and Mill. Outfall 001 is water being pumped from the BRRF site to the Buick Mine and Mill water treatment plant. A review of the treatment system at Buick Mine and Mill and the effluent limits for BRRF and Buick revealed that the Buick Mine and Mill treatment capabilities and effluent limits were greater and more stringent than BRRD's capabilities and limits. Therefore, as proposed during the August 22, 2018 meeting, Doe Run believes that treatment, limits and monitoring of the transfer of water from BRRF to Buick Mine and Mill should be discontinued as treatment at BRRF is redundant and unnecessary.

Since BRRF's process waste water and accumulated storm water will be treated at Buick Mine & Mill's permitted waste water treatment plant prior to discharge, BRRF will terminate its redundant treatment of waste water. After BRRF's permit is updated the facility plans to physically settle and perform pH adjustment as needed to meet internal process controls, prior to transfer to Buick Mine and Mill. BRRF's previous maximum transfer rate was 500 gpm minute. To decrease the chance of overflowing from outfall 003, BRRF has increased their pumping ability as described in a phone call and email to Pam Hackler on August 8, 2018. BRRF's future maximum pumping capacity will be 2000 gpm from the outfall 003 water shed that includes process and stormwater and 800 gpm from the outfall 002 watershed that includes only stormwater, for combined maximum transfer volume of 2800 gpm. Until the permit is finalized BRRF does not plan to discharge more than 500 gpm unless a storm event occurs and the additional pumping capacity is necessary to prevent an overflow.

In summary, BRRF proposes to amend MSOP No. MO-0000337 to reflect the facilities ongoing efforts to avoid overflow discharges to Crooked Creek, and to improve the company's use of their resources by eliminating redundant water treatment. The premise of the amendment is to declare that BRRF proposes to become a no discharge facility for accumulated waste water and that the subject waters will be properly treated and processed at the neighboring Buick Mine and Mill's permitted waste water treatment plant. If you have additional comments and/or questions, please contact me by phone at (573) 626-3499 or email at mcrocker@doerun.com.

Sincerely,



Margaret L. Crocker
Environmental Compliance Manager

Cc: Samantha Anderson, The Doe Run Company



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

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED

NOTE: PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for: (Select only one.)

An operating permit for a new or unpermitted facility. Number of original construction permit: MO _____

Renewal of an operating permit. Permit number: MO 0000337 Expiration date: 1/23/2016

Modification of an operating permit. Permit number: MO _____ Modification reason: _____

1.1 Is the appropriate fee included with the application? (See instructions for appropriate fee.) Yes No

2. FACILITY

NAME	TELEPHONE NUMBER WITH AREA CODE		
Buick Resource Recycling Facility	(573) 626-4813		
	EMAIL		
	mcrocker@doerun.com		
PHYSICAL ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
18594 Hwy KK	Boss	MO	65440

3. OWNER

NAME	TELEPHONE NUMBER WITH AREA CODE		
The Buick Resource Recycling Facility, LLC	573-626-4813		
	EMAIL		
	astaley@doerun.com		
MAILING ADDRESS	CITY	STATE	ZIP CODE
18594 Hwy KK	Boss	MO	65440

3.1 Do you want to review draft permit prior to public notice? Yes No

4. CONTINUING AUTHORITY

NAME	TELEPHONE NUMBER WITH AREA CODE		
The Doe Run Resources Corp. D/B/A The Doe Run Company	(314) 453-7658		
	EMAIL		
	myingling@doerun.com		
MAILING ADDRESS	CITY	STATE	ZIP CODE
1801 Park 270 Drive	St. Louis	MO	63146

5. OPERATOR

NAME	CERTIFICATE NUMBER	TELEPHONE NUMBER WITH AREA CODE	
The Doe Run Company		(573)-626-3499	
	EMAIL		
	mcrocker@doerun.com		
MAILING ADDRESS	CITY	STATE	ZIP CODE
18594 Hwy KK	Boss	MO	65440

6. FACILITY CONTACT

NAME	TITLE	TELEPHONE NUMBER WITH AREA CODE	
Margaret Crocker	Environmental Manager	573-626-3499	
	EMAIL		
	mcrocker@doerun.com		

7. ADDITIONAL FACILITY INFORMATION

7.1 Legal description of outfalls (Attach additional sheets, if necessary.)

001 NW 1/4 SW 1/4 Sec 14 T 34N R 2W Iron County
 UTM Coordinates Easting (X): 664 868 Northing (Y): 4166879

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

002 NE 1/4 SW 1/4 Sec 14 T 34N R 2W Iron County
 UTM Coordinates Easting (X): 665082 Northing (Y): 4167458

003 NW 1/4 SW 1/4 Sec 14 T 34N R 2W Iron County
 UTM Coordinates Easting (X): _____ Northing (Y): _____

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

7.2 Primary standard industrial classification (SIC) and North American Industrial Classification System (NAICS) codes

001 – SIC 3314 and NAICS 331492 002 – SIC 3314 and NAICS 331492

003 – SIC 3314 and NAICS 331492 004 – SIC _____ and NAICS _____

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

- A. Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? Yes No
 If yes, complete Form C or 2F.
 (2F is EPA's Application for Storm Water Discharges Associated with Industrial Activity.)
- B. Is application for stormwater discharges only? Yes No
 If yes, complete Form C or 2F.
- C. Is your facility considered a "primary industry" under EPA guidelines: Yes No
 If yes, complete Forms C or 2F and D.
- D. Is wastewater land-applied? Yes No
 If yes, complete Form I.
- E. Are biosolids, sludge, ash or residuals generated, treated, stored or land-applied? Yes No
 If yes, complete Form R.
- F. If you are a Class IA CAFO, disregard Parts D and E, above, but attach any revisions to the nutrient management plan.
- G. Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.

9. ELECTRONIC DISCHARGE MONITORING REPORT (eDMR) SUBMISSION SYSTEM

Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, permittee shall report effluent limits and monitoring via an electronic system to ensure timely, complete, accurate and nationally consistent data.

Check one of the following for this application to be considered complete. (Check only one.)

To access the facility participation package, visit dnr.mo.gov/env/wpp/edmr.htm.

- You completed and submitted with this permit application the required documentation to participate in the eDMR system.
- You previously submitted required documentation to participate in the eDMR system and/or you currently use the eDMR system.
- You submitted a written request for a waiver from electronic reporting. See instructions for information regarding waivers.

9. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instructions.

PLEASE SHOW LOCATION ON MAP. SEE 8(D) ABOVE.

NAME

The Doe Run Resources Corporation d/b/a The Doe Run Company

ADDRESS

P.O. Box 500

CITY

Viburnum

STATE

MO

ZIP CODE

65566

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT)

Anthony Staley, General Manager

TELEPHONE NUMBER WITH AREA CODE

(573) 626-3315

SIGNATURE

DATE SIGNED

August 31st, 2018

MO 780-1479 (04-18)

BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETE.

ALSO INCLUDE APPLICABLE ADDITIONAL FORMS.

Submitting an incomplete application may result in the application being returned.

HAVE YOU INCLUDED THE FOLLOWING?

- | | |
|--|--|
| <input type="checkbox"/> Appropriate fees | <input type="checkbox"/> Form I (Irrigation), if applicable |
| <input type="checkbox"/> Map at 1" = 2000' scale | <input type="checkbox"/> Form R (Sludge), if applicable |
| <input type="checkbox"/> Signature | <input type="checkbox"/> Revised nutrient management plan, if applicable |
| <input type="checkbox"/> Form C or 2F, if applicable | |
| <input type="checkbox"/> Form D, if applicable | |

Supplement to Form A

7. ADDITIONAL FACILITY INFORMATION (CONTINUED)

7.1 Legal Description of Outfalls.

Outfall #005 NW ¼, SW ¼, Sec. 14, T34N, R2W, Iron County

UTM Coordinates Easting (X): 664511 Northing (Y): 4167324

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

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

005 – SIC 3314 and NAICS 331492

BRRF Outfalls

Legend	001	002	003	005
1	2	3	5	



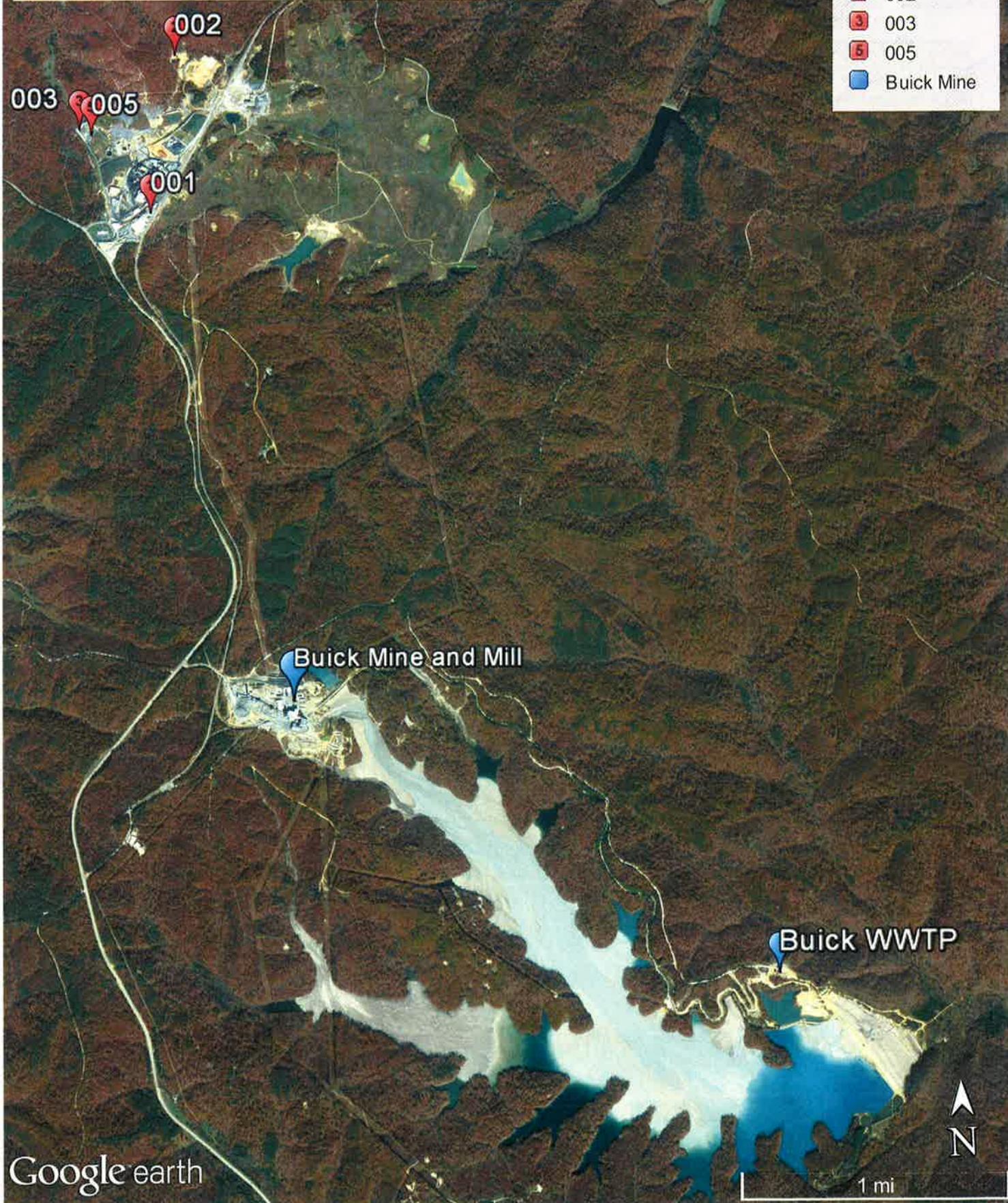
1000 ft

Overview

BRRF outfalls and Buick Mine and Mill facility and waste water treatment plant.

Legend

- 1 001
- 2 002
- 3 003
- 5 005
- Buick Mine





MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
FORM C – APPLICATION FOR DISCHARGE PERMIT –
MANUFACTURING, COMMERCIAL, MINING,
SILVICULTURE OPERATIONS, PROCESS AND STORMWATER

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

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

1.00 NAME OF FACILITY

Buick Resource Recycling Facility

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

MO-0000337

1.20 THIS IS A NEW FACILITY AND WAS CONSTRUCTED UNDER MISSOURI CONSTRUCTION PERMIT NUMBER (COMPLETE ONLY IF THIS FACILITY DOES NOT HAVE AN OPERATING PERMIT).

2.00 LIST THE STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES APPLICABLE TO YOUR FACILITY (FOUR DIGIT CODE)

A. FIRST 3314 B. SECOND _____
 C. THIRD _____ D. FOURTH _____

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) NW 1/4 SW 1/4 SEC 14 T 34N R 2W Iron COUNTY
(001, 003, 005)
002 NE 1/4 SW 1/4 Sec 14 T 34N R 2W Iron County

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST)	RECEIVING WATER
001	Internal - Doe Run Buick Mine and Mill
002 & 003	Unnamed Tributary to Crooked Creek
005	Internal - Doe Run Buick Mine and Mill

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

The facility recycles lead bearing materials, primarily lead acid batteries, to produce lead metal, lead alloys, metallic drosses, and other byproducts.

2.40 CONTINUED

C. EXCEPT FOR STORM RUNOFF, LEAKS OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL?

YES (COMPLETE THE FOLLOWING TABLE) NO (GO TO SECTION 2.50)

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

2.50 MAXIMUM PRODUCTION

A. DOES AN EFFLUENT GUIDELINE LIMITATION PROMULGATED BY EPA UNDER SECTION 304 OF THE CLEAN WATER ACT APPLY TO YOUR FACILITY?

YES (COMPLETE B.) NO (GO TO SECTION 2.60)

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINES EXPRESSED IN TERMS OF PRODUCTION (OF OTHER MEASURE OF OPERATION)?

YES (COMPLETE c.) NO (GO TO SECTION 2.60)

C. IF YOU ANSWERED "YES" TO B. LIST THE QUANTITY THAT REPRESENTS AN ACTUAL MEASUREMENT OF YOUR MAXIMUM LEVEL OF PRODUCTION, EXPRESSED IN THE TERMS AND UNITS USED IN THE APPLICABLE EFFLUENT GUIDELINE AND INDICATE THE AFFECTED OUTFALLS.

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS <i>(list outfall numbers)</i>
A. QUANTITY PER DAY	B. UNITS OF MEASURE	C. OPERATION, PRODUCT, MATERIAL, ETC. <i>(specify)</i>	
0.092	MM lb/day	Battery cracking	001
1.01	MM lb/day	Lead cast	001
3.03	MM lb/day	Lead produced from smelting	001
0.00035	B lbs/day	Dross Reverberatory Slag Granulation	001
219	gpm (mthly average)	Stormwater flow	001
2602	gpm (daily max)		
1	gpm	Laboratory	001
14	gpm	Tire Wash	001
30	gpm	Roadway watering and sweeping	001

2.60 IMPROVEMENTS

A. ARE YOU NOW REQUIRED BY ANY FEDERAL, STATE OR LOCAL AUTHORITY TO MEET, ANY IMPLEMENTATION SCHEDULE FOR THE CONSTRUCTION, UPGRADING OR OPERATION OF WASTEWATER TREATMENT EQUIPMENT OR PRACTICES OR ANY OTHER ENVIRONMENTAL PROGRAMS THAT MAY AFFECT THE DISCHARGES DESCRIBED IN THIS APPLICATION? THIS INCLUDES, BUT IS NOT LIMITED TO, PERMIT CONDITIONS, ADMINISTRATIVE OR ENFORCEMENT ORDERS, ENFORCEMENT COMPLIANCE SCHEDULE LETTERS, STIPULATIONS, COURT ORDERS AND GRANT OR LOAN CONDITIONS.

YES (COMPLETE THE FOLLOWING TABLE) NO (GO TO 3.00)

1. IDENTIFICATION OF CONDITION AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
				A. REQUIRED	B. PROJECTED
Refer to Multi-media Consent Decree U.S. and State of MO vs. Doe Run					

B. OPTIONAL: YOU MAY ATTACH ADDITIONAL SHEETS DESCRIBING ANY ADDITIONAL WATER POLLUTION CONTROL PROGRAMS (OR OTHER ENVIRONMENTAL PROJECTS WHICH MAY AFFECT YOUR DISCHARGES) YOU NOW HAVE UNDER WAY OR WHICH YOU PLAN. INDICATE WHETHER EACH PROGRAM IS NOW UNDER WAY OR PLANNED, AND INDICATE YOUR ACTUAL OR PLANNED SCHEDULES FOR CONSTRUCTION.

MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED.

3.10 BIOLOGICAL TOXICITY TESTING DATA

DO YOU HAVE ANY KNOWLEDGE OR REASON TO BELIEVE THAT ANY BIOLOGICAL TEST FOR ACUTE OR CHRONIC TOXICITY HAS BEEN MADE ON ANY OF YOUR DISCHARGES OR ON RECEIVING WATER IN RELATION TO YOUR DISCHARGE WITHIN THE LAST THREE YEARS?

YES (IDENTIFY THE TEST(S) AND DESCRIBE THEIR PURPOSES BELOW.) NO (GO TO 3.20)

Chronic Whole Effluent Toxicity test using Ceriodaphnia Dubia and Pimephales Promelas to fulfill requirements of NPDES permit

3.20 CONTRACT ANALYSIS INFORMATION

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

YES (LIST THE NAME, ADDRESS AND TELEPHONE NUMBER OF AND POLLUTANTS ANALYZED BY EACH SUCH LABORATORY OR FIRM BELOW.) NO (GO TO 3.30)

A. NAME	B. ADDRESS	C. TELEPHONE (area code and number)	D. POLLUTANTS ANALYZED (list)
Pace Analytical Services, Inc.	808 West McKay Frontenac, KS 66763	620-235-0003	WET Testing
AECOM Environment	4303 W LaPorte Ave Ft. Collins, CO 80521-2154	970-416-0916	WET Testing
Pace Analytical Services, Inc.	9608 Loriet Blvd Lenxa, KS 66219	913-599-5665	Chemical Analysis

3.30 CERTIFICATION

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT)

Anthony Staley, General Manager

TELEPHONE NUMBER WITH AREA CODE

(573) 626-4813

SIGNATURE (SEE INSTRUCTIONS)

DATE SIGNED

August 31ST, 2018

PLEASE PRINT OR TYPE You may report some or all of this information on separate sheet
(Use the same format) instead of completing these pages
SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO
001

INTAKE AND EFFLUENT CHARACTERISTICS

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

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify if blank)				4. INTAKE (optional)		B. NO. OF ANALYSES	
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION		(2) MASS
A. Biochemical Oxygen Demand (BOD)	8.5	12.1					1	mg/L	lbs/day			
B. Chemical Oxygen Demand (COD)	27.3	38.7					1	mg/L	lbs/day			
C. Total organic Carbon (TOC)	2.5	3.5					1	mg/L	lbs/day			
D. Total Suspended Solids (TSS)	5	7	5	7	0.8	1.1	13	mg/L	lbs/day			
E. Ammonia (as N)	2.5	3.5					1	mg/L	lbs/day			
F. Flow	VALUE 0.24 MGD		VALUE 0.24 MGD		VALUE 0.10 MGD		12			VALUE		
G. Temperature (winter)	VALUE		VALUE		VALUE			C		VALUE		
H. Temperature (summer)	VALUE		VALUE		VALUE			C		VALUE		
I. pH	MINIMUM 8.2	MAXIMUM 9.3	MINIMUM 8.2	MAXIMUM 9.3			12	STANDARD UNITS				

PART B - Mark 'X' in column 2A for each pollutant you know or have reason to believe is present. Mark 'X' in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE	B. MAXIMUM 30 DAY VALUE (if available)	C. LONG TERM AVRG. VALUE (if available)	D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE	B. NO. OF ANALYSES		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
A. Bromide (24959-67-9)	X		8.1	11.9		1	mg/L	lbs/day				
B. Chlorine, Total Residual	X		NonDetect	ND		1	mg/L	lbs/day				
C. Color	X		5			1	units					
D. Fecal Coliform	X		<10			1	CFU/100ml					
E. Fluoride (16984-48-8)	X		0.87	1.2		1	mg/L	lbs/day				
F. Nitrate - Nitrate (as N)	X		3.2	4.5		1	mg/L	lbs/day				

Outfall 001

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS			5. INTAKE (optional)		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen, Total Organic (as N)	X		8.1	11.5					1	mg/L	lbs/day			
H. Oil and Grease		X	NonDetect	ND					1	mg/L	lbs/day			
I. Phosphorus (as P), Total (7723-14-0)		X	NonDetect	ND					1	mg/L	lbs/day			
J. Sulfate (as SO ₄) (14808-79-8)	X		1790	2539.1					1	mg/L	lbs/day			
K. Sulfide (as S)		X	NonDetect	ND					1	mg/L	lbs/day			
L. Sulfite (as SO ₃) (14265-45-3)		X	NonDetect	ND					1	mg/L	lbs/day			
M. Surfactants	X		0.74	1.0					1	mg/L	lbs/day			
N. Aluminum, Total (7429-90-5)		X	NonDetect	ND					1	ug/L	lbs/day			
O. Barium, Total (7440-39-3)	X		30.4	0.04					1	ug/L	lbs/day			
P. Boron, Total (7440-42-8)	X		1680	2.38					1	ug/L	lbs/day			
Q. Cobalt, Total (7440-48-4)		X	NonDetect	ND					1	ug/L	lbs/day			
R. Iron, Total (7439-89-6)	X		127	0.18					1	ug/L	lbs/day			
S. Magnesium, Total (7439-95-4)	X		13100	18.58					1	ug/L	lbs/day			
T. Molybdenum, Total (7439-98-7)	X		12.2J	0.02					1	ug/L	lbs/day			
U. Manganese, Total (7439-96-5)		X	NonDetect	ND					1	ug/L	lbs/day			
V. Irm, Total (7440-31-5)	X		2.6J	0.004					1	ug/L	lbs/day			
W. Titanium, Total (7440-32-6)		X	NonDetect	ND					1	ug/L	lbs/day			

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting level.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE	
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS
METALS AND TOTAL PHENOLS													
1M Antimony, Total (7440-36-9)	X		434.4	0.3	434.4	0.3	75.2	0.1	13	ug/L	lbs/day		
2M Arsenic, Total (7440-38-2)	X		1078.57	0.72	1078.57	0.72	245.6	0.2	13	ug/L	lbs/day		
3M Beryllium, Total (7440-41-7)		X	NonDetect	NonDetect					1	ug/L	lbs/day		
4M Cadmium, Total (7440-43-9)	X		5.7	0.008					1	ug/L	lbs/day		
5M Chromium III (16065-83-1)		X	NonDetect	NonDetect					1	ug/L	lbs/day		
6M Chromium VI (18510-29-9)		X	NonDetect	NonDetect					1	ug/L	lbs/day		
7M Copper, Total (7440-50-8)	X		6.9	0.010					1	ug/L	lbs/day		
8M Lead, Total (7439-92-1)	X		176.8	0.24	176.8	0.24	28.4	0.03	13	ug/L	lbs/day		
9M Mercury, Total (7439-97-6)		X	NonDetect	NonDetect					1	ug/L	lbs/day		
10M Nickel, Total (7440-02-0)	X		6.7	0.010					1	ug/L	lbs/day		
11M Selenium, Total (7782-49-2)	X		744	1.055					1	ug/L	lbs/day		
12M Silver, Total (7440-22-4)		X	NonDetect	NonDetect					1	ug/L	lbs/day		
13M Thallium, Total (7440-28-0)		X	NonDetect	NonDetect					1	ug/L	lbs/day		
14M Zinc, Total (7440-66-6)	X		87.2	0.16	87.2	0.16	13.4	0.02	13	ug/L	lbs/day		
15M Cyanide, Amenable to Chlorination		X	NonDetect	NonDetect					1	ug/L	lbs/day		
16M Phenols, Total	X		0.023J	0.00003					1	ug/L	lbs/day		
RADIOACTIVITY													
(1) Alpha Total		X	0.833 +/- 0.953						1	pCi/l			
(2) Beta Total	X		41.0 +/- 9.18						1	pCi/l			
(3) Radium Total		X	0.0891 +/- 0.165						1	pCi/l			
(4) Radium 226 Total		X	0.164 +/- 0.374						1	pCi/l			

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting level

PLEASE PRINT OR TYPE You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages
SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO
002

INTAKE AND EFFLUENT CHARACTERISTICS

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify if blank)				4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	*	*										
B. Chemical Oxygen Demand (COD)	*	*										
C. Total organic Carbon (TOC)	*	*										
D. Total Suspended Solids (TSS)	21	7					1	mg/L	lbs/day			
E. Ammonia (as N)	*	*										
F. Flow	VALUE	0.04 MGD	VALUE							VALUE		
G. Temperature (winter)	VALUE		VALUE					C		VALUE		
H. Temperature (summer)	VALUE		VALUE					C		VALUE		
I. pH	MINIMUM	7.7	MAXIMUM	7.7	MINIMUM	MAXIMUM						

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 or any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS														
A. Bromide (24855-67-9)	X		*	*	*	*								
B. Chlorine, Total Residual			X	X	X	X								
C. Color	X		*	*	*	*								
D. Fecal Coliform			X	X	X	X								
E. Fluoride (16984-48-8)	X		*	*	*	*								
F. Nitrate - Nitrate (as N)	X		*	*	*	*								

MO-80-1514-05-03

* Data not available. Flow is dependent on precipitation. Believed present indicated based on presence in Outfall 001

Outfall 002

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G Nitrogen, Total Organic (as N)	X		*	*										
H Oil and Grease		X	*	*										
I Phosphorus (as P), Total (7723-14-0)		X	*	*										
J Sulfate (as SO ₄) (14806-79-8)	X		*	*										
K Sulfide (as S)		X	*	*										
L Sulfite (as SO ₃) (14265-45-3)		X	*	*										
M Surfactants	X		*	*										
N Aluminum, Total (7429-90-5)		X	*	*										
O Barium, Total (7440-39-3)	X		*	*										
P Boron, Total (7440-42-8)	X		*	*										
Q Cobalt, Total (7440-48-4)		X	*	*										
R Iron, Total (7439-89-6)	X		*	*										
S Magnesium, Total (7439-95-4)	X		*	*										
T Molybdenum, Total (7439-98-7)	X		*	*										
U Manganese, Total (7439-96-5)		X	*	*										
V Tin, Total (7440-31-5)	X		*	*										
W Titanium, Total (7440-32-6)		X	*	*										

* Data not available. Flow is dependent on precipitation. Believed present indicated based on presence in Outfall 001

Outfall 002

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M Antimony, Total (744C-36-9)	X		*		*									
2M Arsenic, Total (7440-38-2)	X		*		*									
3M Beryllium, Total (7440-41-7)		X	*		*									
4M Cadmium, Total (7440-43-9)	X		71.2	0.024				1	ug/L	lbs/day				
5M Chromium III (16065-83-1)		X	*		*									
6M Chromium VI (18540-29-9)		X	*		*									
7M Copper, Total (7440-50-8)	X		218	0.073				1	ug/L	lbs/day				
8M Lead, Total (7439-92-1)	X		1250	0.417				1	ug/L	lbs/day				
9M Mercury, Total (7439-97-6)		X	*		*									
10M Nickel, Total (7440-02-0)	X		*		*									
11M Selenium, Total (7782-49-2)	X		*		*									
12M Silver, Total (7440-22-4)		X	*		*									
13M Thallium, Total (7440-28-0)		X	*		*									
14M Zinc, Total (7440-66-6)	X		1760	0.587				1	ug/L	lbs/day				
15M Cyanide, Amenable to Chlorination		X	*		*									
16M Phenols, Total	X		*		*									
RADIOACTIVITY														
(1) Alpha Total		X	*		*									
(2) Beta Total		X	*		*									
(3) Radium Total		X	*		*									
(4) Radium 226 Total		X	*		*									

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PAGE 6

* Data not available Flow is dependent on precipitation. Believed present indicated based on presence in Outfall 001

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(Use the same format) instead of completing these pages
SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS

OUTFALL NO
003

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

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify, if blank)				4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	*	*										
B. Chemical Oxygen Demand (COD)	*	*										
C. Total organic Carbon (TOC)	*	*										
D. Total Suspended Solids (TSS)	25.9	216.9	25.9	216.9	16	106.8	3	mg/L	lbs/day			
E. Ammonia (as N)	*	*										
F. Flow	VALUE 0.8 MGD		VALUE 0.76 MGD		VALUE 0.9 MGD		10		VALUE			
G. Temperature (winter)	VALUE		VALUE		VALUE				°C			
H. Temperature (summer)	VALUE		VALUE		VALUE				°C			
I. pH	MINIMUM 3.2	MAXIMUM 9.6	MINIMUM 3.2	MAXIMUM 9.6			3	STANDARD UNITS				

PART B - Mark 'X' in column 2A for each pollutant you know or have reason to believe is present. Mark 'X' in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE	B. MAXIMUM 30 DAY VALUE (if available)	C. LONG TERM AVRG. VALUE (if available)	D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE	B. NO. OF ANALYSES		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

A. Bromide (24959-67-9)	X	*										
B. Chlorine, Total Residual		X										
C. Color	X	*										
D. Fecal Coliform	X	*										
E. Fluoride (16984-48-8)	X	*										
F. Nitrate - Nitrate (as N)	X	*										

* Data not available. Flow is dependent on precipitation. Believed present indicated based on presence in Outfall 001

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS			5. INTAKE (optional)		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS						
G Nitrogen, Total Organic (as N)	X													
H O ₂ and Grease		X												
I Phosphorus (as P), Total (7423-14-0)		X												
J Sulfate (as SO ₄) (14806-79-8)	X		2020	12473	2020	12473	1507	9132	3	mg/L	lbs/day			
K Sulfide (as S)		X												
L Sulfite (as SO ₃) (14265-45-3)		X												
M Surfactants	X													
N Aluminum, Total (7429-90-5)		X												
O Barium, Total (7440-39-3)	X		85	0.6	85	0.6	64.2	0.4	3	mg/L	lbs/day			
P Boron, Total (7440-42-8)	X													
Q Cobalt, Total (7440-48-4)		X												
R Iron, Total (7439-89-6)	X		10100	54.8	10100	54.8	5971.7	22.2	3	ug/L	lbs/day			
S Magnesium, Total (7439-95-4)	X													
T Molybdenum, Total (7439-98-7)	X													
U Manganese, Total (7439-96-5)		X												
V Tin, Total (7440-31-5)	X													
W Titanium, Total (7440-32-6)		X												

* Data not available. Flow is dependent on precipitation. Believed present indicated based on presence in Outfall 001

Outfall 003

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS			5. INTAKE (optional)	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS													
1M Antimony, Total (7440-36-9)	X		593.7	3.2	593.7	3.2	378.6	2.2	3	ug/L	lbs/day		
2M Arsenic, Total (7440-38-2)	X		894	6.4	894	6.4	397.3	2.8	3	ug/L	lbs/day		
3M Beryllium, Total (7440-41-7)	X		*	*									
4M Cadmium, Total (7440-43-9)	X		650	3.5	650	3.5	392.3	2.3	3	ug/L	lbs/day		
5M Chromium III (16065-83-1)	X		*	*									
6M Chromium VI (18540-29-9)	X		*	*									
7M Copper, Total (7440-50-8)	X		670	3.6	670	3.6	282.3	1.6	3	ug/L	lbs/day		
8M Lead, Total (7439-92-1)	X		7420	49.4	7420	49.4	4643	31.6	3	ug/L	lbs/day		
9M Mercury, Total (7439-97-6)	X		*	*									
10M Nickel, Total (7440-02-0)	X		*	*									
11M Selenium, Total (7782-49-2)	X		406	2.7	406	2.7	361.7	2.2	3	ug/L	lbs/day		
12M Silver, Total (7440-22-4)	X		*	*									
13M Thallium, Total (7440-28-0)	X		*	*									
14M Zinc, Total (7440-66-6)	X		1550	11.2	1550	11.2	31.6	5	3	ug/L	lbs/day		
15M Cyanide, Amenable to Chlorination	X		*	*									
16M Phenols, Total	X		*	*									
RADIOACTIVITY													
(1) Alpha Total	X		*	*									
(2) Beta Total	X		*	*									
(3) Radium Total	X		*	*									
(4) Radium 226 Total	X		*	*									

MO 150-513 06-13

* Data not available. Flow is dependent on precipitation. Believed present indicated based on presence in Outfall 001

PLEASE PRINT OR TYPE You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages SEE INSTRUCTIONS

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO
005

INTAKE AND EFFLUENT CHARACTERISTICS

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify if blank)				4. INTAKE (optional)		
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					
A. Biochemical Oxygen Demand (BOD)	28	5	28	5	11.9	2	6	mg/L	lbs/day		
B. Chemical Oxygen Demand (COD)											
C. Total Organic Carbon (TOC)											
D. Total Suspended Solids (TSS)	29	6	29	6	18	3	6	mg/L	lbs/day		
E. Ammonia (as N)	9.4	1.1	9.4	1.1	2.5	0.3	7	mg/L	lbs/day		
F. Flow	VALUE 0.026 MGD		VALUE 0.026 MGD		VALUE 0.018 MGD		7	VALUE		VALUE	
G. Temperature (winter)	VALUE		VALUE					°C		VALUE	
H. Temperature (summer)	VALUE		VALUE					°C		VALUE	
I. pH	MINIMUM 2.6	MAXIMUM 8.6	MINIMUM 2.6	MAXIMUM 8.6			7	STANDARD UNITS			

PART B - Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE	B. MAXIMUM 30 DAY VALUE (if available)	C. LONG TERM AVRG. VALUE (if available)	D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	B. NO. OF ANALYSES		
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS												
A. Bromide (24959-67-9)	X											
B. Chlorine, Total Residual		X										
C. Color	X											
D. Fecal Coliform		X										
E. Fluoride (15984-48-8)	X											
F. Nitrate - Nitrate (as N)	X											

END

Data not available. Believed present indicated based on presence in outfall 001

Outfall 005

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)		B. NO. OF ANALYSES	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE			
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS		
G Nitrogen, Total Organic (as N)	X													
H Oil and Grease		X												
I. Phosphorus (as P), Total (7723-14-0)	X													
J Sulfate (as SO ₄) (14808-79-8)	X													
K Sulfide (as S)		X												
L Sulfite (as SO ₃) (14265-45-3)		X												
M Surfactants	X													
N Aluminum, Total (7429-90-5)		X												
O Barium, Total (7440-39-3)	X													
P Boron, Total (7440-42-8)	X													
Q Cobalt, Total (7440-48-4)		X												
R Iron, Total (7439-89-6)	X													
S Magnesium, Total (7439-95-4)	X													
T Molybdenum, Total (7439-98-7)	X													
U Manganese, Total (7439-96-5)		X												
V Tin, Total (7440-31-5)	X													
W Titanium, Total (7440-32-6)		X												

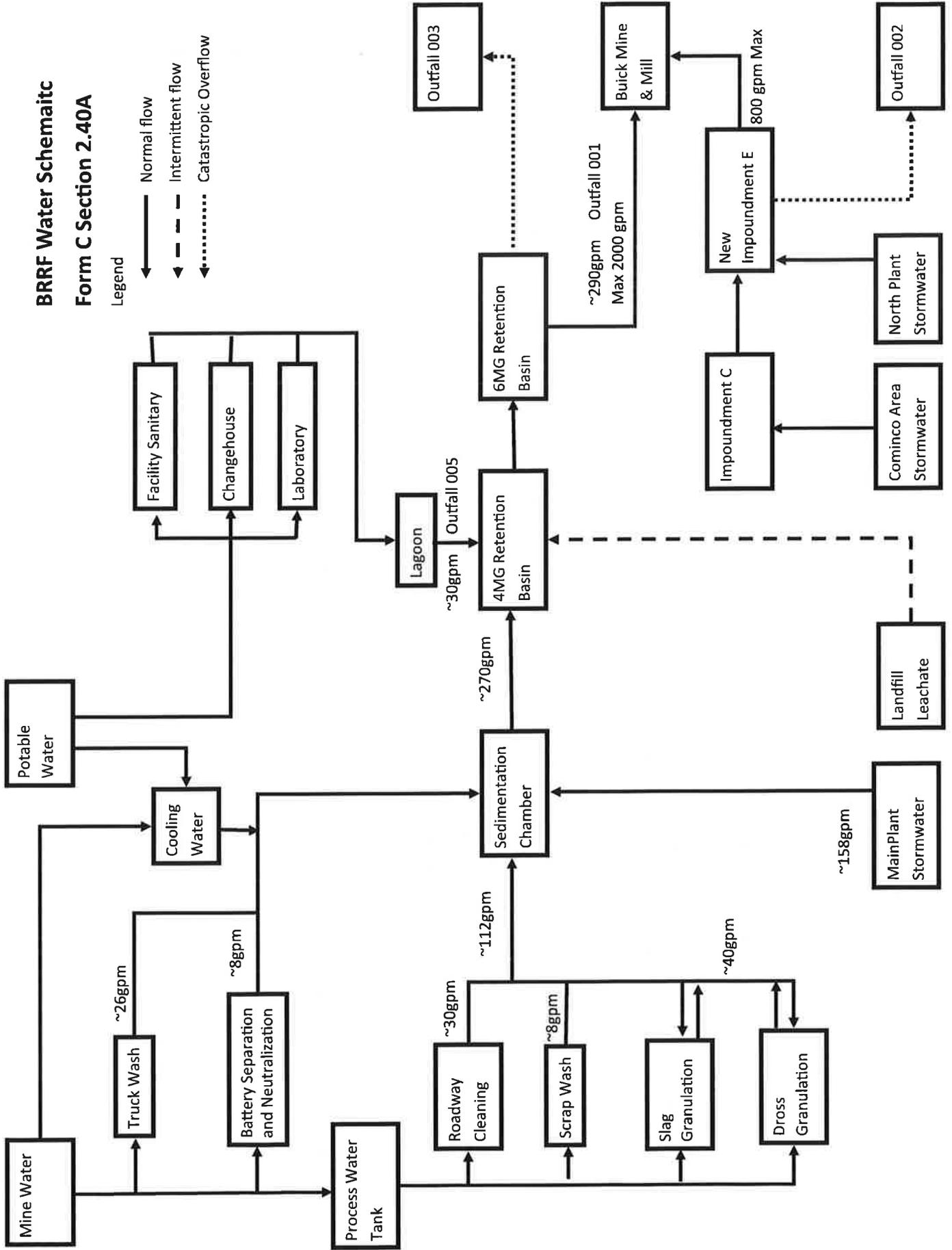
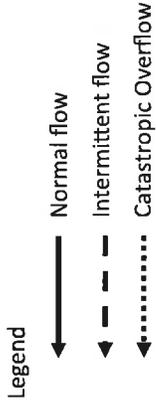
Data not available. Believed present indicated based on presence in outfall 001

Outfall 005

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE (optional)				
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)	D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS													
1M Antimony, Total (7440-36-9)		X											
2M Arsenic, Total (7440-38-2)	X												
3M Beryllium, Total (7440-41-7)		X											
4M Cadmium, Total (7440-43-9)	X												
5M Chromium III (16065-83-1)		X											
6M Chromium VI (18540-29-9)		X											
7M Copper, Total (7440-50-8)	X												
8M Lead, Total (7439-92-1)	X												
9M Mercury, Total (7439-97-6)		X											
10M Nickel, Total (7440-02-0)	X												
11M Selenium, Total (7782-49-2)	X												
12M Silver, Total (7440-32-4)		X											
13M Thallium, Total (7440-28-0)		X											
14M Zinc, Total (7440-66-6)	X												
15M Cyanide, Amenable to Chlorination		X											
16M Phenols, Total	X												
RADIOACTIVITY													
(1) Alpha Total		X											
(2) Beta Total	X												
(3) Radium Total		X											
(4) Radium 226 Total		X											

Data not available. Believed present indicated based on presence in outfall 001.

BRRF Water Schemaitc
Form C Section 2.40A



BRRF Outfall 003 Estimated Storm Volumes

DRAINAGE AREA	AREA (AC)	IMP (AC)	IMP (%)	CN	Time of Concentration (min)	DATA TYPE	UNIT	10-Year*				50-Year		100-Year	
								24-Hr	2-Day	3-Day	4-Day	24-Hr	24-Hr	24-Hr	24-Hr
1	70	56	80	84	11.5	PREC	IN	5.89	5.68	6.14	6.50	6.65	7.42		
						FLOW	CFS	402.8	272.4	279.0	283.3	469.44	536.93		
						RUNOFF	CF	1,040,199	990,463	1,099,667	1,185,746	1,221,753	1,407,699		
						INFLOW	CFS	0.22							
						OUTFLOW	CFS	-1.11							
						STORAGE	CF	963,199	836,463	868,667	877,746	1,144,753	1,330,699		
						Net Accumulation [^]	CF								

BRRF Outfall 003 Estimated Additional Capacity Requirements

	UNIT	10-Year*				50-Year		100-Year	
		24-Hr	2-Day	3-Day	4-Day	24-Hr	24-Hr	24-Hr	24-Hr
Net accumulation	CF	963,199	836,463	868,667	877,746				
Capacity of stormwater basin	CF		(802,139)						
1 ft freeboard	CF		62,930						
Solids accumulation	15%		120,321						
Safety factor (0%)	0%		0						
Additional Storage Req	CF	344,311	217,575	249,779	258,858	525,865	711,811		
Additional Storage Req	MG	2.58	1.63	1.87	1.94	3.93	5.32		

* SCS TYPE II STORM; D soil(industrial), CN(imp)=90, CN(pe)=60, precipitation per NOAA Atlas 14 90% confidence intervals

^ Initial period where rainfall distribution is less than that of the adjusted outflow has been ignored due to standing pool and manual pump control.

Notes:

1. Process water source = 100 gpm (0.22 cfs). Volume: estimated per Doe Run TRE Hydrologic model adjusted to include cooling tower water.
2. Pump rate provided by Godwin Pumps for the Xylem Dri-Prime HL 150M Electric Pump (500 gpm - 1.11 cfs)
3. pH ranges from 7 to 10.