

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, 92<sup>nd</sup> Congress) as amended,

Permit No. MO-0100226

Owner: The Doe Run Resources Corporation d/b/a The Doe Run Company  
Address: 1801 Park 270 Drive, St. Louis, MO 63146

Continuing Authority: The Doe Run Company  
Address: P.O. Box 500, Viburnum, MO 65566

Facility Name: Doe Run, Viburnum Mine #35 (Casteel)  
Address: Highway 32, Bixby, MO 65439

Legal Description: See Page 2  
Latitude/Longitude: See Page 2

Receiving Stream: See Page 2  
First Classified Stream and ID: See Page 2  
USGS Basin & Sub-watershed No.: See Page 2

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

**FACILITY DESCRIPTION**

See Page 2

This permit authorizes only wastewater 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 Section 644.051.6 of the Law.

March 19, 2010                      December 24, 2013  
Effective Date                      Revised Date

  
Sara Parker Pauley, Director, Department of Natural Resources

March 18, 2015  
Expiration Date

  
John Madras, Director, Water Protection Program

**FACILITY DESCRIPTION (continued):**

**Outfall #001** – Settling basin discharge - mine dewatering/storm water runoff from mining of lead, zinc and copper bearing ores. Water collected in the basin is combined and undergoes treatment via settling – SIC #1031

Average flow is 2.9 MGD, Maximum measured and reported flow is 6.8 MGD. Because of storm water influence, actual flow is dependent on precipitation

Legal Description: NW ¼, NE ¼, Sec 11, T34N, R2W, Iron Country

UTM Coordinates: X = 665285, Y = 4169578

Receiving Stream: Crooked Creek (U)

First Classified Stream and ID: Crooked Creek (P) (1928) 303(d)

USGS Basin & Sub-watershed No.: (07140102 - 0402)

**Outfall #002** – Domestic waste / sludge disposal - SIC #1031

Septic tank/Gravity Absorption Field/No-Discharge

Design Flow 400 GPD. Actual Flow 300 GPD.

Legal Description: NW ¼, NE ¼, Sec 11, T34N, R2W, Iron Country

UTM Coordinates: X=665351 Y=4169702

Receiving Stream: Crooked Creek (U)

First Classified Stream and ID: Crooked Creek (P) (1928)

USGS Basin & Sub-watershed No.: (07140102 - 0402)

**Outfall #003** – Settling basin discharge - mine dewatering/storm water runoff from mining of lead, zinc and copper bearing ores/truck wash water. Water collected in the basin is combined and undergoes treatment via settling – SIC #1031

Average flow is 3.2 MGD, Maximum measured and reported flow is 6.1 MGD. Because of storm water influence, actual flow is dependent on precipitation

Legal Description: NE ¼, NE ¼, Sec 11, T34N, R2W, Iron Country

UTM Coordinates: X = 665612, Y = 4169778

Receiving Stream: Crooked Creek (U)

First Classified Stream and ID: Crooked Creek (P) (1928) 303(d)

USGS Basin & Sub-watershed No.: (07140102 - 0402)

**Outfall #005**- Emergency Spillway from stormwater retention basin. The retention basin will be operated in a no-discharge fashion by pumping back to the tailings impoundment with a maximum pumping capacity of 3,000 gallon per minute.

Legal Description: NE ¼, NE ¼, Sec 11, T34N, R2W, Iron Country

UTM Coordinates: X = 665450, Y = 4169875

Receiving Stream: Crooked Creek (U)

First Classified Stream and ID: Crooked Creek (P) (1928) 303(d)

USGS Basin & Sub-watershed No.: (07140102 - 0402)

Flow dependent on precipitation

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 3 of 12	
PERMIT NUMBER MO-0100226						
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until two (2) years 364 days after the effective date of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	MGD	*		*	once/month	24-hr. estimate
Precipitation	Inches	*			once/day	24-hr. total
Hardness, Total as CaCO <sub>3</sub>	mg/L	*		*	once/month	grab
pH – Units	SU	**		**	once/month	grab
Total Suspended Solids	mg/L	30		20	once/month	grab
Cadmium, Total Recoverable	µg/L	94		50	once/month	grab
Copper, Total Recoverable	µg/L	300		150	once/month	grab
Lead, Total Recoverable	µg/L	432		264	once/month	grab
Zinc, Total Recoverable	µg/L	1,000		500	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>December 28, 2011</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<u>Outfall #001</u> Chronic Whole Effluent Toxicity (WET) Test	% Survival	See Special Conditions			once/quarter	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>July 28, 2010</u> .						
<u>Outfall #001</u> Mercury, Total Recoverable	µg/L	2.0		1.0	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2010</u> .						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 4 of 12	
PERMIT NUMBER MO-0100226						
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 three (3) years from the effective date of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	MGD	*		*	once/month	24-hr. estimate
Precipitation	Inches	*			once/day	24-hr. total
Hardness, Total as CaCO <sub>3</sub>	mg/L	*		*	once/month	grab
pH – Units	SU	**		**	once/month	grab
Total Suspended Solids	mg/L	30		20	once/month	grab
Cadmium, Total Recoverable	µg/L	1.6		0.8	once/month	grab
Copper, Total Recoverable	µg/L	300		150	once/month	grab
Lead, Total Recoverable	µg/L	48.2		24	once/month	grab
Zinc, Total Recoverable	µg/L	446.3		222.4	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE NEXT REPORT IS DUE <u>JANUARY 28, 2014</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<u>Outfall #001</u> Chronic Whole Effluent Toxicity (WET) Test	% Survival	See Special Conditions			once/quarter	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE NEXT REPORT IS DUE <u>JANUARY 28, 2014</u> .						
<u>Outfall #001</u> Mercury, Total Recoverable	µg/L	2.0		1.0	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE NEXT REPORT IS DUE <u>October 28, 2014</u> .						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 5 of 12	
					PERMIT NUMBER MO-0100226	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until two (2) years 364 days after the effective date of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #003</u>						
Flow	MGD	*		*	once/month	24-hr. estimate
Precipitation	Inches	*			once/day	24-hr. total
Hardness, Total as CaCO3	mg/L	*		*	once/month	grab
pH – Units	SU	**		**	once/month	grab
Total Suspended Solids	mg/L	30		20	once/month	grab
Cadmium, Total Recoverable	µg/L	94		50	once/month	grab
Copper, Total Recoverable	µg/L	137.2		68.4	once/month	grab
Lead, Total Recoverable	µg/L	432		264	once/month	grab
Zinc, Total Recoverable	µg/L	1,000		500	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>December 28, 2011</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<u>Outfall #003</u> Chronic Whole Effluent Toxicity (WET) Test	% Survival	See Special Conditions			once/quarter	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>July 28, 2010</u> .						
<u>Outfall #003</u> Mercury, Total Recoverable	µg/L	2.0		1.0	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2010</u> .						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>	PAGE NUMBER 6 of 12 PERMIT NUMBER MO-0100226
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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 three (3) years from the effective date of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #003</u>						
Flow	MGD	*		*	once/month	24-hr. estimate
Precipitation	Inches	*			once/day	24-hr. total
Hardness, Total as CaCO3	mg/L	*		*	once/month	grab
pH – Units	SU	**		**	once/month	grab
Total Suspended Solids	mg/L	30		20	once/month	grab
Cadmium, Total Recoverable	µg/L	1.2		0.6	once/month	grab
Copper, Total Recoverable	µg/L	137.2		68.4	once/month	grab
Lead, Total Recoverable	µg/L	59.4		29.6	once/month	grab
Zinc, Total Recoverable	µg/L	468.1		233.3	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE NEXT REPORT IS DUE JANUARY 28, 2014. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

<u>Outfall #003</u> Chronic Whole Effluent Toxicity (WET) Test	% Survival	See Special Conditions		once/quarter	grab
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MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE NEXT REPORT IS DUE JANUARY 28, 2014.

<u>Outfall #003</u> Mercury, Total Recoverable	µg/L	2.0		1.0	once/year	grab
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MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE NEXT REPORT IS DUE October 28, 2014.

**B. STANDARD CONDITIONS**

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 7 of 12	
PERMIT NUMBER MO-0100226						
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 upon issuance and remain in effect until expiration. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #005-Emergency Spillway (Notes 1,2, &amp; 3)</u> Basin Freeboard	feet	*		*	once/month	measured
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2015</u> .						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I & III STANDARD CONDITIONS DATED <u>November 1, 2013 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- \* Monitoring requirement only
- \*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 units.

Note 1 – Emergency Discharge. Outfall 005 may only discharge if rainfall exceeds the 1 in 10 year (Data taken from the Missouri Climate Atlas) rainfall event. **Discharge for any other reason shall constitute a permit violation and shall be recorded in accordance with Standard Conditions, Part 1, Section B.2.b.** Monitoring shall take place once per day while discharging. Test results are due on the 28<sup>th</sup> day of the following month after the cessation of the discharge. Permittee shall monitor for the following constituents:

Constituent	Units
Flow	MGD
Hardness	mg/L
Total Suspended Solids	mg/l
pH – Units	Standard Units
Cadmium, Total Recoverable	µg/L
Copper, Total Recoverable	µg/L
Lead, Total Recoverable	µg/L
Zinc, Total Recoverable	µg/L

Note 2 - Basin freeboard shall be reported as lagoon water level in feet below the overflow level.

Note 3 - Records shall be maintained and summarized into an annual operating report, which shall be submitted by January 28th of each year for the previous calendar year period. The report shall include the following:

- a. Record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;
- b. The number of days the stormwater retention basin has discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed;

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) 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:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.
3. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge 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; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
    - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
    - (4) The level established in Part A of the permit by the Director.
  - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
4. Report as no-discharge when a discharge does not occur during the report period.

5. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
  - (1) 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;
  - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
  - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
  - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
  - (5) There shall be no significant human health hazard from incidental contact with the water;
  - (6) There shall be no acute toxicity to livestock or wildlife watering;
  - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
  - (8) 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.

C. SPECIAL CONDITIONS (continued)

6. Industrial Sludge Disposal

- (a) Disposal of industrial sludge is not authorized by this permit. Industrial sludge shall be disposed at a permitted solid waste disposal facility in accordance with 10 CSR 80; or if the sludge is determined to be hazardous waste, shall be disposed at a permitted hazardous waste disposal facility pursuant to 10 CSR 25.
- (b) Non-hazardous sludge that is disposed on site or that is exempted under 10 CSR 80 must obtain applicable permits under 10 CSR 20-6.015 and 10 CSR 20-6.200.
- (c) Each effluent monitoring report shall also specify the date any sludge is removed from the facility, who removed the sludge and the number of gallons or quantity of sludge removed. The final disposal location shall be reported, including the name of the disposal facility, the solid waste or hazardous waste disposal permit number, and date of permit issuance.
- (d) This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act.

7. The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be prepared within 90 days and implemented within 120 days of permit issuance. The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. 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 the following document:

Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators, (Document number EPA 833-B-09-002) published by the United States Environmental Protection Agency (USEPA) in February 2009.

The SWPPP must include the following:

- (a) An assessment of all storm water discharges associated with the facility, including those flowing to the tailings pond. This must include a list of potential contaminants and an annual estimate of amounts that will be used in the described activities.
- (b) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter storm water.
- (c) The SWPPP must include a schedule for a monthly site inspection and a brief written report. The inspections must include observation and evaluation of BMP effectiveness, deficiencies, and corrective measures that will be taken. Deficiencies must be corrected within seven days. Inspection reports must be kept on site with the SWPPP. These must be made available to DNR personnel upon request.
- (d) A provision for designating an individual to be responsible for environmental matters.
- (e) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.

8. The permittee shall adhere to the following minimum Best Management Practices:

- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or other activities and thereby prevent the contamination of storm water from these substances.
- (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
- (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
- (d) Provide good housekeeping practices on the site to keep solid waste from entry into waters of the state.
- (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits.

C. SPECIAL CONDITIONS (continued)

9. Whole Effluent Toxicity (WET) Test shall be conducted as follows:

SUMMARY OF WET TESTING FOR THIS PERMIT				
OUTFALL	Toxic Unit Limit	FREQUENCY	SAMPLE TYPE	MONTH
001 & 003	1.6 TUC	once/quarter	grab	March, April, August & October

Dilution Series					
100%	62.5%	25%	12.5%	6.25%	(Control) 100% upstream, if available

(a) Test Schedule and Follow-Up Requirements

- (1) All tests results shall be submitted using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 14 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
  - (a) Upstream receiving water samples, where required, shall be collected upstream from any influence of the effluent where downstream flow is clearly evident.
  - (b) Samples submitted for analysis of upstream receiving water may be collected as a grab.
  - (c) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.
  - (d) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analyses performed upon any other effluent concentration.
  - (e) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
  - (f) Where flow-weighted composite sample is required for analysis, the samples shall be composited at the laboratory where the test is to be performed.
  - (g) Where instream testing is required downstream from the discharge, sample collection shall occur immediately below the established Zone of Initial Dilution in conjunction with or immediately following a release or discharge.
  - (h) Samples submitted for analysis of downstream receiving water may be collected as a grab.
  - (i) All instream samples, including downstream samples, shall be tested for toxicity at the 100% concentration in addition to any other assigned AEC for in-stream samples.
- (2) The WET test will be considered a failure if the Toxic Units exceed the limit in the table above.
- (3) All failing test results along with complete copies of the test reports as received from the laboratory shall be reported to the WATER PROTECTION PROGRAM within 14 calendar days of the availability of the results.
- (4) Unless waived by the Department, if the effluent fails the test, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter until one of the following conditions are met:
  - (a) Three consecutive tests pass. No further tests need to be performed until next regularly scheduled test period.
  - (b) A total of three tests fail.
- (5) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM within 14 calendar days of the third failed test.

C. SPECIAL CONDITIONS (continued)

9. Whole Effluent Toxicity tests (continued):

- (6) Additionally, upon failure of the third follow up test, the permittee shall contact the Water Protection Program within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. If the Water Protection Program directs the permittee to conduct a TIE or TRE, the permittee shall submit a plan for conducting a TIE or TRE within 60 calendar days of receiving such direction. This plan for conducting the TIE or TRE must be approved by the Program before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.
- (7) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.
- (8) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
- (9) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.
- (10) Submit a concise summary in tabular format of all WET test results with the annual report.

(b) Test Conditions

- (1) Unless more stringent methods are specified by the DNR, the procedures shall be consistent with the most current edition of Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, EPA-821/R-02/013, and Errata for the Effluent and Receiving Water Toxicity Testing Manuals: Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms; Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms; and Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms EPA-600/R-98/182.
- (2) The test shall be a 3-Brood *Ceriodaphnia dubia* Survival and Reproduction Test and a 7-Day Fathead Minnow (*Pimephales promelas*) Larval Survival and Growth Test. Testing with the green algae *Selenastrum* is not required.
- (3) All tests, including repeat tests for previous failures, shall include both test species listed below unless prior approval to use only one species is granted by the department.
- (4) Test species: *Ceriodaphnia dubia* and *Pimephales promelas* (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Reconstituted dilution/control water used will be moderately hard water as described in Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms.
- (5) Multiple-dilution tests will be run with:
  - (a) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
  - (b) reconstituted water.
- (6) If, in any control more than 10% of the test organisms die in 7 days, the test (control and effluent) is considered invalid and the test shall be repeated within two (2) weeks. Furthermore, if the results do not meet the acceptability criteria in Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, EPA-821-R-02-013 (or the most current edition), or if the required concentration-response review fails to yield a valid relationship per guidance contained in Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing, EPA-821-B-00-004 (or the most current edition), that test shall be repeated. Any test initiated but terminated before completion must also be reported along with a complete explanation for the termination.

D. SCHEDULE OF COMPLIANCE

1. The permittee must attain compliance with the final effluent limits as soon as possible, but no later than three years after issuance of this permit.
2. Within one year of issuance of this permit, the permittee shall submit a report detailing progress made in attaining compliance with the final effluent limits.
3. Within two years of issuance of this permit, the permittee shall submit a report detailing progress made in attaining compliance with the final effluent limits.

**Missouri Department of Natural Resources**  
**FACT SHEET**  
**FOR THE PURPOSE OF MODIFICATION**  
**OF**  
**MO-0100226**  
**DOE RUN COMPANY - VIBURNUM MINE #35 (CASTEEL)**

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water 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.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)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 (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit. This Factsheet is for a Major , Industrial Facility ; and/or permit with widespread public interest .

**Part I – Facility Information**

Facility Type: IND  
Facility SIC Code(s): 1031

Facility Description:

**2013 Modification: Addition of Outfall 005 and the no discharge requirements for the emergency spillway.** The purpose of this modification was to update the facility description and addition of an emergency overflow outfall #005. Doe Run is constructing a storm water retention basin approximately 0.36 acres in size, collecting stormwater runoff from 4.17 acres. The stormwater detention basin will collect stormwater runoff from the industrial areas. A storm water holding basin is being proposed to store storm water and expand the pump back capabilities to 3000 gallons per minute. In the event of an overflow, monitoring is proposed. The emergency spillway, Outfall 005, would only discharge if rainfall exceeds the 10 year precipitation event. The facility will normally be operated in a no-discharge manner unless flows exceed pumping capacity. There were no other changes in the facility description or effluent limits. The construction of the emergency spillway was covered under CP0001368 which was issued April 11, 2013.

Comments:

- Updating the facility description concerning the installation of an on-site no-discharge treatment system for outfall #002. The modification removes discharge monitoring requirements for outfall #002 as the facility is designed not to discharge. Construction permit for new domestic no-discharge system was issued August 30, 2011 (CP0000999). The public notice for the Outfall #002 changes were completed July 2011.

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	10.5	Settling	Mine dewatering/Stormwater runoff	~ 4.9
002	0.004	No discharge	Domestic wastewater	~ 4.9
003	9.46	Settling	Mine dewatering/Stormwater runoff	~ 4.9
005	--	Emergency	Stormwater runoff	~ 4.9

Outfall #001

Legal Description: NW ¼, NE ¼, Sec 11, T34N, R2W, Iron Country  
Latitude/Longitude: +3739299/-09107350  
Receiving Stream: Crooked Creek (U)  
First Classified Stream and ID: Crooked Creek (P) (1928)  
USGS Basin & Sub-watershed No.: (07140102 - 030002)

Outfall #002 – Domestic waste / sludge disposal - SIC #1031

Septic tank/Gravity Absorption Field/No-Discharge  
Design Flow 400 GPD. Actual Flow 300 GPD.  
Legal Description: NW ¼, NE ¼, Sec 11, T34N, R2W, Iron Country  
UTM Coordinates: X=665351 Y=4169702  
Receiving Stream: Unnamed Tributary to Crooked Creek (U)  
First Classified Stream and ID: Crooked Creek (P) (1928)  
USGS Basin & Sub-watershed No.: (07140102 - 0402)

Outfall #003

Legal Description: NE ¼, NE ¼, Sec 11, T34N, R2W, Iron Country  
Latitude/Longitude: +3739370/-09107210  
Receiving Stream: Crooked Creek (U)  
First Classified Stream and ID: Crooked Creek (P) (1928)  
USGS Basin & Sub-watershed No.: (07140102 - 030002)

**Outfall #005**- Emergency Spillway from stormwater retention basin. The retention basin will be operated in a no-discharge fashion by pumping back to the tailings impoundment with a maximum pumping capacity of 3,000 gallon per minute.

Legal Description: NE ¼, NE ¼, Sec 11, T34N, R2W, Iron Country  
UTM Coordinates: X = 665450, Y = 4169875  
Receiving Stream: Crooked Creek (U)  
First Classified Stream and ID: Crooked Creek (P) (1928) 303(d)  
USGS Basin & Sub-watershed No.: (07140102 - 0402)  
Flow dependent on precipitation

## **Part II – Receiving Stream Information**

### **APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:**

As per Missouri's Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

Missouri or Mississippi River [10 CSR 20-7.015(2)]:   
Lake or Reservoir [10 CSR 20-7.015(3)]:   
Losing [10 CSR 20-7.015(4)]:   
Metropolitan No-Discharge [10 CSR 20-7.015(5)]:   
Special Stream [10 CSR 20-7.015(6)]:   
Subsurface Water [10 CSR 20-7.015(7)]:   
All Other Waters [10 CSR 20-7.015(8)]:

10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1<sup>st</sup> classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

**RECEIVING STREAM(S) TABLE:**

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Crooked Creek	U	----	General Criteria	07140102	Ozark/Meramec
Crooked Creek	P	1928	LWW, AQL, CLF WBC (A)	07140102	Ozark/Meramec

- \* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery (CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND).  
 \*\* - Ecological Drainage Unit

**RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:**

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Crooked Creek (U)	0.0	0.0	0.0

Mixing Zone: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(a)].  
 Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(b)].

**RECEIVING STREAM MONITORING REQUIREMENTS:**

No receiving water monitoring requirements recommended at this time.

**Part III – Rationale and Derivation of Effluent Limitations & Permit Conditions**

**ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:**

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

Not Applicable : The facility does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

**ANTI-BACKSLIDING:**

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

Not Applicable : All limits in this operating permit are at least as protective as those previously established; therefore, backsliding does not apply. The effluent limit increases are as protective of instream water quality standards as the previously established limits. Adjustments to the effluent limits were made in accordance with U.S. EPA guidance on site specific dissolved metals translators. In addition, the facility is not presently in compliance with the previous effluent limits, therefore the revised effluent limits do not represent a possible decrease in performance.

**ANTIDegradation:**

In accordance with Missouri’s Water Quality Standard [10 CSR 20-7.031(2)], the Department is to document by means of Antidegradation Review that the use of a water body’s available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

Not Applicable : No degradation proposed and no further review necessary. Increased effluent limits do not represent additional loading, because the facility is not in compliance with the previous limits. The proposed final effluent limits still result in decreased loading to the stream.

**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.

Applicable : The permittee/facility is currently under enforcement action by the U.S. EPA and the State of Missouri due to violations of the Missouri Clean Water Law and the Federal Clean Water Act.

**SCHEDULE OF COMPLIANCE (SOC):**

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, 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.

Applicable : The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(10)].

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP):**

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* 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 storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Storm Water 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.

Applicable : A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the Department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.

**VARIANCE:**

As 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 operating permit is not drafted under premises of a petition for variance.

**WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:**

As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

Applicable : Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

$$C = \frac{(C_s \times Q_s) + (C_e \times Q_e)}{(Q_e + Q_s)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration  
C<sub>s</sub> = upstream concentration  
Q<sub>s</sub> = upstream flow  
C<sub>e</sub> = effluent concentration  
Q<sub>e</sub> = effluent flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID). Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

Number of Samples "n":

Additionally, in accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance, which should be, at a minimum, be targeted to comply with the values dictated by the WLA. Therefore, it is recommended that the actual planned frequency of monitoring normally be used to determine the value of "n" for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for "n" must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is "n = 4" at a minimum. For Total Ammonia as Nitrogen, "n = 30" is used.

**WLA MODELING:**

There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

Not Applicable : A WLA study was either not submitted or determined not applicable by Department staff.. The dissolved metals translator study is not a wasteload allocation study, it adjusts effluent limit calculations based on the previous WLAs

**WATER QUALITY STANDARDS:**

Per [10 CSR 20-7.031(3)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

**WHOLE EFFLUENT TOXICITY (WET) TEST:**

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

Applicable : Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(3)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§644.051.3 requires the Department to set permit conditions that comply 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, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by **all** facilities meeting the following criteria:

- Facility is a designated Major.
- Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH<sub>3</sub>)
- Other – facility has demonstrated that its effluent is significantly toxic. Facility will pursue upgrades to wastewater treatment.

Due to the lack of variation expected in discharge quality from outfall 001, grab samples for WET are appropriate. The primary source of flow for outfall 001 is mine dewatering.

Mine water is conveyed to sump locations and then pumped to the surface. At the surface the mine water is treated by settling in basins before discharge. The hydraulic residence time in the settling basins varies at each facility but is typically greater than 24 hours. Any variability in pollutant concentrations in the mine water would be dampened as a result of significant attenuation and mixing while in the settling basins. Therefore, discharges through monitored outfalls can be expected to exhibit minimal variation over the course of a day.

**303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):**

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are 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 waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

Applicable : Crooked Creek appears on the 303(d) list for Cadmium , Lead and Copper. The source of this pollution is believed to be the Buick Resource Recycling Facility. This facility is a source of the listed pollutants, but no TMDL has been completed, therefore standard water quality based effluent limits apply.

- This facility is considered to be a source of or has the potential to contribute to the above listed pollutant(s).

**Part V – Effluent Limits Determination**

OUTFALL #005- Emergency Spillway from new stormwater retention basin.

***Outfall #005 EFFLUENT LIMITATIONS TABLE:***

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	1,9	*		*	YES	**
TOTAL SUSPENDED SOLIDS	mg/L	1,9	*		*	YES	**
pH	SU	2,9	*		*	YES	**
CADMIUM, TOTAL RECOVERABLE	µg/L	2,9	*		*	YES	**
COPPER, TOTAL RECOVERABLE	µg/L	2,9	*		*	YES	**
LEAD, TOTAL RECOVERABLE	µg/L	2,9	*		*	YES	**
ZINC, TOTAL RECOVERABLE	µg/L	2,9	*		*	YES	**
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only.

\*\* - Parameter not previously established in previous state operating permit.

**Basis for Limitations Codes:**

- |  |                                    |
|--|------------------------------------|
| 1. State or Federal Regulation/Law       | 7. Antidegradation Policy          |
| 2. Water Quality Standard (includes RPA) | 8. Water Quality Model             |
| 3. Water Quality Based Effluent Limits   | 9. Best Professional Judgment      |
| 4. Lagoon Policy                         | 10. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy                        | 11. WET Test Policy                |
| 6. Dissolved Oxygen Policy               | 12. Antidegradation Review         |

**OUTFALLS #005 – DERIVATION AND DISCUSSION OF LIMITS:**

**Emergency Discharges** These parameters are being required once/event during an emergency discharge event. A storm water holding basin is being proposed to store storm water and to have capabilities to pump of 3,000 gallons per minute back to mine water pond and for ultimate discharge. In the event of an overflow, monitoring only for the parameters of concern (Flow, Total Suspended Solids, pH – Units, Total Hardness, Cadmium- Total Recoverable, Copper - Total Recoverable, Lead - Total Recoverable, Zinc - Total Recoverable) are proposed to determine the frequency and extent of emergency overflows to be evaluated during the next permit cycle. The facility will normally be operated in a no-discharge manner unless flows exceed pumping capacity. The facility will normally be operated in a no-discharge manner unless flows exceed pumping capacity. Monitoring and limitations are based on 40 CFR 440 Subpart L.

**Outfall #001 EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
CADMIUM, TOTAL RECOVERABLE	µg/L	2,3	1.6		0.8	YES	0.9/0.5
COPPER, TOTAL RECOVERABLE	µg/L	1	300		150	YES	36.7/18.3
LEAD, TOTAL RECOVERABLE	µg/L	2,3	48.2		24	YES	19.6/9.8
ZINC, TOTAL RECOVERABLE	µg/L	2,3	446.3		222.4	YES	286/143
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only.

\*\* - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.

\*\*\* - # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean.

\*\*\*\* - Parameter not previously established in previous state operating permit.

**Basis for Limitations Codes:**

- |  |                                    |
|--|------------------------------------|
| 7. State or Federal Regulation/Law       | 7. Antidegradation Policy          |
| 8. Water Quality Standard (includes RPA) | 8. Water Quality Model             |
| 9. Water Quality Based Effluent Limits   | 9. Best Professional Judgment      |
| 10. Lagoon Policy                        | 10. TMDL or Permit in lieu of TMDL |
| 11. Ammonia Policy                       | 11. WET Test Policy                |
| 12. Dissolved Oxygen Policy              | 12. Antidegradation Review         |

**OUTFALLS #001 – DERIVATION AND DISCUSSION OF LIMITS:**

**Metals**

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in the “Technical Support Document For Water Quality-based Toxic Controls” (EPA/505/2-90-001) and “The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion” (EPA 823-B-96-007). General warm-water fishery criteria apply and a water hardness of 400 mg/L is used in calculating water quality criteria.

METAL	CONVERSION FACTORS	
	ACUTE	CHRONIC
Cadmium	0.610	0.610
Copper	0.090	0.090
Lead	0.370	0.370
Zinc	0.850	0.850

Conversion factor values supplied by the permittee via a dissolved metals translator study. This study provides the site specific conditions for determining partitioning between dissolved and total recoverable metals. The plan for this study was approved by the Department.

- Cadmium, Total Recoverable**      Protection of Aquatic Life Chronic Criteria = 0.6 µg/L, Acute Criteria = 18.3 µg/L

Chronic = 0.6 / 0.610 = 1.0 µg/L  
 Acute = 18.3 / 0.610 = 30.0 µg/L

WLA<sub>C</sub> = 1.0 µg/L  
 WLA<sub>A</sub> = 30.0 µg/L

LTA<sub>C</sub> = 1.0 ( 0.527 ) = 0.5 µg/L      [ CV = 0.6, 99th Percentile ]  
 LTA<sub>A</sub> = 30.0 ( 0.321 ) = 9.6 µg/L      [ CV = 0.6, 99th Percentile ]

Use most protective number of LTA<sub>C</sub> or LTA<sub>A</sub>.

MDL = 0.5 ( 3.11 ) = 1.6 µg/L      [ CV = 0.6, 99th Percentile ]  
 AML = 0.5 ( 1.55 ) = 0.8 µg/L      [ CV = 0.6, 95th Percentile, n = 4 ]

• **Copper, Total Recoverable** Protection of Aquatic Life Chronic Criteria = 29.3 µg/L, Acute Criteria = 49.6 µg/L

$$\text{Chronic} = 29.3 / 0.090 = 325.6 \text{ } \mu\text{g/L}$$

$$\text{Acute} = 49.6 / 0.090 = 551.1 \text{ } \mu\text{g/L}$$

$$\text{WLA}_C = 325.6 \text{ } \mu\text{g/L}$$

$$\text{WLA}_A = 551.1 \text{ } \mu\text{g/L}$$

$$\text{LTA}_C = 325.6 ( 0.527 ) = 171.6 \text{ } \mu\text{g/L}$$

[ CV = 0.6, 99th Percentile ]

$$\text{LTA}_A = 551.1 ( 0.321 ) = 176.9 \text{ } \mu\text{g/L}$$

[ CV = 0.6, 99th Percentile ]

Use most protective number of  $\text{LTA}_C$  or  $\text{LTA}_A$ .

$$\text{MDL} = 171.6 ( 3.11 ) = 533.7 \text{ } \mu\text{g/L}$$

[ CV = 0.6, 99th Percentile ]

$$\text{AML} = 171.6 ( 1.55 ) = 266.0 \text{ } \mu\text{g/L}$$

[ CV = 0.6, 95th Percentile, n = 4 ]

• **Lead, Total Recoverable** Protection of Aquatic Life Chronic Criteria = 10.9 µg/L, Acute Criteria = 281 µg/L

$$\text{Chronic} = 10.9 / 0.370 = 29.5 \text{ } \mu\text{g/L}$$

$$\text{Acute} = 281 / 0.370 = 759 \text{ } \mu\text{g/L}$$

$$\text{WLA}_C = 29.5 \text{ } \mu\text{g/L}$$

$$\text{WLA}_A = 759 \text{ } \mu\text{g/L}$$

$$\text{LTA}_C = 29.5 ( 0.527 ) = 15.5 \text{ } \mu\text{g/L}$$

[ CV = 0.6, 99th Percentile ]

$$\text{LTA}_A = 759 ( 0.321 ) = 243.6 \text{ } \mu\text{g/L}$$

[ CV = 0.6, 99th Percentile ]

Use most protective number of  $\text{LTA}_C$  or  $\text{LTA}_A$ .

$$\text{MDL} = 15.5 ( 3.11 ) = 48.2 \text{ } \mu\text{g/L}$$

[ CV = 0.6, 99th Percentile ]

$$\text{AML} = 15.5 ( 1.55 ) = 24.0 \text{ } \mu\text{g/L}$$

[ CV = 0.6, 95th Percentile, n = 4 ]

• **Zinc, Total Recoverable** Protection of Aquatic Life Chronic Criteria = 380 µg/L, Acute Criteria = 380 µg/L

$$\text{Chronic} = 380 / 0.850 = 447 \text{ } \mu\text{g/L}$$

$$\text{Acute} = 380 / 0.850 = 447 \text{ } \mu\text{g/L}$$

$$\text{WLA}_C = 447 \text{ } \mu\text{g/L}$$

$$\text{WLA}_A = 447 \text{ } \mu\text{g/L}$$

$$\text{LTA}_C = 447 ( 0.527 ) = 236 \text{ } \mu\text{g/L}$$

[ CV = 0.6, 99th Percentile ]

$$\text{LTA}_A = 447 ( 0.321 ) = 143.5 \text{ } \mu\text{g/L}$$

[ CV = 0.6, 99th Percentile ]

Use most protective number of  $\text{LTA}_C$  or  $\text{LTA}_A$ .

$$\text{MDL} = 143.5 ( 3.11 ) = 446.3 \text{ } \mu\text{g/L}$$

[ CV = 0.6, 99th Percentile ]

$$\text{AML} = 143.5 ( 1.55 ) = 222.4 \text{ } \mu\text{g/L}$$

[ CV = 0.6, 95th Percentile, n = 4 ]

**Outfall 001 Categorical Effluent Limits, Best Conventional Pollutant Control Technology (BCT)**

Categorical effluent limits represent minimum technology based standards.

Part 440 - Ore Mining and Dressing Point Source Category  
 Subpart J - Copper, Lead, Zinc, Gold, Silver, and Molybdenum Ores Subcategory  
 40 CFR 440.102(a)

Effluent Characteristic	Maximum for	Average of daily
	any 1 day	values for 30 consecutive days
<u>Milligrams per Liter</u>		
TSS.....	30.0	20.0
Cu.....	0.30	0.15
Zn.....	1.5	0.75
Pb.....	0.6	0.3
Hg.....	0.002	0.001
pH.....	(1)	(1)

\1\ Within the range 6.0 to 9.0

**Comparison of Water Quality Based Effluent Limits and Categorical Limits**

A comparison has been made of all calculated water quality based effluent limits and the categorical effluent limits. The most protective limit below has been incorporated into this permit.

Effluent Parameter	Water Quality Based Effluent Limit	Categorical Limit
Total Suspended Solids (mg/L)	100/50	<b>30/20</b>
Copper, Total Recoverable (µg/L)	533.7/266	<b>300/150</b>
Zinc, Total Recoverable (µg/L)	<b>446.3/222.4</b>	1,500/750
Lead, Total Recoverable (µg/L)	<b>48.2/24</b>	600/300
Mercury, Total Recoverable (µg/L)	N/A	<b>2/1</b>
Cadmium, Total Recoverable (µg/L)	<b>1.6/0.8</b>	N/A
pH (SU)	<b>6.5 - 9.0</b>	6.0-9.0

**Outfall #003 EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
CADMIUM, TOTAL RECOVERABLE	µg/L	2,3	1.2		0.6	YES	0.9/0.5
COPPER, TOTAL RECOVERABLE	µg/L	2,3	137.2		68.4	YES	36.7/18.3
LEAD, TOTAL RECOVERABLE	µg/L	2,3	59.4		29.6	YES	19.6/9.8
ZINC, TOTAL RECOVERABLE	µg/L	2,3	468.1		233.3	YES	286/143
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only.

**Basis for Limitations Codes:**

- |  |                                    |
|--|------------------------------------|
| 1. State or Federal Regulation/Law       | 7. Antidegradation Policy          |
| 2. Water Quality Standard (includes RPA) | 8. Water Quality Model             |
| 3. Water Quality Based Effluent Limits   | 9. Best Professional Judgment      |
| 4. Lagoon Policy                         | 10. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy                        | 11. WET Test Policy                |
| 6. Dissolved Oxygen Policy               | 12. Antidegradation Review         |

**OUTFALL #003 – DERIVATION AND DISCUSSION OF LIMITS:**

**Metals**

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in the “Technical Support Document For Water Quality-based Toxic Controls” (EPA/505/2-90-001) and “The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion” (EPA 823-B-96-007). General warm-water fishery criteria apply and a water hardness of 400 mg/L is used to calculate applicable criteria.

METAL	CONVERSION FACTORS	
	ACUTE	CHRONIC
Cadmium	0.780	0.780
Copper	0.350	0.350
Lead	0.300	0.300
Zinc	0.810	0.810

Conversion factor values supplied by the permittee via a dissolved metals translator study. This study provides the site specific conditions for determining partitioning between dissolved and total recoverable metals. The plan for this study was approved by the Department.

- **Cadmium, Total Recoverable**      Protection of Aquatic Life Chronic Criteria = 0.6 µg/L, Acute Criteria = 18.3 µg/L

Chronic =  $0.6 / 0.780 = 0.8 \text{ µg/L}$

Acute =  $18.3 / 0.780 = 23.5 \text{ µg/L}$

WLA<sub>C</sub> = 0.8 µg/L

WLA<sub>A</sub> = 23.5 µg/L

LTA<sub>C</sub> =  $0.8 ( 0.527 ) = 0.4 \text{ µg/L}$

[ CV = 0.6, 99th Percentile ]

LTA<sub>A</sub> =  $23.5 ( 0.321 ) = 7.5 \text{ µg/L}$

[ CV = 0.6, 99th Percentile ]

Use most protective number of LTA<sub>C</sub> or LTA<sub>A</sub>.

MDL =  $0.4 ( 3.11 ) = 1.2 \text{ µg/L}$

[ CV = 0.6, 99th Percentile ]

AML =  $0.4 ( 1.55 ) = 0.6 \text{ µg/L}$

[ CV = 0.6, 95th Percentile, n = 4 ]

- **Copper, Total Recoverable**      Protection of Aquatic Life Chronic Criteria = 29.3 µg/L, Acute Criteria = 49.6 µg/L

Chronic =  $29.3 / 0.350 = 83.7 \text{ µg/L}$

Acute =  $49.6 / 0.350 = 141.7 \text{ µg/L}$

WLA<sub>C</sub> = 83.7 µg/L

WLA<sub>A</sub> = 141.7 µg/L

LTA<sub>C</sub> =  $83.7 ( 0.527 ) = 44.1 \text{ µg/L}$

[ CV = 0.6, 99th Percentile ]

LTA<sub>A</sub> =  $141.7 ( 0.321 ) = 45.5 \text{ µg/L}$

[ CV = 0.6, 99th Percentile ]

Use most protective number of LTA<sub>C</sub> or LTA<sub>A</sub>.

MDL =  $44.1 ( 3.11 ) = 137.2 \text{ µg/L}$

[ CV = 0.6, 99th Percentile ]

AML =  $44.1 ( 1.55 ) = 68.4 \text{ µg/L}$

[ CV = 0.6, 95th Percentile, n = 4 ]

• **Lead, Total Recoverable**                      Protection of Aquatic Life Chronic Criteria = 10.9 µg/L, Acute Criteria = 281 µg/L

Chronic = 10.9 / 0.300 = 36.3 µg/L  
 Acute = 281 / 0.300 = 937 µg/L

WLA<sub>C</sub> = 36.3 µg/L  
 WLA<sub>A</sub> = 937 µg/L

LTA<sub>C</sub> = 36.3 ( 0.527 ) = 19.1 µg/L                      [ CV = 0.6, 99th Percentile ]  
 LTA<sub>A</sub> = 937 ( 0.321 ) = 300.8 µg/L                      [ CV = 0.6, 99th Percentile ]

Use most protective number of LTA<sub>C</sub> or LTA<sub>A</sub>.

MDL = 19.1 ( 3.11 ) = 59.4 µg/L                      [ CV = 0.6, 99th Percentile ]  
 AML = 19.1 ( 1.55 ) = 29.6 µg/L                      [ CV = 0.6, 95th Percentile, n = 4 ]

• **Zinc, Total Recoverable**                      Protection of Aquatic Life Chronic Criteria = 380 µg/L, Acute Criteria = 380 µg/L

Chronic = 380 / 0.810 = 469 µg/L  
 Acute = 380 / 0.810 = 469 µg/L

WLA<sub>C</sub> = 469 µg/L  
 WLA<sub>A</sub> = 469 µg/L

LTA<sub>C</sub> = 469 ( 0.527 ) = 247 µg/L                      [ CV = 0.6, 99th Percentile ]  
 LTA<sub>A</sub> = 469 ( 0.321 ) = 150.5 µg/L                      [ CV = 0.6, 99th Percentile ]

Use most protective number of LTA<sub>C</sub> or LTA<sub>A</sub>.

MDL = 150.5 ( 3.11 ) = 468.1 µg/L                      [ CV = 0.6, 99th Percentile ]  
 AML = 150.5 ( 1.55 ) = 233.3 µg/L                      [ CV = 0.6, 95th Percentile, n = 4 ]

**Outfall 003 Categorical Effluent Limits, Best Conventional Pollutant Control Technology (BCT)**

Categorical effluent limits represent minimum technology based standards.

Part 440 - Ore Mining and Dressing Point Source Category  
 Subpart J - Copper, Lead, Zinc, Gold, Silver, and Molybdenum Ores Subcategory  
 40 CFR 440.102(a)

Effluent Characteristic	Maximum for any 1 day	Average of daily values for 30 consecutive days
	<u>Milligrams per Liter</u>	
TSS.....	30.0	20.0
Cu.....	0.30	0.15
Zn.....	1.5	0.75
Pb.....	0.6	0.3
Hg.....	0.002	0.001
pH.....	(1)	(1)

(1) Within the range 6.0 to 9.0

### **Comparison of Water Quality Based Effluent Limits and Categorical Limits**

A comparison has been made of all calculated water quality based effluent limits and the categorical effluent limits. The most protective limit below has been incorporated into this permit.

Effluent Parameter	Water Quality Based Effluent Limit	Categorical Limit
Total Suspended Solids (mg/L)	100/50	<b>30/20</b>
Copper, Total Recoverable (µg/L)	<b>137.2 / 68.4</b>	300/150
Zinc, Total Recoverable (µg/L)	<b>468.1 / 233.3</b>	1,500/750
Lead, Total Recoverable (µg/L)	<b>59.4 / 29.6</b>	600/300
Mercury, Total Recoverable (µg/L)	N/A	<b>2/1</b>
Cadmium, Total Recoverable (µg/L)	<b>1.2 / 0.6</b>	N/A
pH (SU)	<b>6.5 - 9.0</b>	6.0-9.0

### **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.

#### **PUBLIC NOTICE:**

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

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

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

- The Public Notice period for this operating permit was from March 8, 2013 to April 8, 2013. No responses were received.

**DATE OF FACT SHEET:** 10-17-11, 12-20-2012

#### **COMPLETED BY:**

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STANDARD CONDITIONS FOR NPDES PERMITS  
ISSUED BY  
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION  
REVISED  
NOVEMBER 1, 2013

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(a)(1);
    - 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. **Twenty-Four Hour Reporting.**
  - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
    - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
    - ii. Any upset which exceeds any effluent limitation in the permit.
    - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
  - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Sanitary Sewer Overflow Reporting.** The following requirements solely reflect reporting obligations, and reporting does not necessarily reflect noncompliance, which may depend on the circumstances of the incident reported.
- a. **Twenty-Four Hour (24-Hour) Reporting.** The permittee or owner shall report any incident in which wastewater escapes the collection system such that it reaches waters of the state or it may pose an imminent or substantial endangerment to the health or welfare of persons. 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 incident. A written submission shall also be provided within five (5) business days of the time the permittee or owner becomes aware of the incident. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The five (5) day reports may be provided via the current electronic method approved by the Department.
  - b. **Incidents Reported via Discharge Monitoring Reports (DMRs).** The permittee or owner shall report any event in which wastewater escapes the collection system, which does not enter waters of the state and is not expected to pose an imminent or substantial endangerment to the health or welfare of persons, which occur typically during wet weather events. Relevant information shall be provided with the permittee's or owner's DMRs.
4. **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.
5. **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.
6. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, 4, and 7 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
7. **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.
8. **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 28<sup>th</sup> day of the month following the end of the reporting period.

## Section C – Bypass/Upset Requirements

1. **Definitions.**
  - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility.
  - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
  - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
  - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.
  - b. Notice.
    - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
    - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
  - c. Prohibition of bypass.
    - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
      1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
      3. The permittee submitted notices as required under paragraph 2. b. of this section.
    - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
  - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
  - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
    - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
    - ii. The permitted facility was at the time being properly operated; and
    - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
    - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
  - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.



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Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
  - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
  - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
  - c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
  - d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
  - a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
  - b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
  - c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
  - a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
    - i. Violations of any terms or conditions of this permit or the law;
    - ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
    - iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
    - iv. Any reason set forth in the Law or Regulations.
  - b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.



STANDARD CONDITIONS FOR NPDES PERMITS  
ISSUED BY  
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION  
REVISED  
NOVEMBER 1, 2013

7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
  - b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
  - c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.
10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
- a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
  - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
- a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
  - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
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.
- 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.

**STANDARD CONDITIONS FOR NPDES PERMITS  
ISSUED BY  
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION  
AUGUST 15, 1994**

**PART III – SLUDGE & BIOSOLIDS FROM DOMESTIC WASTEWATER TREATMENT FACILITIES**

**SECTION A – GENERAL REQUIREMENTS**

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation and incorporates applicable federal sludge disposal requirements under 40 CFR 503. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFS 503 until such time as Missouri is delegated the new EPA sludge program. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address federal requirements.
2. These PART III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW) and privately owned facilities.
3. Sludge and Biosolids Use and Disposal Practices.
  - a. Permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
  - b. Permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
  - c. Permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.
  - d. A separate operating permit is required for each operating location where sludge or biosolids are generated, stored, treated, or disposed, unless specifically exempted in this permit or in 10 CSR 20, Chapter 6 regulations. For land application, see section H, subsection 3 of these standard conditions.
4. Sludge Received From Other Facilities
  - a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
  - b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge.
  - c. Sludge received from out-of-state generators shall receive prior approval of the permitting authority and shall be listed in the facility description or special conditions section of the permit.
5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.
6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after du process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act or under Chapter 644 RsMo.
8. In addition to the STANDARD CONDITIONS, the department may include sludge limitations in the special conditions portion or other sections of this permit.
9. Alternate Limits in Site Specific Permit.

Where deemed appropriate, the department may require an individual site specific permit in order to authorize alternate limitations:

  - a. An individual permit must be obtained for each operating location, including application sites.
  - b. To request a site specific permit, an individual permit application, permit fees, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.
10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the department, as follows:
  - a. The department will prepare a permit modification and follow permit public notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owners of property located adjacent to each land application site, where appropriate.
  - b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.
11. Compliance Period  
Compliance shall be achieved as expeditiously as possible but no later than the compliance dates under 40 CFR 503.2.

## **SECTION B – DEFINITIONS**

1. Biosolids means an organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge. Untreated sludge or sludge that does not conform to the pollutants and pathogen treatment requirements in this permit is not considered biosolids.
2. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
3. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
4. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
5. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a public owned treatment works (POTW) or privately owned facility.
6. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including septic tanks, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological discs, and other similar facilities. It does not include unaerated wastewater treatment lagoons and constructed wetlands for wastewater treatment.
7. Operating location as defined in 10 CSR 20-2.010 is all contiguous lands owned, operated or controlled by one (1) person or by two (2) or more persons jointly or as tenants in common.
8. Plant Available Nitrogen (PAN) is the nitrogen that will be available to plants during the next growing season after biosolids application.
9. Sinkhole is a depression in the land surface into which surface water flows to join an underground drainage system.
10. Site Specific Permit is a permit that has alternate limits developed to address specific site conditions for each land application site or storage site.
11. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks.
12. Sludge lagoon is an earthen basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
13. Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamp, marshes, bogs, and similar areas. Wetlands do not include constructed wetlands used for wastewater treatment.

## **SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES**

1. Sludge shall be routinely removed from the wastewater treatment facilities and handled according to the permit facility description and sludge conditions in this permit.
2. The permittee shall operate the facility so that there is no sludge loss into the discharged effluent in excess of permit limits, no sludge bypassing, and no discharge of sludge to waters of the state.
3. Mechanical treatment plants shall have separate sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove sludge from these storage compartments on the required design schedule is a violation of this permit.

## **SECTION D – SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR CONTRACT HAULER**

1. This section applies to permittees that haul sludge to another treatment facility for disposal or use contract haulers to remove and dispose of sludge.
2. Permittees that use contract haulers are responsible for compliance with all the terms of this permit including final disposal, unless the hauler has a separate permit for sludge or biosolids disposal issued by the department; or the hauler transports the sludge to another permitted treatment facility.
3. The permittee shall require documentation from the contractor of the disposal methods used and permits obtained by the contractor.
4. Testing of sludge, other than total solids content, is not required if sludge is hauled to a municipal wastewater treatment facility or other permitted wastewater treatment facility.

## **SECTION E – WASTEWATER TREATMENT LAGOONS AND STORMWATER RETENTION BASINS**

1. Sludge that is retained within a wastewater treatment lagoon is subject to sludge disposal requirements when the sludge is removed from the lagoon or when the lagoon ceases to receive and treat wastewater.
2. If sludge is removed during the year, an annual sludge report must be submitted.
3. Storm water retention basins or other earthen basins, which have been used as sludge storage for a mechanical treatment system is considered a sludge lagoon and must comply with Section G of this permit.

## **SECTION F – INCINERATION OF SLUDGE**

1. Sludge incineration facilities shall comply with the requirements of 40 CFR 503 Subpart E; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or if the ash is determined to be hazardous waste, shall be disposed in accordance with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, quantity of sludge incinerated, quantity of ash generated, quantity of ash stored; and ash use or disposal method, quantity, and location. Permittee shall also provide the name of the disposal facility and the applicable permit number.
4. Additional limitations, monitoring, and reporting requirements may be addressed in the Special Conditions sections of this permit.

## **SECTION G – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS**

1. Surface disposal sites shall comply with the requirements in 40 CFR 503 Subpart C, and solid waste disposal regulations under 10 CSR 80.
2. Additional limitations, monitoring, and reporting requirements may be addressed in the Special Conditions section of this permit.
3. Effective February 19, 1995, a sludge lagoon that has been in use for more than two years without removal of accumulated sludge, or that has not been properly closed shall comply with one of the following options:
  - a. Permittee shall obtain a site specific permit to address surface disposal requirements under 40 CFR 503, ground water quality regulations under 10 CSR 20, Chapter 7 and 8, and solid waste management regulations under 10 CSR 80;
  - b. Permittee shall clean out the sludge lagoon to remove any sludge over two years old and shall continue to remove accumulated sludge at least every two years or an alternate schedule approved under 40 CFR 503.20(b). In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of sludge on the bottom of the lagoon, upon prior approval of the department; or
  - c. Permittee shall close the lagoon in accordance with Section 1.

## **SECTION H – LAND APPLICATION**

1. The permittee shall not land apply sludge or biosolids unless land application is authorized in the Facility Description or special conditions section of the permit.
2. This permit replaces and terminates all previous sludge management plan approvals by the department for land application of sludge or biosolids.
3. Land application sites within a 20 mile radius of the wastewater treatment facility are authorized under this permit when biosolids are applied for beneficial use in accordance with these standard conditions unless a site specific permit is required under Section A, Subsection 9.
4. Biosolids shall not be applied unless authorized in this permit or exempted under 10 CSR 20, Chapter 6.
  - a. This permit does not authorize the land application of sludge except when sludge meets the definition of biosolids.
  - b. This permit authorizes “Class A or B” biosolids derived from domestic wastewater sludges to be land applied onto grass land, crop land, timber land or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
5. Public Contact Sites.

Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the department. Applications for approval shall be in the form of an engineering report and shall address priority pollutants and dioxin concentrations. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site-specific permit.

6. Agricultural and Silvicultural Sites.

In addition to specified conditions herein, this permit is subject to the attached Water Quality Guides numbers WQ 422 through 426 published by the University of Missouri, and hereby incorporated as though fully set forth herein. The guide topics are as follows:

WQ 422	Land Application of Septage
WQ 423	Monitoring Requirements for Biosolids Land Application
WQ 424	Biosolids Standards for Pathogens and Vectors
WQ 425	Biosolids Standards for Metals and Other Trace Substances
WQ 426	Best Management Practices for Biosolids Land Applications

### SECTION I – CLOSURE REQUIREMENTS

1. This section applies to all wastewater treatment facilities (mechanical and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees who plan to cease operation must obtain department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids, and ash. Permittee must maintain this permit until the facility is properly closed per 10 CSR 20-6.010 and 10 CSR 20-6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure shall not exceed the agricultural loading rates as follows:
  - a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
  - b. If a wastewater treatment lagoon has been in operation for 15 years or more, the sludge in the lagoon qualifies for Class B with respect to pathogens (see WQ 424, Table 3), and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B limitations. See WQ 423 and 424.
  - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. See WQ 426 for calculation procedures. For a grass cover crop, the allowable PAN is 300 pounds/acre.
4. When closing a wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered “septage” under the similar treatment works” definition. See WQ 422. Under the septage category, residuals may be left in place as follows:
  - a. Testing for metals or fecal coliform is not required.
  - b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at the rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
  - c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If more than 100 dry tons/acre will be left in the lagoon, test for nitrogen and determine the PAN in accordance with WQ 426. Allowable PAN loading is 300 pounds/acre.
5. Residuals left within the lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berms shall be demolished, and the site shall be graded and vegetated so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoon closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed five acres in accordance with 10 CSR 20-6.200.
7. If sludge exceeds agricultural loading rates under Section H or I, a landfill permit or solid waste disposal permit shall be obtained to authorize on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR 503, Subpart C.

### SECTION J – MONITORING FREQUENCY

1. At a minimum, sludge or biosolids shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed.
2. Testing for land application is listed under Section H, Subsection 6 of these standard conditions (see WQ 423). Once per year is the minimum test frequency. Additional testing shall be performed for each 100 dry tons of sludge generated or stored during the year.
3. Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the department.
4. Monitoring requirements shall be performed in accordance with, “POTW Sludge Sampling and Analysis Guidance Document”, United States Environmental Protection Agency, August 1989, and subsequent revisions.

## SECTION K – RECORD KEEPING AND REPORTING REQUIREMENTS

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in these Standard Conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
2. Reporting Period
  - a. By January 28<sup>th</sup> of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
  - b. Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
3. Report Forms. The annual report shall be submitted on report forms provided by the department or equivalent forms approved by the department.
4. Report shall be submitted as follows:  
Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the department and EPA. Other facilities need to report only to the department. Reports shall be submitted to the addresses listed as follows:

DNR regional office listed in your permit  
(See cover letter of permit)

EPA Region VII  
Water Compliance Branch (WACM)  
Sludge Coordinator  
901 N 5<sup>th</sup> Street  
Kansas City, KS 66101

5. Annual Report Contents. The annual report shall include the following:
  - a. Sludge/biosolids testing performed. Include a copy or summary of all test results, even if not required by this permit.
  - b. Sludge or Biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at end of year, and the quantity used or disposed.
  - c. Gallons and % solids data used to calculate the dry ton amounts.
  - d. Description of any unusual operating conditions.
  - e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
    - (1) This must include the name, address and permit number for the hauler and the sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name and permit number of that facility.
    - (2) Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
  - f. Contract Hauler Activities.  
If contract hauler, provide a copy of a signed contract or billing receipts from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge disposal or biosolids use permit.
  - g. Land Application Sites.
    - (1) Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as legal description for nearest ¼, ¼, Section, Township, Range, and County, or as latitude and longitude.
    - (2) If biosolids application exceeds 2 dry tons/acre/year, report biosolids nitrogen results. Plant Available Nitrogen (PAN) in pounds/acre, crop nitrogen requirement, available nitrogen in the soil prior to biosolids application, and PAN calculations for each site.
    - (3) If the “Low Metals” criteria is exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative loading which has been reached at each site.
    - (4) Report the method used for compliance with pathogen and vector attraction requirements.
    - (5) Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.

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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH  
**FORM A - APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT  
UNDER MISSOURI CLEAN WATER LAW**

FOR AGENCY USE ONLY	
CHECK NUMBER	# 689572
DATE RECEIVED	8/1/12
FEE SUBMITTED	\$750.00

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

1. This application is for:

An operating permit and antidegradation review public notice

A construction permit following an appropriate operating permit and antidegradation review public notice

A construction permit and concurrent operating permit and antidegradation review public notice

A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)

An operating permit for a new or unpermitted facility Construction Permit # \_\_\_\_\_

An operating permit renewal: permit # MO- \_\_\_\_\_ Expiration Date \_\_\_\_\_

An operating permit modification: permit # MO- \_\_\_\_\_ Reason: \_\_\_\_\_

1.1 Is the appropriate fee included with the application? (See instructions for appropriate fee)  YES  NO

**2. FACILITY**

NAME		TELEPHONE WITH AREA CODE	
THE DOE RUN COMPANY, VIBURNUM MINE #35 (CASTEEL)		(573) 626-4217	
ADDRESS (PHYSICAL)		FAX (573) 626-4217	
1304 HIGHWAY 32			
CITY	STATE	ZIP CODE	
BIXBY	MO	65439	

**3. OWNER**

NAME		E-MAIL ADDRESS	TELEPHONE WITH AREA CODE	
THE DOE RUN RESOURCES CORP. D/B/A THE DOE RUN CO.		sbatts@doerun.com	(573) 689-4504	
ADDRESS (MAILING)		FAX (573) 689-4598		
P.O. BOX 500, 35 IRON COUNTY ROAD #1				
CITY	STATE	ZIP CODE		
VIBURNUM	MO	65565		

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

**4. CONTINUING AUTHORITY**

NAME		TELEPHONE WITH AREA CODE		
SAME AS OWNER				
ADDRESS (MAILING)		FAX		
CITY	STATE	ZIP CODE		

**5. OPERATOR**

NAME		CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE	
SAME AS OWNER				
ADDRESS (MAILING)		FAX		
CITY	STATE	ZIP CODE		

**6. FACILITY CONTACT**

NAME		TITLE	TELEPHONE WITH AREA CODE	
ADAM KRESLER		MINE SUPERINTENDENT	(573) 626-4217	
			FAX (573) 626-4217	

**7. ADDITIONAL FACILITY INFORMATION**

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

ACTIVE 001 NW 1/4 NE 1/4 Sec 11 T 34N R 2W IRON County

OUTFALL UTM Coordinates Easting (X): 665279.1 Northing (Y): 4169586.8

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

INACTIVE 002 NW 1/4 NE 1/4 Sec 11 T 34N R 2W IRON County

OUTFALL UTM Coordinates Easting (X): \_\_\_\_\_ Northing (Y): \_\_\_\_\_

ACTIVE 003 NE 1/4 NE 1/4 Sec 11 T 34N R 2W IRON County

OUTFALL UTM Coordinates Easting (X): 665611.4 Northing (Y): 4169801.6

PROPOSED 005 NE 1/4 NE 1/4 Sec 11 T 34N R 2W IRON County

OUTFALL UTM Coordinates Easting (X): 665450.1 Northing (Y): 4169875.1

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

001 - SIC 1031 and NAICS 212231      002 - SIC \_\_\_\_\_ and NAICS \_\_\_\_\_

003 - SIC \_\_\_\_\_ and NAICS \_\_\_\_\_      004 - SIC \_\_\_\_\_ and NAICS \_\_\_\_\_

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

A. Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? YES  NO   
If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below).

B. Is your facility considered a "Primary Industry" under EPA guidelines: YES  NO   
If yes, complete Forms C and D.

C. Is application for storm water discharges only? YES  NO   
If yes, complete EPA Form 2F.

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

E. Is wastewater land applied? If yes, complete Form I. YES  NO

F. Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? YES  NO   
If yes, complete Form R.

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

NAME STEVE THOMAS - MIDWEST TRAIL RIDERS ASSOCIATION			
ADDRESS 12033 WESHIRE (P.O. Box 1203)	CITY MARYLAND HEIGHTS	STATE MO	ZIP CODE 63043

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT) STEVEN C. BATTS, GENERAL MANAGER	TELEPHONE WITH AREA CODE (573) 689-4513
SIGNATURE 	DATE SIGNED 7/30/12

MO 780-1479 (01-09)

**BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.**  
Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

- Appropriate Fees?
- Map at 1" = 2000' scale?
- Signature?
- Form C, if applicable?
- Form D, if applicable?
- Form 2F, if applicable?
- Form I (Irrigation), if applicable?
- Form R (Sludge), if applicable?

Note concerning Form C and Form D analytical requests:

Viburnum Mine #35 (Casteel) is currently operating under Missouri State Operating Permit MO-0100226. Permitted NPDES Outfalls 001 and 003, discharge mine water, truck wash water and stormwater collected within their respective drainage basins. The proposed impoundment will catch stormwater off a portion of the site and pump back to Mine Water Pond #1 which discharges to Permitted Outfall 003. The outfall associated with the proposed impoundment, Outfall 005, may discharge under precipitation events greater than the design event (see the Rainfall Hydrologic Model Memo). Under most circumstances however, Outfall 005 may not discharge. Because the active permitted Outfalls 001 and 003 are covered under the current Missouri State Operating Permit and the mining and ore loading processes remain unchanged, only the analytes dictated by the permit have been analyzed (currently and in past sampling events) for each active outfall as they are the analytes believed to be present at the site. Therefore, the additional analytical requests beyond the analytes dictated in the current Missouri State Operating Permit are not included in this construction permit application.

AUG -1 2012



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

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

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

1.00 NAME OF FACILITY  
THE DOE RUN COMPANY, VIBURNUM MINE #35 (CASTEEL)

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER  
MO-0100226

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

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

A. FIRST 1031 B. SECOND \_\_\_\_\_  
C. THIRD \_\_\_\_\_ D. FOURTH \_\_\_\_\_

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 SEC \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_ COUNTY \_\_\_\_\_

001 NW 1/4, NE 1/4, SEC 11, T34N, R2W, IRON COUNTY (EXISTING OUTFALL)  
003 NE 1/4, NE 1/4, SEC 11, T34N, R2W, IRON COUNTY (EXISTING OUTFALL)  
005 NE 1/4, NE 1/4, SEC 11, T34N, R2W, IRON COUNTY (PROPOSED OUTFALL)

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST) 001, 003, 005 RECEIVING WATER UNNAMED TRIBUTARY TO CROOKED CREEK

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS  
MINING OF LEAD, ZINC AND COPPER BEARING ORES.



**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>	

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
CONSENT DECREE					

B. OPTIONAL: YOU MAY ATTACH ADDITIONAL SHEETS DESCRIBING ANY ADDITIONAL WATER POLLUTION CONTROL PROGRAMS (OR OTHER ENVIRONMENTAL PROJECTS THAT MAY AFFECT YOUR DISCHARGES) YOU NOW HAVE UNDER WAY OR ARE YOU PLANNING. 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)

**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.	9608 Lolret Blvd. Lenexa, KS 66219	913-599-5665	NPDES Permit Analytes Calcium Magnesium Total Hardness Cadmium Copper Lead Zinc Total Suspended Solids Mercury

**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 the information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME AND OFFICIAL TITLE (TYPE OR PRINT) STEVE BATTS, GENERAL MANAGER	TELEPHONE NUMBER WITH AREA CODE (573) 689-4513
SIGNATURE (SEE INSTRUCTIONS) 	DATE SIGNED 7/30/12

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet instead of completing these pages.  
 (Use the same format)  
 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)			
	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						
A. Biochemical Oxygen Demand (BOD)												
B. Chemical Oxygen Demand (COD)												
C. Total organic Carbon (TOC)	0.15	1.7				1	mg/L	kg				
D. Total Suspended Solids (TSS)	6	68				1	mg/L	kg				
E. Ammonia (as N)												
F. Flow	VALUE		VALUE		VALUE	3	MGD		VALUE			
G. Temperature (winter)	VALUE		VALUE		VALUE		°C		VALUE			
H. Temperature (summer)	VALUE		VALUE		VALUE		°C		VALUE			
I. pH	MINIMUM 8.2	MAXIMUM -	MINIMUM	MAXIMUM		1	STANDARD UNITS					

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a 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	
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		2.6	30					1	mg/L	kg			

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						
G. Nitrogen Total Organic (as N)	X		4.2	48					1		kg			
H. Oil and Grease	X		1.3	15					1		kg			
I. Phosphorus (as P) Total (7723-14-0)	X		0.1	1.1					1		kg			
J. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X		406	4611					1		kg			
K. Sulfide (as S)	X		0.05	0.6					1		kg			
L. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum Total (7429-90-5)	X		0.01	0.1					1		kg			
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		51	579					1		kg			
T. Molybdenum Total (7439-98-7)		X												
U. Manganese Total (7439-96-5)		X												
V. Tin Total (7440-31-5)		X												
W. Titanium Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE <i>(optional)</i>			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE <i>(if available)</i>		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		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	
<b>METALS, AND TOTAL PHENOLS</b>												
1M. Antimony, Total (7440-36-9)		X										
2M. Beryllium, Total (7440-41-7)		X										
3M. Magnesium, Total (7439-95-4)	X		51	579		1	mg/L	kg				
4M. Molybdenum, Total (7439-98-7)		X										
5M. Tin, Total (7440-31-5)		X										
6M. Titanium, Total (7440-32-6)		X										
7M. Mercury, Total (7439-97-6)	X		ND	0		1	mg/L	kg				
8M. Selenium, Total (7782-49-2)		X										
9M. Thallium, Total (7440-28-0)		X										
10M. Phenols, Total		X										
<b>RADIOACTIVITY</b>												
(1) Alpha Total		X										
(2) Beta Total		X										
(3) Radium Total		X										
(4) Radium 226 Total		X										

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet instead of completing these pages.  
(Use the same format)  
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)		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	
A. Biochemical Oxygen Demand (BOD)										
B. Chemical Oxygen Demand (COD)										
C. Total organic Carbon (TOC)	0.21	4.4			1	mg/L	kg			
D. Total Suspended Solids (TSS)	4.5	94			1	mg/L	kg			
E. Ammonia (as N)										
F. Flow	VALUE				1	MGD		VALUE		
G. Temperature (winter)	VALUE				1			VALUE		
H. Temperature (summer)	VALUE				1			VALUE		
I. pH	MINIMUM 8.3	MAXIMUM			1	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a 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)		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	
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		0.46	10			1	mg/L	kg			

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						
G. Nitrogen Total Organic (as N)	X		0.5	10					1	mg/L	kg			
H. Oil and Grease	X		1.4	19					1	mg/L	kg			
I. Phosphorus (as P) Total (7723-14-0)	X		0.1	2.1					1	mg/L	kg			
J. Sulfate (as SO <sub>4</sub> ) (14808-79-8)	X		356	7411					1	mg/L	kg			
K. Sulfide (as S)	X		0.05	1					1	mg/L	kg			
L. Sulfite (as SO <sub>3</sub> ) (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		53.3	1110					1	mg/L	kg			
T. Molybdenum Total (7439-98-7)		X												
U. Manganese Total (7439-96-5)		X												
V. Tin Total (7440-31-5)		X												
W. Titanium Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS			5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE		A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(if available)	(1) CONCENTRATION			(2) MASS	(1) CONCENTRATION	
<b>METALS, AND TOTAL PHENOLS</b>													
1M. Antimony, Total (7440-36-9)		X											
2M. Beryllium, Total (7440-41-7)		X											
3M. Magnesium, Total (7439-95-4)	X		53.3	1110					1	mg/L	kg		
4M. Molybdenum, Total (7439-98-7)		X											
5M. Tin, Total (7440-31-5)		X											
6M. Titanium, Total (7440-32-6)		X											
7M. Mercury, Total (7439-97-6)		X	ND	0					1	mg/L	kg		
8M. Selenium, Total (7782-49-2)		X											
9M. Thallium, Total (7440-28-0)		X											
10M. Phenols, Total		X											
<b>RADIOACTIVITY</b>													
(1) Alpha Total		X											
(2) Beta Total		X											
(3) Radium Total		X											
(4) Radium 226 Total		X											

AUG - 1 2012



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
**FORM – APPLICATION FOR DISCHARGE PERMIT  
PRIMARY INDUSTRIES**

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

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

1.00 NAME OF FACILITY

THE DOE RUN COMPANY, VIBURNUM MINE #35 (CASTEEL)

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

**MO - 0100226**

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

**INDUSTRY CATEGORY**

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

**APPLICATION FOR DISCHARGE PERMIT  
FORM D – PRIMARY INDUSTRIES**

<b>TABLE II</b>	
NPDES # (IF ASSIGNED) MO-0100226	OUTFALL NUMBER 001

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

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT				4. UNITS		5. INTAKE (optional)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	B. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			
<b>METALS, AND TOTAL PHENOLS</b>												
1M. Antimony, Total (7440-36-9)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
2M. Beryllium, Total (7440-41-7)	-	<input type="checkbox"/>	<input type="checkbox"/>									
3M. Magnesium Total (7439-95-4)	✓	<input checked="" type="checkbox"/>	<input type="checkbox"/>	51	579					1	kg	
4M. Molybdenum Total (7439-98-7)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
5M. Tin Total (7440-31-5)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
6M. Titanium Total (7440-32-6)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
7M. Mercury, Total (7439-97-6)	✓	<input type="checkbox"/>	<input type="checkbox"/>	ND	0					1	kg	
8M. Selenium, Total (7782-49-2)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
9M. Thallium, Total (7440-28-0)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
10M. Phenols, Total	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
<b>DIOXIN</b>												
2,3,7,8 – Tetra – chlorodibenzo-P-Dioxin (1764-01-6)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
<b>DESCRIBE RESULTS</b>												

CONTINUED FROM PAGE 3

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

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

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

CONTINUED FROM THE PAGE 5

NPDES # (IF ASSIGNED)  
MO-0100226

OUTFALL NUMBER  
001

3. EFFLUENT

2. MARK "X"

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

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT				4. UNITS		5. INTAKE (optional)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. LONG TERM AVRG. VALUE	B. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			
<b>GCMS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)</b>												
42B. N-Nitroso N-Propylamine (621-64-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
43B. N-Nitrosodiphenylamine (86-30-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
44B. Phenanthrene (85-01-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
45B. Pyrene (129-00-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
46B. 1,2,4-Trichlorobenzene (120-82-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
<b>GCMS FRACTION - PESTICIDES</b>												
1P. Aldrin (309-00-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
2P. α-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
3P. β-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
4P. γ-BHC (58-89-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
5P. δ-BHC (319-86-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
6P. Chlordane (57-74-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
7P. 4,4'-DDT (50-29-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
8P. 4,4'-DDE (72-55-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
9P. 4,4'-DDD (72-54-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
10P. Dieldrin (60-57-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
11P. α-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
12P. β-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
13P. Endosulfan Sulfate (1031-07-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
14P. Endrin (72-20-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
15P. Endrin Aldehyde (7421-93-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
16P. Heptachlor (76-44-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									



**APPLICATION FOR DISCHARGE PERMIT  
FORM D – PRIMARY INDUSTRIES**

<b>TABLE II</b>	
NPDES # (IF ASSIGNED)	OUTFALL NUMBER
MO-0100226	003

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

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT				4. UNITS		5. INTAKE (optional)			
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		(1) CONCENTRATION	(2) MASS	
<b>METALS, AND TOTAL PHENOLS</b>													
1M. Antimony, Total (7440-36-9)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
2M. Beryllium, Total (7440-41-7)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
3M. Magnesium Total (7439-95-4)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	53.3	1110								
4M. Molybdenum Total (7439-98-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
5M. Tin Total (7440-31-5)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
6M. Titanium Total (7440-32-6)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
7M. Mercury, Total (7439-97-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND	0								
8M. Selenium, Total (7782-49-2)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
9M. Thallium, Total (7440-28-0)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
10M. Phenols, Total	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<b>DIOXIN</b>													
2,3,7,8 - Tetra - chlorodibenzo-P- Dioxin (1764-01-6)	-	<input type="checkbox"/>	<input checked="" type="checkbox"/>										
MO 780-1516 (02-12)													

CONTINUED FROM PAGE 3

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

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "x"		3. EFFLUENT				4. UNITS		5. INTAKE (optional)	
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		D. NO. OF ANALYSES	A. LONG TERM AVRG. VALUE	B. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			
<b>GC/MS FRACTION – VOLATILE COMPOUNDS (continued)</b>										
22V. Methylene Chloride (75-09-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
23V. 1,1,2,2 – Tetra-chloroethane (79-34-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
24V. Tetrachloroethylene (127-18-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
25V. Toluene (108-88-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
26V. 1,2 – Trans Dichloroethylene (156-60-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
27V. 1,1,1 – Tri – chloroethane (71-55-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
28V. 1,1,2 – Tri-chloroethane (79-00-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
29V. Trichloro – ethylene (79-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
30V. Trichloro – fluoromethane (75-69-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
31V. Vinyl Chloride (75-01-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							

**GC/MS FRACTION – ACID COMPOUNDS**

1A. 2 – Chlorophenol (95-57-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
2A. 2,4 – Dichloro – phenol (120-83-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
3A. 2,4 – Dimethyl – phenol (105-67-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
4A. 4,6 – Dinitro – O-Cresol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
5A. 2,4 – Dinitro – phenol (51-28-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
6A. 2-Nitrophenol (88-75-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
7A. 4-Nitrophenol (100-02-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
8A. P – Chloro – M Cresol (59-50-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
9A. Pentachloro – phenol (87-86-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
10A. Phenol (108-952)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							
11A. 2,4,6 – Trichloro-phenol (88-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>							

CONTINUED FROM THE FRONT

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

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NPDES # (IF ASSIGNED)  
MO-0100226

OUTFALL NUMBER  
003

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT				4. UNITS		5. INTAKE (optional)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. LONG TERM AVRG. VALUE	B. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			
<b>GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)</b>												
22B. 1, 4-Dichlorobenzene (106-46-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
23B. 3, 3'-Dichlorobenzidine (91-94-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
24B. Diethyl Phthalate (84-66-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
25B. Dimethyl Phthalate (131-11-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
26B. Di-N-butyl Phthalate (84-74-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
27B. 2,4-Dinitrotoluene (121-14-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
28B. 2,6-Dinitrotoluene (606-20-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
29B. Di-N-Octyl Phthalate (117-84-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
31B. Fluoranthene (206-44-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
32B. Fluorene (86-73-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
33B. Hexachlorobenzene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
34B. Hexachlorobutadiene (87-68-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
35B. Hexachlorocyclopentadiene (77-47-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
36B. Hexachloroethane (67-72-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
37B. Indeno (1,2,3-c-d) Pyrene (193-39-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
38B. Isophorone (78-59-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
39B. Naphthalene (91-20-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
40B. Nitrobenzene (98-95-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									
41B. N-Nitrosodimethylamine (62-75-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>									

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



2.00 POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

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

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

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

YES (COMPLETE C BELOW)       NO (GO TO SECTION 3.00)

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

3.00 CONTRACT ANALYSIS INFORMATION

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

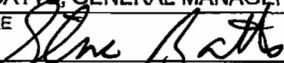
YES (LIST THE NAME, ADDRESS, AND TELEPHONE NUMBER OF, AND ANALYZED BY, EACH SUCH LABORATORY OR FIRM BELOW)

NO (GO TO SECTION 4.00)

A. NAME	B. ADDRESS	C. TELEPHONE NUMBER WITH AREA CODE	D. POLLUTANTS ANALYZED (list)
Pace Analytical Services, Inc.	9608 Lolret Blvd. Lenexa, KS 66219	(913) 599-5665	NPDES Permit Analytes
			Calcium, Magnesium
			Total Hardness, Cadmium
			Copper, Lead, Zinc, TSS
			Mercury

4.00 CERTIFICATION

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT) STEVE BATTS, GENERAL MANAGER	TELEPHONE NUMBER WITH AREA CODE (573) 689-4513
SIGNATURE 	DATE SIGNED 7/30/12