

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

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

Permit No. MO-0108472

Owner: Front Street Remedial Action Corp.
Address: 1400 Commerce Bank Bldg, 1000 Walnut St., Kansas City, MO 64106

Continuing Authority: Same as above
Address: Same as above

Facility Name: Conservation Chemical Company, Groundwater Treatment Facility
Facility Address: 8900 Front Street, Kansas City, MO 64120

Legal Description: NE¼, NW¼, Sec. 29, T50N, R32W, Jackson County
UTM Coordinates: X= 372841, Y= 4332233

Receiving Stream: Missouri River (P)
First Classified Stream and ID: Missouri River (P) (356) (303(d) List)
USGS Basin & Sub-watershed No.: 10300101-0301

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

FACILITY DESCRIPTION

Industrial – Groundwater Remediation Site; SIC #9999 NAICS #562910

This is a groundwater remediation facility consisting of equalization, hydroxide metal precipitation, biological treatment, filtration, activated carbon absorption, and pH adjustment. Sludge generated during the treatment process is dewatered on site and hauled to a disposal facility for landfilling or incineration. This facility does not require a certified wastewater operator. Domestic wastewater is not generated at this facility.

Design Flow: 0.25 MGD


Average Flow: 0.20 MGD

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 Sections 640.013, 621.250, and 644.051.6 of the Law.

March 1, 2020
Effective Date

June 30, 2024
Expiration Date


Edward B. Galbraith, Director, Division of Environmental Quality


Chris Wieberg, Director, Water Protection Program

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL #001 main outfall	TABLE A-1 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on March 1, 2020 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: Q						
PHYSICAL						
Flow	MGD	*		*	once/quarter	24 hr. total
CONVENTIONAL						
Biochemical Oxygen Demand ₅	mg/L	*		*	once/quarter	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter	grab
pH [†]	SU	6.5-9.0		6.5-9.0	once/quarter	grab
METALS						
Arsenic, TR	µg/L	*		*	once/quarter	grab
NUTRIENTS						
Ammonia as N	mg/L	*		*	once/quarter	grab
OTHER						
Acetone	µg/L	*		*	once/quarter	grab
Phthalates, Total	µg/L	*		*	once/quarter	grab
Vinyl Chloride	µg/L	*		*	once/quarter	grab
2 Butanone	µg/L	*		*	once/quarter	grab
4 Methyl-2-pentanone	µg/L	*		*	once/quarter	grab
PHENOLS						
Phenols, Total	µg/L	*		*	once/quarter	grab
2 methylphenol	µg/L	*		*	once/quarter	grab
4 methylphenol	µg/L	*		*	once/quarter	grab
VOLATILE ORGANICS						
Dichloroethanes	µg/L	*		*	once/quarter	grab
Methylene Chloride	µg/L	*		*	once/quarter	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>JULY 28, 2020</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
LIMIT SET: WC						
OTHER						
Whole Effluent Toxicity, Chronic See Special Condition #1	TU _c	*			once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2021</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

OUTFALL #001 main outfall	TABLE A-2 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS						
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on March 1, 2020 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:							
EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE	
LIMIT SET: A							
CONVENTIONAL							
Cyanide, Amenable to Chlorination Ω	µg/L	*		*	once/year	grab	
Cyanide Ω	µg/L	*		*	once/year	grab	
METALS							
Beryllium, TR	µg/L	*		*	once/year	grab	
Cadmium, Total Recoverable	µg/L	*		*	once/year	grab	
Chromium (III), TR	µg/L	*		*	once/year	grab	
Chromium (VI), Dissolved ††	µg/L	*		*	once/year	grab	
Copper, TR	µg/L	*		*	once/year	grab	
Lead, TR	µg/L	*		*	once/year	grab	
Mercury, TR	µg/L	*		*	once/year	grab	
Nickel, TR	µg/L	*		*	once/year	grab	
Zinc, TR	µg/L	*		*	once/year	grab	
OTHER							
Benzene	µg/L	*		*	once/year	grab	
Benzoic Acid	µg/L	*		*	once/year	grab	
Ethylbenzene	µg/L	*		*	once/year	grab	
Halogenated Benzene	µg/L	*		*	once/year	grab	
PAH's	µg/L	*		*	once/year	grab	
Toluene	µg/L	*		*	once/year	grab	
PESTICIDES							
Demeton	µg/L	*		*	once/year	grab	
Endosulfan	µg/L	*		*	once/year	grab	
Guthion	µg/L	*		*	once/year	grab	
Malathion	µg/L	*		*	once/year	grab	
Parathion	µg/L	*		*	once/year	grab	
PHENOLS							
Aldrin	µg/L	*		*	once/year	grab	
Endrin	µg/L	*		*	once/year	grab	
a,b,d-BHC	µg/L	*	*	once/year	grab		
Acrylonitrile	µg/L	*	*	once/year	grab		
bis-(2)-chloroethylether	µg/L	*	*	once/year	grab		
Dieldrin	µg/L	*	*	once/year	grab		
Heptachlor	µg/L	*	*	once/year	grab		
Hexachlorobenzene	µg/L	*	*	once/year	grab		
Hexachlorobutadiene	µg/L	*	*	once/year	grab		
Hexachloroethane	µg/L	*	*	once/year	grab		
Lindane	µg/L	*	*	once/year	grab		
Methoxychlor	µg/L	*	*	once/year	grab		
Mirex	µg/L	*	*	once/year	grab		
n-nitrosodimethylanine	µg/L	*	*	once/year	grab		
PCBs §	µg/L	*	*	once/year	grab		
Toxaphene	µg/L	*	*	once/year	grab		
1,2-diphenylhydrazine	µg/L	*	*	once/year	grab		
2,3,7,8-TCDD	µg/L	*	*	once/year	grab		
2,4,6-trichlorophenol	µg/L	*	*	once/year	grab		
3,3-dichlorobenzidine	µg/L	*	*	once/year	grab		
2,4-dichlorophenol	µg/L	*	*	once/year	grab		
2,4-dimethylphenol	µg/L	*	*	once/year	grab		
VOLATILE ORGANICS							
1,1-dichloroethylene	µg/L	*	*	once/year	grab		

OUTFALL #001 main outfall	TABLE A-2 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on March 1, 2020 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited, and monitored by the permittee as specified below:						
EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Carbon Tetrachloride	µg/L	*		*	once/year	grab
Chloroform	µg/L	*		*	once/year	grab
Trichloroethanes	µg/L	*		*	once/year	grab
Trichloroethylene	µg/L	*		*	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2021</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

* Monitoring and reporting requirement only

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

†† This permit establishes monitoring for dissolved hexavalent chromium. This permit establishes the requirement to use Standard Method 3500-Cr C-2011 or newer to assure data submitted to the Department conforms to the most sensitive method as required by Standard Conditions Part I Section A 4 and is analyzed within the required method holding times.

Ω Cyanide, Total. This effluent limit is below the accepted minimum quantification level (ML). The Department has determined the current acceptable minimum level (ML) of cyanide to be 10 µg/L when using Standard Method 4500-CN⁻ E. This method is used to determine the concentration of inorganic cyanide present as either soluble salts or complexes in wastes or leachate. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 10 µg/L will be considered violations of the permit and values less than the minimum quantification level of 10 µg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of cyanide in excess of the effluent limits stated in the permit.

§ This permit establishes monitoring for polychlorinated biphenyls. This permit establishes the requirement to use EPA approved test method 608 to assure data submitted to the Department conforms to the most sensitive method as required by Standard Conditions Part I Section A 4 and is analyzed within the required method holding times.

◇ Quarterly sampling

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

B. STANDARD CONDITIONS

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

C. SPECIAL CONDITIONS

1. Acute Whole Effluent Toxicity (WET) tests shall be conducted as follows:
 - (a) Freshwater Species and Test Methods: Species and short-term test methods for estimating the acute toxicity of NPDES effluents are found in the most recent edition of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012; Table IA, 40 CFR Part 136). The permittee shall concurrently conduct 48-hour, static, non-renewal toxicity tests with the following species:
 - The fathead minnow, *Pimephales promelas* (Acute Toxicity EPA Test Method 2000.0).
 - The daphnid, *Ceriodaphnia dubia* (Acute Toxicity EPA Test Method 2002.0).
 - (b) Chemical and physical analysis of the upstream control sample and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping. Where upstream receiving water is not available or known to be toxic, other approved control water may be used.
 - (c) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.
 - (d) The laboratory shall not chemically dechlorinate the sample.
 - (e) The Allowable Effluent Concentration (AEC) is 9.1%; the dilution series is: 99.9%, 44.9%, 20.2%, 9.1%, and 4.1%.
 - (f) All chemical and physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% effluent concentration.
 - (g) The facility must submit a full laboratory report for all toxicity testing. The report must include a quantification of acute toxic units ($TU_a = 100/LC_{50}$) reported according to the test methods manual chapter on report preparation and test review. The Lethal Concentration 50 Percent (LC_{50}) is the effluent concentration that would cause death in 50 percent of the test organisms at a specific time.
2. Spills, Overflows, and Other Unauthorized Discharges.
 - (a) Any spill, overflow, or other discharge(s) not specifically authorized above are unauthorized discharges.
 - (b) Should an unauthorized discharge cause or permit any contaminants to discharge or enter waters of the state, the unauthorized discharge must be reported to the regional office as soon as practicable but no more than 24 hours after the discovery of the discharge. If the spill or overflow needs to be reported after normal business hours or on the weekend, the facility must call the Department's 24 hour spill line at 573-634-2436.
3. Electronic Discharge Monitoring Report (eDMR) Submission System.
 - (a) Discharge Monitoring Reporting Requirements. The permittee must electronically submit compliance monitoring data via the eDMR system. Standard Conditions Part I, Section B, #7 indicates the eDMR system is currently the only Department approved reporting method for this permit.
 - (b) Programmatic Reporting Requirements. All reports must be electronically submitted as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data. After such a system has been made available by the Department, required data shall be directly input into the system by the next report due date
 - (1) Whole Effluent Toxicity (WET) Reports;
 - (2) Sludge/Biosolids Annual Reports;
 - (c) The following shall be submitted electronically after such a system has been made available by the Department:
 - (1) General Permit Applications/Notices of Intent to discharge (NOIs);
 - (2) Notices of Termination (NOTs);
 - (3) No Exposure Certifications (NOEs);
 - (4) Low Erosivity Waivers, and Other Waivers from Stormwater Controls (LEWs); and
 - (d) Electronic Submission: access the eDMR system via: <https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>
 - (e) Electronic Reporting Waivers. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the Department in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. The Department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period the approved electronic reporting waiver is effective.
4. Site-wide minimum Best Management Practices (BMPs). At a minimum, the permittee shall adhere to the following:
 - (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, warehouse activities, and other areas, and thereby prevent the contamination of stormwater from these substances.

- (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
 - (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so these materials are not exposed to stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater. Spill records should be retained on-site.
 - (d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
 - (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property.
5. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with §644.051.16, RSMo, and the CWA section 402(k); however, this permit may be reopened and modified, or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under Clean Water Act Sections 301(b)(2)(C) and (D), §304(b)(2), and §307(a) (2), if the effluent standard or limitation so issued or approved contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or controls any pollutant not limited in the permit. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, termination, notice of planned changes, or anticipated non-compliance does not stay any permit condition.
6. All outfalls must be clearly marked in the field.
7. Report no discharge when a discharge does not occur during the report period. It is a violation of this permit to report no-discharge when a discharge has occurred.
8. Changes in Discharges of Toxic Pollutant.
In addition to the reporting requirements under §122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:
- (a) That an activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
 - (3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
 - (4) One milligram per liter (1 mg/L) for antimony;
 - (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
 - (6) The notification level established by the Department in accordance with 40 CFR 122.44(f).
 - (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - (1) Five hundred micrograms per liter (500 µg/L);
 - (2) One milligram per liter (1 mg/L) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with §122.21(g)(7).
 - (4) The level established by the Director in accordance with §122.44(f).
9. Reporting of Non-Detects.
- (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way the precision and accuracy of the analyzed result can be enumerated.
 - (b) The permittee shall not report a sample result as “non-detect” without also reporting the detection limit of the test or the reporting limit of the laboratory. Reporting as “non-detect” without also including the detection/reporting limit will be considered failure to report, which is a violation of this permit.
 - (c) The permittee shall report the non-detect result using the less than “<” symbol and the laboratory’s detection/reporting limit (e.g. <6).
 - (d) See sufficiently sensitive method requirements in Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
 - (e) When calculating monthly averages, one-half of the minimum detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the “<MDL” shall be reported as indicated in item (C).
10. Failure to pay fees associated with this permit is a violation of the Missouri Clean Water Law (644.055 RSMo).

11. This permit does not cover land disturbance activities.
12. This permit does not authorize the placement of fill materials in flood plains, placement of solid materials into any waterway, the obstruction of stream flow, or changing the channel of a defined drainage course. The facility must contact the U.S. Army Corps of Engineers (Corps) to determine if a CWA §404 Department of Army permit is required.
13. Renewal Application Requirements.
 - (a) This facility shall submit an appropriate and complete application to the Department no less than 180 days from the expiration date listed on page 1 of the permit.
 - (b) Application materials shall include Form A, Form C, and Form D. If the form names have changed, then the facility should assure they are submitting the correct forms as required by regulation. Sampling for all parameters on Form D is required for this facility based on the pollutants found at this facility.
 - (c) The facility may use the electronic submission system to submit the application to the Program.
 - (d) This facility must submit any corrective action reports completed for the last permit term if a benchmark exceedance occurred.
14. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 *et. seq.*) and the use of such pesticides shall be in a manner consistent with its label.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0108472
CONSERVATION CHEMICAL COMPANY, GROUNDWATER TREATMENT FACILITY

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

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

PART I. FACILITY INFORMATION

Facility Type:	Industrial
SIC Code(s):	9999
Application Date:	02/25/2019
Expiration Date:	06/30/2019
Last Inspection:	05/01/2019

FACILITY DESCRIPTION:

Conservation Chemical Company is a 6-acre site in Kansas City, Missouri. Chemical storage and disposal operations from the 1960s to 1980s led to contamination of groundwater and soils. The Conservation Chemical Company handled an estimated 48 million gallons of liquids, sludge, and 1,144 tons of solids, and buried 93,000 cubic yards of materials at the site. Groundwater on and off the site contains metals, cyanide, phenolic compounds and volatile organic compounds (VOCs); soils contained the previously-listed contaminants and dioxins and polychlorinated biphenyls (PCBs). Following cleanup, operation and maintenance activities and monitoring are ongoing.

The groundwater is pumped from the two wells to the equalization tank. The water then goes via gravity to the pH adjustment tank where 50% sodium hydroxide solution is added to bring the pH above 8. The water then goes to the flash mix tank where polymer is added. After the flash mix tank, the water flows into the flocculation tank and then into the clarifier for settling. From the clarifier, the water goes to the bio-feed tank and splitter, which diverts flow evenly to the two bio-towers. Inoculum is added once per week to the bio-towers to clean off the bio-mass from the plastic media. From the bio-towers, the water goes into the dual media filter. The filters are continuously back-washed with the backwash water going to the filtrate tank. The water from the backwash and filtrate tanks are routed back to the pH tank for treatment. After the dual media tank, the treated water is gravity fed to the carbon feed tank. The water is continuously pumped from the carbon feed tank through the activated carbon adsorption tank. Following the activated carbon adsorption tank, the water is then gravity fed to the non-potable water tank before discharging to the Missouri River. The sludge from the clarifier is pumped to the sludge thickening tank. The clarifier has four hoppers below it that alternates every three minutes to pump sludge back to the pH tank for 10 seconds to keep the sludge mixed. Decanted water from the thickening tank is diverted to the filtrate tank. The sludge is pumped from the clarifier twice per week to the sludge thickening tank. After the sludge thickens, the sludge is sent to the press for de-watering. The water from the press is routed back to the filtrate tank and the dry sludge is dropped in a roll off and hauled to a hazardous waste landfill.

The charter number for the continuing authority for this facility is N00038267; this number was verified by the permit writer to be associated with the facility and precisely matches the continuing authority reported by the facility.

In accordance with 40 CFR 122.21(f)(6), the Department evaluated other permits currently held by this facility. This facility is a Superfund site with an EPA ID: MOD000829705.

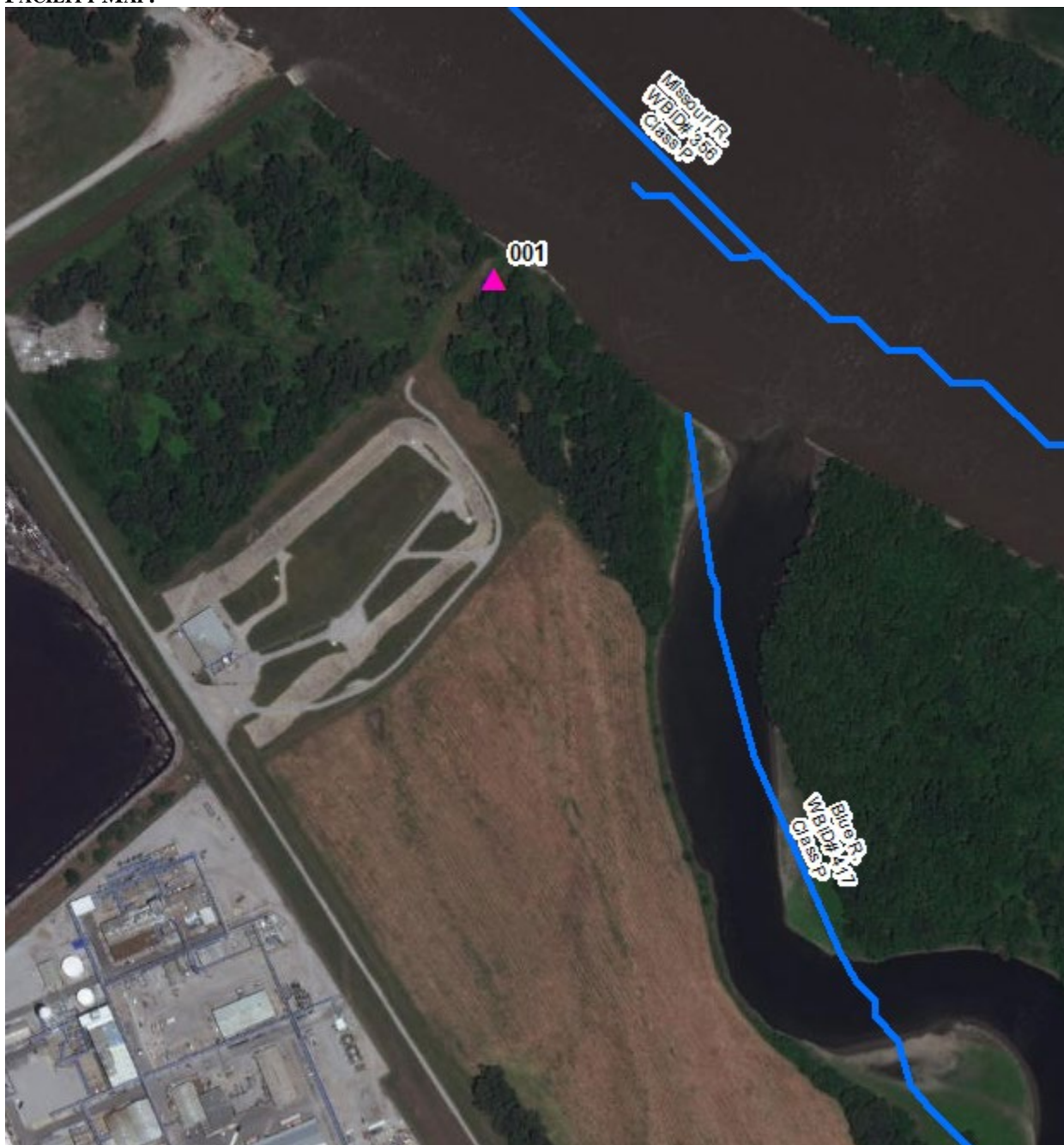
PERMITTED FEATURES TABLE:

OUTFALL	AVERAGE FLOW	DESIGN FLOW	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.20 MGD	0.25 MGD	Advanced (Tertiary)	Treated Groundwater

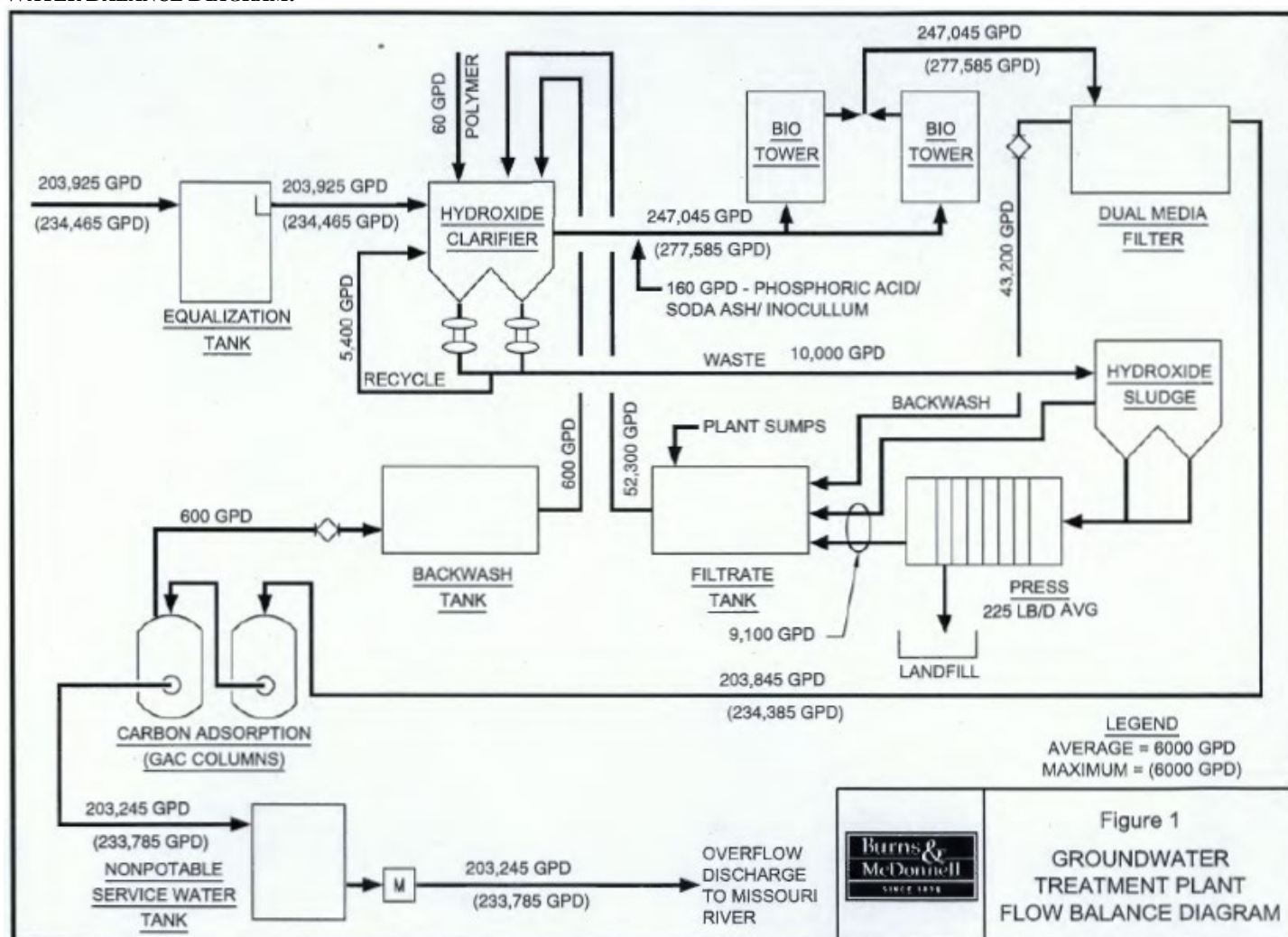
FACILITY PERFORMANCE HISTORY & COMMENTS:

The electronic discharge monitoring reports were reviewed for the last permit term. There were no exceedances of any water quality standards during the previous permit term. The most recent site inspection to determine compliance with MSOP MO-0108472 was conducted on May 1, 2019. The permittee was found to be in compliance with the Missouri Clean Water Law, the implementing regulations, and MSOP MO0108472, based upon observations made during the inspection.

FACILITY MAP:



WATER BALANCE DIAGRAM:



PART II. RECEIVING WATERBODY INFORMATION

RECEIVING WATERBODY'S WATER QUALITY:

The receiving stream is impaired by E coli. Sturgeon eggs found high in Chlordane and PCBs, but not considered impairment. There is TMDL approved for Chlordane and PCBs in 2006.

303(d) LIST:

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

✓ Applicable; The Missouri River is listed on the 2018 Missouri 303(d) list for E. coli.

- This facility is not considered a source of the above listed pollutant(s) or considered to contribute to the impairment.

TOTAL MAXIMUM DAILY LOAD (TMDL):

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

✓ Applicable; the Missouri River is associated with the 2006 EPA approved TMDL for chlordane and polychlorinated biphenyls (PCBs).

- This facility is not considered to be a source of the above listed pollutant(s) or considered to contribute to the impairment.

UPSTREAM OR DOWNSTREAM IMPAIRMENTS:

The permit writer has reviewed upstream and downstream stream segments of this facility for impairments.

- ✓ The Missouri River has a TMDL for PCBs and Chlordane, and is on the 303d list for e. coli.

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

Per Missouri's Effluent Regulations [10 CSR 20-7.015(1)(B)], waters of the state are divided into seven categories. This facility is subject to effluent limitations derived on a site specific basis which are presented in each outfall's effluent limitation table and further discussed in Part IV: Effluents Limits Determinations.

- ✓ Missouri or Mississippi River

RECEIVING WATERBODY TABLE:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES	DISTANCE TO SEGMENT	12-DIGIT HUC
#001	Missouri River	P	0356	ALP, DWS, HHP, IND, IRR, LWW, SCR, WBC-B,	0.0 mi	10300101-0301 Lower Missouri-Crooked

n/a not applicable

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

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

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

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

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

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

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

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

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

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

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

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

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

DWS = Drinking Water Supply

IND = industrial water supply

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

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

RECEIVING WATERBODY MONITORING REQUIREMENTS:

No receiving water monitoring requirements are recommended at this time.

RECEIVING STREAM LOW-FLOW VALUES:

OUTFALL	RECEIVING STREAM	LOW-FLOW VALUES (CFS)				
		GAGING STATION	1Q10	7Q10	30Q10	60Q10
#001	Missouri River (P)	Kansas City MO #06893000	17,664	18,692	19,961	20,629

Data were obtained for the last 20 years and were calculated using a Department developed spreadsheet (available upon request).

MIXING CONSIDERATIONS TABLE:

MIXING ZONE (CFS) (CHRONIC) [10 CSR 20-7.031(5)(A)5.A.4.B.(II)(a)]				ZONE OF INITIAL DILUTION (CFS) (ACUTE) [10 CSR 20-7.031(5)(A)4.B.(II)(b)]			
1Q10	7Q10	30Q10	60Q10	1Q10	7Q10	30Q10	60Q10
4,416	4,673	4,990.25	5,157.25	4.27	4.27	4.27	4.27

ZID cannot be more than 10 times the facility design flow. The design flow is 0.465 CFS, so 10 times the flow is 4.65 CFS.

PART III. RATIONALE AND DERIVATION OF PERMIT CONDITIONS

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

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

- ✓ Not applicable; 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)].

ANTIBACKSLIDING:

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

- ✓ Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) which would have justified the application of a less stringent effluent limitation.
 - Five years of DMR data were available to support reduced monitoring for a number of parameters from quarterly to annually. The permit used best professional judgement to reduce monitoring based on historic sampling events showing that these parameters were not a pollutant of concern at the site.
- ✓ The Department determined technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
 - The previous permit's special conditions required the release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010 and that a record of each reportable spill shall be retained with the permit and made available to the department upon request. This rule was rescinded on August 30, 2018, therefore the previous special condition was removed.

ANTIDEGRADATION REVIEW:

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

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

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

- ✓ Not applicable; the facility does not have stormwater discharges or the stormwater outfalls onsite have no industrial exposure.

BEST MANAGEMENT PRACTICES:

Minimum site-wide best management practices are established in this permit to assure all permittees are managing their sites equally to protect waters of the state from certain activities which could cause negative effects in receiving water bodies. While not all sites require a SWPPP because the SIC codes are specifically exempted in 40 CFR 122.26(b)(14), these best management practices are not specifically included for stormwater purposes. These practices are minimum requirements for all industrial sites to protect waters of

the state. If the minimum best management practices are not followed, the facility may violate general criteria [10 CSR 20-7.031(4)]. Statutes are applicable to all permitted facilities in the state, therefore pollutants cannot be released unless in accordance with RSMo 644.011 and 644.016 (17).

CHANGES IN DISCHARGES OF TOXIC POLLUTANT:

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

COMPLIANCE AND ENFORCEMENT:

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

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

DOMESTIC WASTEWATER, SLUDGE, AND BIOSOLIDS:

Domestic wastewater is defined as wastewater (i.e., human sewage) originating primarily from the sanitary conveyances of bathrooms and kitchens. Domestic wastewater excludes stormwater, animal waste, process waste, and other similar waste.

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

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

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

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

EFFLUENT LIMITATIONS:

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

EFFLUENT LIMITATION GUIDELINE:

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

✓ The facility does not have an associated ELG.

ELECTRONIC DISCHARGE MONITORING REPORT (EDMR) SUBMISSION SYSTEM:

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

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

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

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

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

GENERAL CRITERIA CONSIDERATIONS:

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

- ✓ Not applicable; this permit does not contain effluent limitations based on the narrative criteria.

GROUNDWATER MONITORING:

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

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

LAND APPLICATION:

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

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

MAJOR WATER USER:

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

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

OIL/WATER SEPARATORS:

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

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

REASONABLE POTENTIAL (RP):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants which are (or may be) discharged at a level causing or have the reasonable potential to cause (or contribute to) an in-stream excursion above narrative or numeric water quality standards. Per 10 CSR 20-7.031(4), general criteria shall be applicable to all waters of the state at all times; however, acute toxicity criteria may be exceeded by permit in zones of initial dilution, and chronic toxicity criteria may be exceeded by permit in mixing zones. If the permit writer determines any given pollutant has the reasonable potential to cause or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for the pollutant per 40 CFR Part 122.44(d)(1)(iii) and the most stringent limits per 10 CSR 20-7.031(9)(A). Permit writers may use mathematical reasonable potential analysis (RPA) using the Technical Support Document for Water Quality Based Toxics Control (TSD) methods (EPA/505/2-90-001) as found in Section 3.3.2, or may also use reasonable potential determinations (RPD) as provided in Sections 3.1.2, 3.1.3, and 3.2 of the TSD.

- ✓ Applicable; an RPA was conducted on appropriate parameters and was conducted as per (TSD Section 3.3.2). A more detailed version including calculations of this RPA is available upon request. See Wasteload Allocations (WLA) for Limits in this section. Please see **APPENDIX A – RPA RESULTS**

SAMPLING FREQUENCY JUSTIFICATION:

Sampling and reporting frequency was generally retained from previous permit. There were a number of parameters which were reduced from quarterly monitoring to annual monitoring because of historic sampling showing they are not a pollutant of concern at the site. This includes the following; 2 conventional, 9 metals, 6 other, 5 pesticides, 22 phenols, and 5 volatile organics. 40 CFR

122.45(d)(1) indicates all continuous discharges shall be permitted with daily maximum and monthly average limits. Minimum sampling frequency for all parameters is annually per 40 CFR 122.44(i)(2).

SAMPLING TYPE JUSTIFICATION:

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

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, effluent limits, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. SOC's are allowed under 40 CFR 122.47 and 10 CSR 20-7.031(11) providing certain conditions are met.

A SOC is not allowed:

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

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

- ✓ Not applicable; this permit does not contain a SOC. Limits have not become more restrictive. No SOC is allowed because the permittee is already capable of meeting the new effluent limits.

SPILLS, OVERFLOWS, AND OTHER UNAUTHORIZED DISCHARGE REPORTING:

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

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

SLUDGE – INDUSTRIAL:

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

- ✓ Applicable; sludge is removed by contract hauler. The permitted management strategy must be followed, see permit under FACILITY DESCRIPTION. If the permitted management strategy cannot be followed, the permittee must obtain a permit modification.

STANDARD CONDITIONS:

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

STORMWATER PERMITTING: LIMITATIONS AND BENCHMARKS:

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

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

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

A SWPPP must be prepared by the permittee if the SIC code is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2). A SWPPP may be required of other facilities where stormwater has been identified as necessitating better management. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream

pollution from stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

✓ Not applicable; this facility's SIC code does not require stormwater monitoring per 40 CFR 122.26(b)(14).

SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:

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

UNDERGROUND INJECTION CONTROL (UIC):

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

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

VARIANCE:

Per the Missouri Clean Water Law §644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

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

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

$$C = \frac{(C_s \times Q_s) + (C_e \times Q_e)}{(Q_e + Q_s)}$$

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

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

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

WASTELOAD ALLOCATION (WLA) MODELING:

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

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

WATER QUALITY STANDARD REVISION:

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

- ✓ This operating permit does not contain requirements for a permit limit based on a water quality standard which has changed twenty-five percent or more since the previous operating permit.

PART IV. EFFLUENT LIMITS DETERMINATIONS

OUTFALL #001 – MAIN FACILITY OUTFALL

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG.	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL							
FLOW	MGD	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	24 Hr. TOT
CONVENTIONAL							
BOD ₅	mg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
COD	mg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
CYANIDE, AMENABLE TO CHLORINATION	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
CYANIDE, TOTAL	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
pH [†]	SU	6.5 – 9.0	6.5 – 9.0	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
METALS							
ARSENIC, TR	µg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
BERYLLIUM, TR		*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
CHROMIUM (III), TR	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
CHROMIUM (VI), DISSOLVED	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
COPPER, TR	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
LEAD, TR	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG.	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	REPORTING FREQUENCY	SAMPLE TYPE
MERCURY, TR	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
NICKEL, TR	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
ZINC, TR	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
NUTRIENTS							
AMMONIA AS N	mg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
OTHER							
ACETONE	µg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
BENZENE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
BENZOIC ACID	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
ETHYLBENZENE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
HALOGENATED BENZENE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
PHTHALATES, TOTAL	µg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
PAH'S	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
TOLUENE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
VINYL CHLORIDE	µg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
2-BUTANONE	µg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
4-METHYL-2-PENTANONE	µg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
PESTICIDES							
DEMETON	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
ENDOSULFAN	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
GUTHION	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
MALATHION	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
PARATHION	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
PHENOLS							
A,B,D – BHC	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
ACRYLONITRILE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
ALDRIN	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
BIS-(2)-CHLOROETHYLETHER	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
DIELDRIN	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
ENDRIN	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
HEPTACHLOR	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
HEXACHLOROBENZENE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
HEXACHLOROBUTADIENE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
HEXACHLOROETHANE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
LINDANE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
METHOXYCHLOR	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
MIREX	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
N-NITROSODIMETHYLANINE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
PHENOLS, TOTAL	µg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
PCBS	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
TOXAPHENE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
1,2-DIPHENYLHYDRAZINE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
2 METHYLPHENOL	µg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
2,3,7,8-TCDD	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG.	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	REPORTING FREQUENCY	SAMPLE TYPE
2,4-DICHLOROPHENOL	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
2,4-DIMETHYLPHENOL	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
2,4,6-TRICHLOROPHENOL	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
3,3-DICHLOROBENZIDINE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
4-METHYLPHENOL	µg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
VOLATILE ORGANICS							
CARBON TETRACHLORIDE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
CHLOROFORM	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
DICHLOROETHANES	µg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
METHYLENE CHLORIDE	µg/L	*	*	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
TRICHLOROETHANES	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
TRICHLOROETHYLENE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
1,1-DICHLOROETHYLENE	µg/L	*	*	SAME	ONCE/YEAR	ONCE/YEAR	GRAB
WET TESTING							
ACUTE WET TEST	TUa	*	-	SAME	ONCE/YEAR	ONCE/YEAR	COMPOSITE

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

DERIVATION AND DISCUSSION OF LIMITS:

PHYSICAL:

Flow

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

CONVENTIONAL:

Biochemical Oxygen Demand - 5 Day (BOD₅)

Monitoring only continued from previous permit. DMR data from the previous permit term shows no potential to decrease dissolved oxygen demand in the Missouri River. Monitoring will continue as an indicator of technology performance.

Chemical Oxygen Demand (COD)

Monitoring only continued from previous permit. There is no numeric water quality standard for COD; however, increased oxygen demand may impact instream water quality. COD is also a valuable indicator parameter. COD monitoring allows the permittee to identify increases in COD may indicate materials/chemicals coming into contact with stormwater causing an increase in oxygen demand. Increases in COD may indicate a need for maintenance or improvement of BMPs. The DMR data from the previous permit term shows no potential to decrease dissolved oxygen demand in the Missouri River. Monitoring will continue as an indicator of technology performance.

Cyanide Amenable to Chlorination (CATC)

Monitoring continued from previous permit. The DMR data shows no reasonable potential to cause or contribute to excursion above the water quality standards for protection of aquatic life.

Cyanide

Monitoring continued from previous permit. The DMR data shows no reasonable potential to cause or contribute to excursion above the water quality standards for protection of aquatic life.

pH

6.5 to 9.0 SU, continued from the previous permit. The Water Quality Standard at 10 CSR 20-7.031(5)(E) states water contaminants shall not cause pH to be outside the range of 6.5 to 9.0 standard pH units. While pH limits have not been exceeded in the previous permit, this parameter is a basic indicator of water quality. Water quality based limits will be maintained from the previous permit in order to ensure protection of water quality.

METALS:

Arsenic, Beryllium, Cadmium, Chromium, Chromium III, Chromium VI, Copper, Lead, Mercury, Nickel, Zinc

The RPA's for all metals listed above show no reasonable potential to cause or contribute to excursions of water quality standards for the protection of aquatic life or protection of drinking water sources (beryllium only). For this reason, the metals listed above will continue to be monitoring only requirements.

NUTRIENTS:

Ammonia, Total as Nitrogen

Monitoring only continued from previous permit. The RPA shows no reasonable potential to cause or contribute to excursions of water quality standards for the protection of aquatic life. For this reason, monitoring only will continue.

OTHER:

Acetone, Benzene, Benzoic Acid, Ethyl Benzene, Halogenated Benzene, Phthalates, PAHs, Toluene, Vinyl Chloride, 2 Butanone, 4 Methyl-2-Pentanone

The RPA's for the pollutants listed under "Other" in the table above show no reasonable potential to cause or contribute to excursions of water quality standards for the protection of aquatic life and human health. The permittee's lab reports show non-detects for all effluent data. For this reason, monitoring only will continue at this time without implementation of effluent limitations.

PESTICIDES:

Demeton, Endosulfan, Guthion, Malathion, Parathion

The RPA's for pesticides previously monitored for show no reasonable potential to cause or contribute to excursions of water quality standards for the protection of aquatic life and human health. The permittee's lab reports show non-detects for all effluent data. For this reason, monitoring only will continue at this time without implementation for effluent limitations.

PHENOLS:

A,B,D, BHC, Acrylonitrile, Aldrin, bis-(2)-chloroethylether, Dieldrin, Endrin, Heptachlor, Hexachlorobenzene, Hexachlorobutadiene, Hexachloroethane, Lindane, Methoxychlor, Mirex, n-Nitrosodimethylaniline, Total Phenols, Toxaphene, 1,2-diphenylhydrazine, 2 methylphenol, 2,3,7,8-TCDD, 2,4-dichlorophenol, 2,4-dimethylphenol, 2,4,6-trichlorophenol, 3,3-dichlorobenzidine, 4 methylphenol

The RPA's for all of the pollutants listed under phenols in the table above show no reasonable potential to cause or contribute to excursions of water quality standards for the protection of aquatic life, human health or drinking water sources. These are pollutants being treated in the groundwater remediation activity. The permittee's lab reports show non-detects for all effluent data. For this reason, monitoring only will continue at this time without implementation of effluent limitations.

Polychlorinated Biphenyls (PCBs)

Monitoring only using sufficiently sensitive test methods is continued. Historic contamination of the site includes polychlorinated biphenyl. The water quality standard for human health protection is 45 picograms per liter (pg/L) [4.5×10^{-5} µg/L] and the standard for chronic aquatic life protection is .014 µg/L. These standards are below the detection level for PCB. The facility reported non-detections of <0.8 µg/L. Since the effluent limit is below the detection level for PCB, the compliance level is defined in the permit as the minimum level (ML), 0.5 µg/L. Defining the compliance level as the ML is consistent with the approach set forth in the *Technical Support Document for Water Quality-Based Toxics Control* (TSD); U.S Environmental Protection Agency, Office of Water, EPA/505/2-90-001, March 1991, page 111.

VOLATILE ORGANICS:

Carbon Tetrachloride, Chloroform, Dichloroethanes, Methylene Chloride, Trichloroethanes, Trichloroethylene, 1,1-Dichloroethylene, 1,2-Dichloroethylene

The RPA's for VOC's previously monitored for show no reasonable potential to cause or contribute to excursions of water quality standards for the protection of human health or drinking water sources. The permittee's lab reports show non-detects for all effluent data. Therefore, monitoring only will continue at this time without the implementation of effluent limitations.

Whole Effluent Toxicity (WET) Test

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

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

✓ Facility handles large quantities of toxic substances, or substances toxic in large amounts

Annual testing is the minimum testing frequency; monitoring requirements promulgated in 40 CFR 122.44(i)(2) state "requirements to report monitoring results shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the discharge, but in no case less than once per year."

WET, Acute

For classified permanent streams with other than default mixing considerations, the Allowable Effluent Concentration (AEC)% is determined as follows:

$$AEC_a\% = [0.465 \text{ cfs}_{DF} \div (4.65 \text{ cfs}_{ZID7Q10} + 0.465 \text{ cfs}_{DF})] * 100\% = 9.09\%$$
 10 CSR 20-7.015((9)(L)4.A. states the dilution series must be proportional. Each dilution was determined by multiplying or dividing 2 from the AEC and then each consecutive value. The dilution series is: 99.9%, 44.9%, 20.2%, 9.1%, and 4.1%

PART V. ADMINISTRATIVE REQUIREMENTS

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

PERMIT SYNCHRONIZATION:

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

✓ This permit will maintain synchronization by expiring the end of the 2nd quarter, 2024.

PUBLIC NOTICE:

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

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

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

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

✓ The Public Notice period for this operating permit was from January 3, 2020 to February 3, 2020. No responses were received.

DATE OF FACT SHEET: NOVEMBER 12, 2019

COMPLETED BY:

KYLE O'ROURKE, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - INDUSTRIAL UNIT
(573) 526-1289
Kyle.O'Rourke@dnr.mo.gov

APPENDIX A – RPA RESULTS:

✓ The Reasonable Potential Analysis was conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this RPA is available upon request.

Parameter:	Units	CMC Acute	CCC Chronic	Listing	Daily Max	Monthly Average	n#	CV	n Max	MF	RWC Acute	RWC Chronic	RP
Arsenic, TR	µg/L	n/a	20.00	AQL	376018.07	231838.37	19	0.37	13.70	1.73	2.16	0.00	No
Beryllium, TR	µg/L	n/a	5.00	AQL	97094.97	57097.14	19	0.41	0.25	1.85	0.04	0.00	No
Cadmium, TR	µg/L	10.63	1.42	AQL	116.93	68.76	19	0.41	0.25	1.85	0.04	0.00	No
Chromium III, TR	µg/L	3284.96	157.02	AQL	36134.56	10676.10	18	4.10	740.00	14.42	969.84	0.81	No
Chromium III, TR - new	µg/L	3284.96	157.00	AQL	36134.56	10676.10	18	4.10	740.00	14.42	969.84	0.81	No
Chromium VI, Diss.	µg/L	15.00	10.00	AQL	165.00	70.24	18	0.85	14.00	3.18	4.04	0.00	No
Copper, TR	µg/L	27.90	17.44	AQL	306.93	99.17	19	2.08	10.50	7.30	6.96	0.01	No
Cyanide	µg/L	22.00	5.00	AQL	242.00	119.28	19	0.61	21.00	2.39	4.56	0.00	No
Lead, TR	µg/L	207.31	8.08	AQL	2280.46	818.80	19	1.32	1.25	4.70	0.53	0.00	No
Mercury, Total	µg/L	2.82	0.50	AQL	31.06	11.02	19	1.38	0.50	4.88	0.22	0.00	No
Nickel, TR	µg/L	872.36	96.95	AQL	9595.98	4401.47	19	0.72	54.50	2.69	13.34	0.01	No
Zinc, TR	µg/L	223.31	221.49	AQL	2456.36	985.68	19	0.97	19.90	3.51	6.34	0.01	No
1,1-dichloroethylene	µg/L	n/a	3.20	HHP	75647.90	24064.34	19	2.29	7.41	8.01	5.40	0.00	No
1,2-diphenylhydrazine	µg/L	n/a	0.54	HHP	10950.92	6654.39	19	0.38	0.52	1.77	0.08	0.00	No
2,3,7,8-TCDD TEC	µg/L	n/a	0.00	HHP	0.00	0.00	18	2.24	0.00	8.21	0.00	0.00	No
2,4,6-Trichlorophenol	µg/L	n/a	6.50	HHP	132288.20	79968.11	19	0.39	0.52	1.78	0.08	0.00	No
2,4-dichlorophenol	µg/L	n/a	790.00	HHP	18582609.58	5895150.11	19	2.33	7.80	8.15	5.78	0.00	No
2,4-dimethylphenol	µg/L	n/a	2300.00	HHP	53283613.69	16772223.54	19	2.46	239.00	8.58	186.44	0.15	No
3-3'-dichlorobenzidine	µg/L	n/a	0.08	HHP	1718.00	958.48	19	0.47	0.52	1.98	0.09	0.00	No
Acrylonitrile	µg/L	n/a	0.65	HHP	14223.23	7707.94	19	0.50	1.00	2.07	0.19	0.00	No
Aldrin	µg/L	3.00	n/a	AQL	33.00	9.79	19	3.96	0.24	13.18	0.29	0.00	No
Aldrin	µg/L	n/a	0.00	HHP	1.70	0.95	19	0.47	0.52	1.98	0.09	0.00	No
BHC, Total	µg/L	n/a	0.01	HHP	167.86	52.32	19	2.64	0.21	9.18	0.18	0.00	No
Bis-2-Chloroethyl Ether	µg/L	n/a	0.01	HHP	148.20	91.70	19	0.37	0.52	1.73	0.08	0.00	No
Carbon Tetrachloride	µg/L	n/a	5.00	HHP	99968.04	62009.02	19	0.36	0.25	1.72	0.04	0.00	No
Chloroform	µg/L	n/a	470.00	HHP	12189813.15	4431835.70	19	1.27	1.05	4.52	0.43	0.00	No
Demeton	µg/L	n/a	0.10	AQL	1971.17	1133.57	19	0.44	0.59	1.90	0.10	0.00	No
Dieldrin	mg/L	750.00	0.56	AQL	8250.00	2418.73	19	4.36	204.00	14.31	265.47	0.22	No
Dieldrin	µg/L	n/a	470.00	HHP	9134808.42	2678139.35	19	4.36	204.00	14.31	265.47	0.21	No
Endosulfan	mg/L	0.22	0.06	AQL	2.42	1.45	19	0.40	0.00	1.80	0.00	0.00	No
Endrin	mg/L	0.09	0.04	AQL	0.95	0.55	19	0.44	0.00	1.90	0.00	0.00	No
Endrin	µg/L	n/a	0.00	HHP	48.35	27.86	19	0.44	0.00	1.90	0.00	0.00	No
Ethyl Benzene	µg/L	n/a	320.00	AQL	7170456.71	2297304.43	19	2.19	3.78	7.67	2.63	0.00	No
Guthion	µg/L	n/a	0.01	AQL	184.69	116.83	19	0.35	0.60	1.68	0.09	0.00	No
Heptachlor	mg/L	0.52	0.00	AQL	5.72	1.97	19	1.55	0.03	5.48	0.01	0.00	No
Heptachlor	µg/L	n/a	0.00	HHP	5.12	1.76	19	1.55	0.03	5.48	0.01	0.00	No
Hexachlorobenzene	µg/L	n/a	0.00	HHP	15.68	8.93	19	0.45	0.85	1.93	0.15	0.00	No
Hexachlorobutadiene	µg/L	n/a	50.00	HHP	1296868.48	478890.66	19	1.21	2.83	4.32	1.11	0.00	No
Hexachloroethane	µg/L	n/a	8.70	HHP	173604.20	107988.98	19	0.36	0.52	1.71	0.08	0.00	No
Lindane	µg/L	0.95	n/a	AQL	10.45	5.55	19	0.52	0.00	2.13	0.00	0.00	No
Lindane	µg/L	n/a	0.06	HHP	1374.14	729.80	19	0.52	0.00	2.13	0.00	0.00	No
Malathion	µg/L	n/a	0.10	AQL	1863.07	1163.86	19	0.36	0.33	1.70	0.05	0.00	No
Methoxychlor	µg/L	n/a	0.03	AQL	604.50	336.22	19	0.47	0.01	1.99	0.00	0.00	No
Methylene Chloride	µg/L	n/a	1600.00	HHP	34788266.68	10655924.48	19	3.04	261.00	10.43	247.41	0.19	No
Mirex	µg/L	n/a	0.00	AQL	18.76	11.60	19	0.37	0.13	1.73	0.02	0.00	No
N-Nitrosodimethylamine	µg/L	n/a	8.00	HHP	166431.33	97405.64	19	0.42	0.52	1.86	0.09	0.00	No
Parathion	mg/L	0.07	0.01	AQL	0.72	0.45	19	0.36	0.26	1.70	0.04	0.00	No
PCBs	µg/L	n/a	0.01	AQL	230.47	171.05	19	0.21	0.89	1.38	0.11	0.00	No
PAHs	µg/L	n/a	0.05	HHP	997.36	602.80	19	0.39	4.00	1.78	0.65	0.00	No
Toluene	µg/L	n/a	200000.00	HHP	4371952313.46	1342000099.54	19	2.99	219.00	10.26	204.36	0.16	No
Total Phenols	mg/L	10200.00	2560.00	AQL	112200.00	36035.38	19	2.15	690.00	7.56	473.92	0.40	No
Toxaphene	mg/L	0.73	0.00	AQL	3.75	2.32	19	0.37	0.03	1.73	0.00	0.00	No
Toxaphene	µg/L	n/a	0.00	HHP	1.46	0.90	19	0.37	0.03	1.73	0.00	0.00	No
Trichloroethylene	µg/L	n/a	80.00	HHP	1767242.81	544751.65	19	2.89	56.90	9.95	51.47	0.04	No
Vinyl Chloride	µg/L	n/a	525.00	HHP	12277176.58	3882799.24	19	2.38	297.00	8.32	224.54	0.18	No
Benzene	µg/L	n/a	71.00	HHP	1593809.12	494568.24	19	2.74	15.60	9.48	13.45	0.01	No

Units are (µg/L) unless otherwise noted.

n/a Not Applicable

n number of samples; if the number of samples is 10 or greater, then the CV value must be used in the WQBEL for the applicable constituent.

CV Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the mean of the same sample set.

CCC continuous chronic concentration

CMC continuous maximum concentration

RWC Receiving Water Concentration: concentration of a toxicant or the parameter in the receiving water after mixing (if applicable)

MF Multiplying Factor; 99% confidence level and 99% probability basis

RP Reasonable Potential: an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).



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

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

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

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

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

Section B – Reporting Requirements

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



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

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

Section C – Bypass/Upset Requirements

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

Section D – Administrative Requirements

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



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

- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittee with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



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

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
 - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
 - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
 - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
 - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
 - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

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

PART III – BIOSOLIDS AND SLUDGE FROM DOMESTIC TREATMENT FACILITIES

SECTION A – GENERAL REQUIREMENTS

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

SECTION B – DEFINITIONS

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

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

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

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

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

SECTION E – INCINERATION OF SLUDGE

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

SECTION F – SURFACE DISPOSAL SITES AND BIOSOLIDS AND SLUDGE LAGOONS

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

SECTION G – LAND APPLICATION OF BIOSOLIDS

1. The permittee shall not land apply biosolids unless land application is authorized in the facility description, the special conditions of the issued NPDES permit, or in accordance with Section A.3.c., above.
2. This permit only authorizes “Class A” or “Class B” biosolids derived from domestic wastewater to be land applied onto grass land, crop land, timber, or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
3. Class A Biosolids Requirements: Biosolids shall meet Class A requirements for application to public contact sites, residential lawns, home gardens or sold and/or given away in a bag or other container.
4. Class B biosolids that are land applied to agricultural and public contact sites shall comply with the following restrictions:
 - a. Food crops that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.
 - b. Food crops below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for four months or longer prior to incorporation into the soil.
 - c. Food crops below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than four months prior to incorporation into the soil.
 - d. Animal grazing shall not be allowed for 30 days after application of biosolids.
 - e. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.
 - f. Turf shall not be harvested for one year after application of biosolids if used for lawns or high public contact sites in close proximity to populated areas such as city parks or golf courses.
 - g. After Class B biosolids have been land applied to public contact sites with high potential for public exposure, as defined in 40 CFR § 503.31, such as city parks or golf courses, access must be restricted for 12 months.
 - h. After Class B biosolids have been land applied public contact sites with low potential for public exposure as defined in 40 CFR § 503.31, such as a rural land application or reclamation sites, access must be restricted for 30 days.
5. Pollutant limits
 - a. Biosolids shall be monitored to determine the quality for regulated pollutants listed in Table 1, below. Limits for any pollutants not listed below may be established in the permit.
 - b. The number of samples taken is directly related to the amount of biosolids or sludge produced by the facility (See Section J, below). Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable Department approved material to achieve pollutant concentration below those identified in Table 1, below.
 - c. Table 1 gives the ceiling concentration for biosolids. Biosolids which exceed the concentrations in Table 1 may not be land applied.

TABLE 1

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

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

TABLE 2

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

- e. Annual pollutant loading rate.

Table 3

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

- f. Cumulative pollutant loading rates.

Table 4

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

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

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

- i. PAN can be determined as follows:
(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor¹).
¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volatilization factors and mineralization rates can be utilized on a case-by-case basis.
- ii. Crop nutrient production/removal to be based on crop specific nitrogen needs and realistic yield goals. **NOTE:** There are a number of reference documents on the Missouri Department of Natural Resources website that are informative to implement best management practices in the proper management of biosolids, including crop specific nitrogen needs, realistic yields on a county by county basis and other supporting references.
- iii. Biosolids that are applied at agronomic rates shall not cause the annual pollutant loading rates identified in Table 3 to be exceeded.
- d. Buffer zones are as follows:
 - i. 300 feet of a water supply well, sinkhole, water supply reservoir or water supply intake in a stream;
 - ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
 - iii. 150 feet of dwellings or public use areas;
 - iv. 100 feet (35 feet if biosolids application is down-gradient or the buffer zone is entirely vegetated) of lake, pond, wetlands or gaining streams (perennial or intermittent);
 - v. 50 feet of a property line. Buffer distances from property lines may be waived with written permission from neighboring property owner.
 - vi. For the application of dry, cake or liquid biosolids that are subsurface injected, buffer zones identified in 5.d.i. through 5.d.iii above, may be reduced to 100 feet. The buffer zone may be reduced to 35 feet if the buffer zone is permanently vegetated. Subsurface injection does not include methods or technology reflective of combination surface/shallow soil incorporation.
- e. Slope limitation for application sites are as follows:
 - i. For slopes less than or equal to 6 percent, no rate limitation;
 - ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels;
 - iii. Slopes > 12 percent, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.
 - iv. Dry, cake or liquid biosolids that are subsurface injected, may be applied on slopes not to exceed 20 percent. Subsurface injection does not include the use of methods or technology reflective of combination surface/shallow soil incorporation.
- f. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
- g. Biosolids may be land applied to sites with soil that are snow covered, frozen, or saturated with liquid when site restrictions or other controls are provided to prevent pollutants from being discharged to waters of the state during snowmelt or stormwater runoff. During inclement weather or unfavorable soil conditions use the following management practices:
 - i. A maximum field slope of 6% and a minimum 300 feet grass buffer between the application site and waters of the state. A 35 feet grass buffer may be utilized for the application of dry, cake or liquid biosolids that are subsurface injected. Subsurface injection does not include the use of methods or technology reflective of combination surface/shallow soil incorporation;
 - ii. A maximum field slope of 2% and 100 feet grass buffer between the application site and waters of the state. A 35 feet grass buffer may be used for the application of dry, cake or liquid biosolids that are subsurface injected. Subsurface injection does not include the use of methods or technology reflective of combination surface/shallow soil incorporation;
 - iii. Other best management practices approved by the Department.

SECTION H – SEPTAGE

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

SECTION I– CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical and lagoons) and sludge or biosolids storage and treatment facilities. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain Department approval of a closure plan which addresses proper removal and disposal of all sludges and/or biosolids. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6.010 and 10 CSR 20 – 6.015.
3. Biosolids or sludge that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:
 - a. Biosolids and sludge shall meet the monitoring and land application limits for agricultural rates as referenced in Section G, above.
 - b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
 - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre. Alternative, site-specific application rates may be included in the closure plan for department consideration.
 - i. PAN can be determined as follows:
$$(\text{Nitrate} + \text{nitrite nitrogen}) + (\text{organic nitrogen} \times 0.2) + (\text{ammonia nitrogen} \times \text{volatilization factor}^1).$$
¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volatilization factors and mineralization rates can be utilized on a case-by-case basis.
4. Domestic wastewater treatment lagoons with a design treatment capacity less than or equal to 150 persons, are “similar treatment works” under the definition of septage. Therefore the sludge within the lagoons may be treated as septage during closure activities. See Section B, above. Under the septage category, residuals may be left in place as follows:
 - a. Testing for metals or fecal coliform is not required.
 - b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at a rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
 - c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If 100 dry tons/acre or more will be left in the lagoon, test for nitrogen and determine the PAN using the calculation above. Allowable PAN loading is 300 pounds/acre.
5. Biosolids or sludge left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, and unless otherwise approved, the lagoon berm shall be demolished, and the site shall be graded and contain $\geq 70\%$ vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion. Alternative biosolids or sludge and soil mixing ratios may be included in the closure plan for department consideration.
6. Lagoon and earthen structure closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed one acre in accordance with 10 CSR 20-6.200.
7. When closing a mechanical wastewater plant, all biosolids or sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
 - a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain $\geq 70\%$ vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate

- surface water drainage without creating erosion.
- b. Hazardous Waste shall not be land applied or disposed during mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations pursuant to 10 CSR 25.
 - c. After demolition of the mechanical plant, the site must only contain clean fill defined in Section 260.200.1(6) RSMo as uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinderblocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the Department for fill, reclamation, or other beneficial use. Other solid wastes must be removed.
8. If biosolids or sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or I, a landfill permit or solid waste disposal permit must be obtained if the permittee chooses to seek authorization for on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR Part 503, Subpart C.

SECTION J – MONITORING FREQUENCY

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

TABLE 5

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

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

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

Note 1: Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids. This data shall be used to calculate the dry tons of sludge applied per acre.

Note 2: Table 5 is not applicable for incineration and permit holders that landfill their sludge.

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

SECTION K – RECORD KEEPING AND REPORTING REQUIREMENTS

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

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

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

5. Annual report contents. The annual report shall include the following:
 - a. Biosolids and sludge testing performed. If testing was conducted at a greater frequency than what is required by the permit, all test results must be included in the report.
 - b. Biosolids or sludge quantity shall be reported as dry tons for the quantity produced and/or disposed.
 - c. Gallons and % solids data used to calculate the dry ton amounts.
 - d. Description of any unusual operating conditions.
 - e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
 - i. This must include the name and address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
 - ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
 - f. Contract Hauler Activities:

If using a contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate biosolids or sludge use permit.
 - g. Land Application Sites:
 - i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. The facility shall report PAN when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.
 - ii. If the “Low Metals” criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
 - iii. Report the method used for compliance with pathogen and vector attraction requirements.
 - iv. Report soil test results for pH and phosphorus. If no soil was tested during the year, report the last date when tested and the results.

31858

RECEIVED

FEB 25 2019

Water Protection Program



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

**FORM A - APPLICATION FOR NONDOMESTIC PERMIT
UNDER MISSOURI CLEAN WATER LAW**

FOR AGENCY USE ONLY

CHECK NUMBER

DATE RECEIVED

FEE SUBMITTED

2-25-19

QSB

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

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

- ☐ An operating permit for a new or unpermitted facility. Number of original construction permit: MO _____
☒ Renewal of an operating permit. Permit number: MO 0108472 Expiration date: June 30, 2019
☐ Modification of an operating permit. Permit number: MO _____ Modification reason: _____

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

2. FACILITY

NAME	TELEPHONE NUMBER WITH AREA CODE		
CONSERVATION CHEMICAL COMPANY	EMAIL		
PHYSICAL ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
8900 FRONT STREET	KANSAS CITY	MO	64120

3. OWNER

NAME	TELEPHONE NUMBER WITH AREA CODE		
FRONT STREET REMEDIAL ACTION CORPORATION	EMAIL		
MAILING ADDRESS	CITY	STATE	ZIP CODE
8900 FRONT STREET	KANSAS CITY	MO	64120

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

4. CONTINUING AUTHORITY

NAME	TELEPHONE NUMBER WITH AREA CODE		
FRONT STREET REMEDIAL ACTION CORPORATION	EMAIL		
MAILING ADDRESS	CITY	STATE	ZIP CODE
1400 COMMERCE BANK BLDG, 1000 WALNUT STREET	KANSAS CITY	MO	64106

5. OPERATOR

NAME	CERTIFICATE NUMBER	TELEPHONE NUMBER WITH AREA CODE	
MATT JOHNSON	8780	(816) 500-7091	
MAILING ADDRESS	CITY	STATE	ZIP CODE
8900 FRONT STREET	KANSAS CITY	MO	64120

6. FACILITY CONTACT

NAME	TITLE	TELEPHONE NUMBER WITH AREA CODE
JEFF J. KELLER, P.E.	OPERATIONS MANAGER	(816) 822-4371
EMAIL		
JKELLER@BURNSMCD.COM		

7. ADDITIONAL FACILITY INFORMATION

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

001 NE 1/4 NW 1/4 Sec 29 T 50N R 32W JACK County
 UTM Coordinates Easting (X): 372622 Northing (Y): 4331956

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

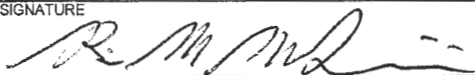
002 1/4 1/4 Sec T R County
 UTM Coordinates Easting (X): Northing (Y):

003 1/4 1/4 Sec T R County
 UTM Coordinates Easting (X): Northing (Y):

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

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

001 - SIC 9999 and NAICS 562910 002 - SIC and NAICS
 003 - SIC and NAICS 004 - SIC and NAICS

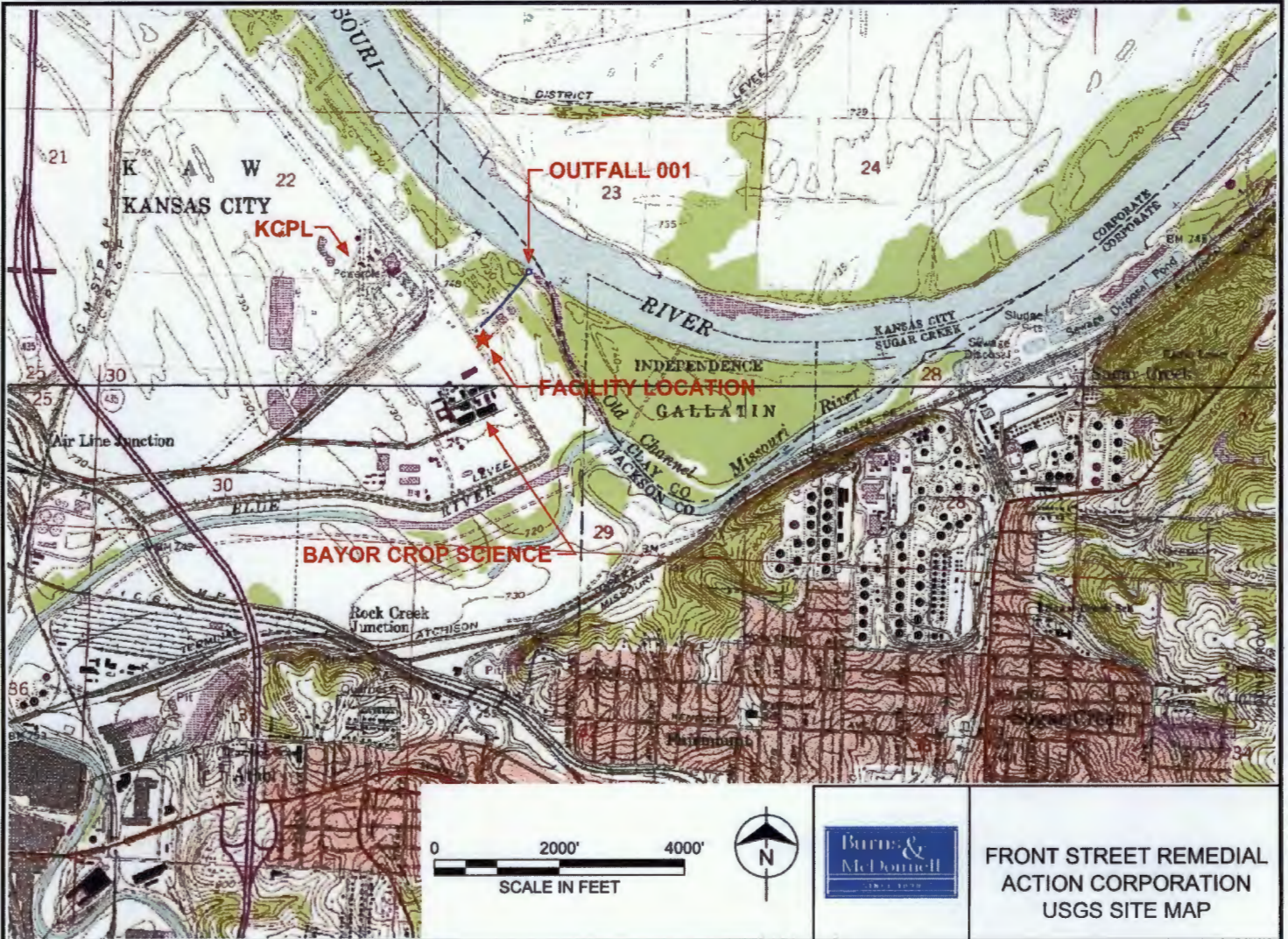
8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE APPLICATION (Complete all applicable forms.)			
A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C or 2F. (2F is EPA's Application for Storm Water Discharges Associated with Industrial Activity.)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
B.	Is application for stormwater discharges only? If yes, complete Form C or 2F.	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
C.	Is your facility considered a "primary industry" under EPA guidelines: If yes, complete Forms C or 2F and D.	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
D.	Is wastewater land-applied? If yes, complete Form I.	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
E.	Are biosolids, sludge, ash or residuals generated, treated, stored or land-applied? If yes, complete Form R.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
F.	If you are a Class IA CAFO, disregard Parts D and E, above, but attach any revisions to the nutrient management plan.		
G.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.		
9. ELECTRONIC DISCHARGE MONITORING REPORT (eDMR) SUBMISSION SYSTEM			
<p>Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, permittee shall report effluent limits and monitoring via an electronic system to ensure timely, complete, accurate and nationally consistent data. Check one of the following for this application to be considered complete. (Check only one.) To access the facility participation package, visit dnr.mo.gov/env/wpp/edmr.htm.</p> <p><input type="checkbox"/> You completed and submitted with this permit application the required documentation to participate in the eDMR system.</p> <p><input checked="" type="checkbox"/> You previously submitted required documentation to participate in the eDMR system and/or you currently use the eDMR system.</p> <p><input type="checkbox"/> You submitted a written request for a waiver from electronic reporting. See instructions for information regarding waivers.</p>			
9. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instructions. PLEASE SHOW LOCATION ON MAP. SEE 8(D) ABOVE.			
NAME BAYER CROPSCIENCE			
ADDRESS 8400 FRONT STREET		CITY KANSAS CITY	STATE MO
		ZIP CODE 64120	
<p>11. I certify that I am familiar with the information contained in this application. To the best of my knowledge and belief, such information is true, complete and accurate. If granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions subject to any legitimate appeal to the Missouri Clean Water Commission available to the applicant under the Missouri Clean Water Law.</p>			
NAME AND OFFICIAL TITLE (TYPE OR PRINT) Brien McGinnis, President FSRAC		TELEPHONE NUMBER WITH AREA CODE 215-299-6047	
SIGNATURE 		DATE SIGNED 2-13-19	

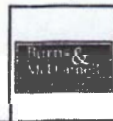
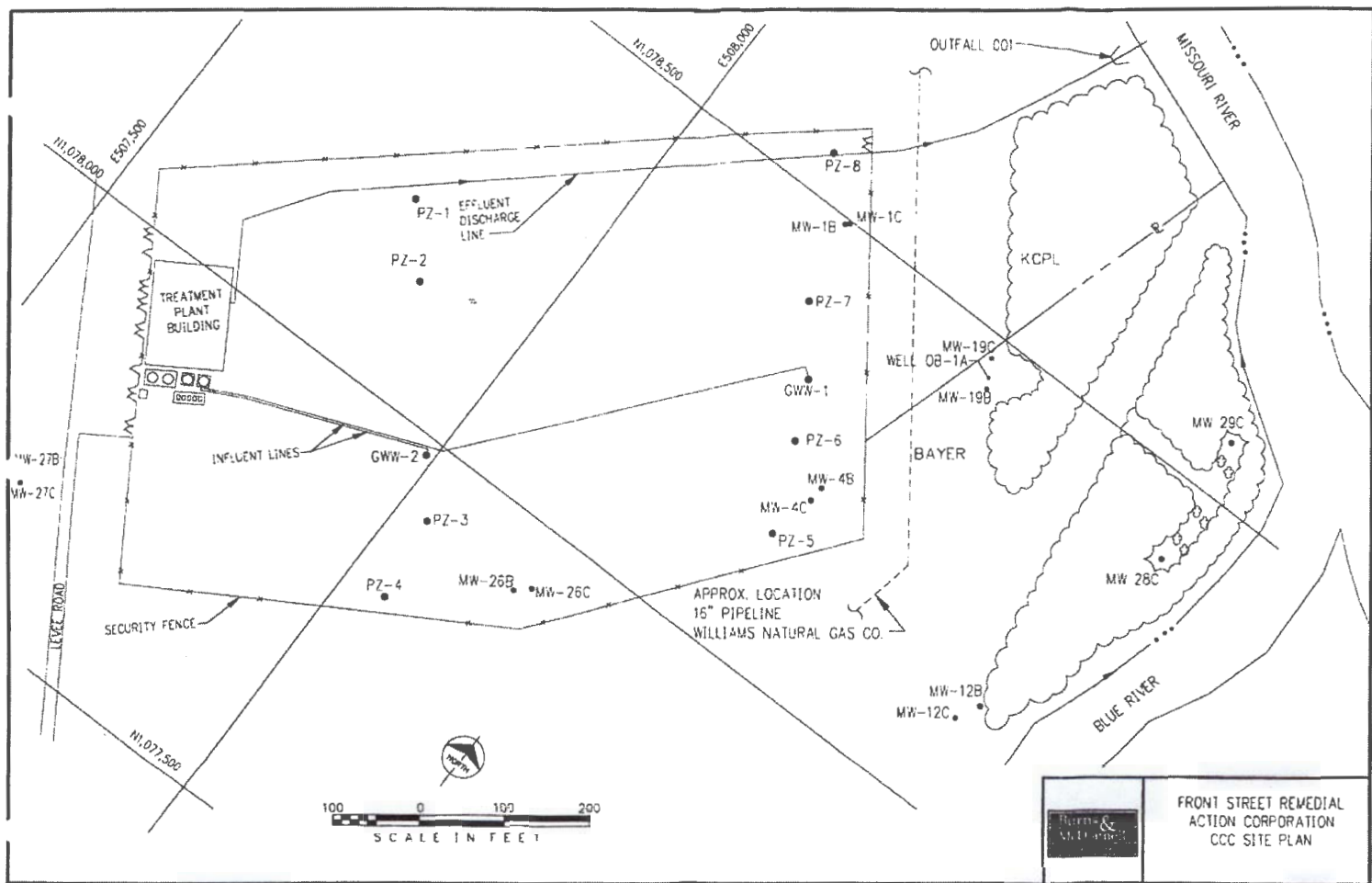
MO 780-1479 (04-18)

**BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETE.
 ALSO INCLUDE APPLICABLE ADDITIONAL FORMS.**
 Submitting an incomplete application may result in the application being returned.

HAVE YOU INCLUDED THE FOLLOWING?

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





FRONT STREET REMEDIAL
ACTION CORPORATION
CCC SITE PLAN



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

FOR AGENCY USE ONLY

CHECK NO.

DATE RECEIVED

FEE SUBMITTED

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

1.00 NAME OF FACILITY

CONSERVATION CHEMICAL COMPANY, GROUNDWATER TREATMENT FACILITY

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

MO-0108472

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).

NOT APPLICABLE

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

A. FIRST #9999 Nonclassifiable establishments

B. SECOND

C. THIRD

D. FOURTH

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) NE 1/4 NW 1/4 SEC 29 T 50N R 32W JACKSON COUNTY

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST)
001

RECEIVING WATER
MISSOURI RIVER (WEST CENTRAL TRIBS TO
MISSOURI RIVER BASIN)
(10300101-30-00) (P)

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

GROUNDWATER REMEDIATION FACILITY CONSISTING OF EQUALIZATION, HYDROXIDE METAL PRECIPITATION, BIOLOGICAL TREATMENT, FILTRATION, ACTIVATED CARBON ABSORPTION, AND pH ADJUSTMENT. THE AVERAGE DAILY FLOW FOR THE PERIOD FROM JANUARY 1, 2018 TO DECEMBER 31, 2018 WAS 203,926 GPD.

B. For each outfall, provide a description of 1. All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water and storm water runoff. 2. The average flow contributed by each operation. 3. The treatment received by the wastewater. Continue on additional sheets if necessary.

[illegible]

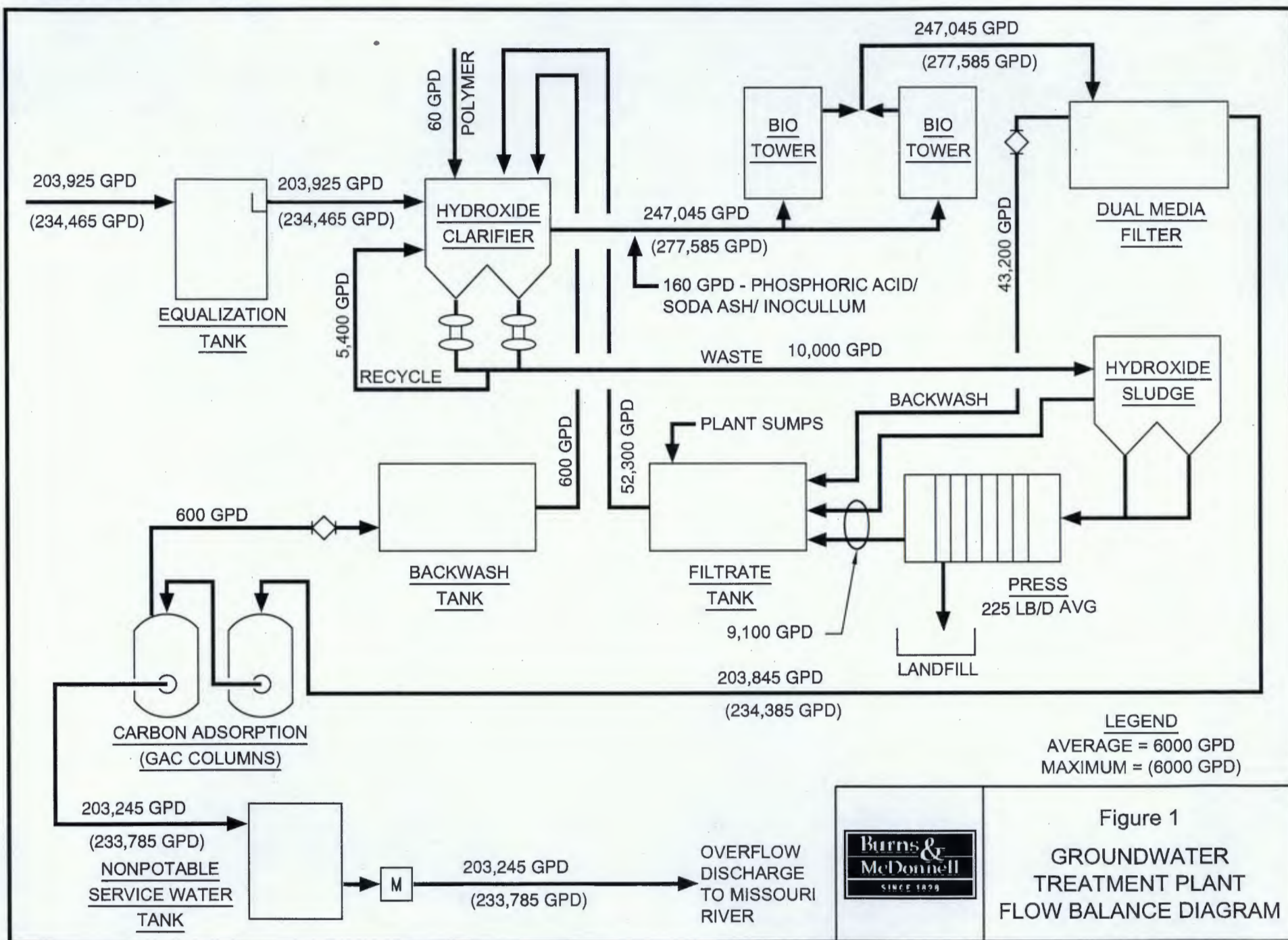


Figure 1
 GROUNDWATER
 TREATMENT PLANT
 FLOW BALANCE DIAGRAM

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. FLOW RATE <i>(in mgd)</i>		B. TOTAL VOLUME <i>(specify with units)</i>		
		A. DAYS PER WEEK <i>(specify average)</i>	B. MONTHS PER YEAR <i>(specify average)</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 (list outfall numbers)
A. QUANTITY PER DAY	B. UNITS OF MEASURE	C. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	

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
US District Court Western District of Missouri Western Division Consent Decree Civil No. 82-0983-CF-W-5	001	Groundwater	Operate the treatment plant to treat groundwater at a former waste disposal facility *There is no set compliance date, the plant is to be operated until groundwater cleanup goals are met.	*	

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

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

3.00 INTAKE AND EFFLUENT CHARACTERISTICS

A. & B. SEE INSTRUCTIONS BEFORE PROCEEDING – COMPLETE ONE TABLE FOR EACH OUTFALL – ANNOTATE THE OUTFALL NUMBER IN THE SPACE PROVIDED.
NOTE: TABLE 1 IS INCLUDED ON SEPARATE SHEETS NUMBERED FROM PAGE 6 TO PAGE 7.

C. USE THE SPACE BELOW TO LIST ANY OF THE POLLUTANTS LISTED IN PART B OF THE INSTRUCTIONS, WHICH YOU KNOW OR HAVE REASON TO BELIEVE IS DISCHARGED OR MAY BE DISCHARGED FROM ANY OUTFALL. FOR EVERY POLLUTANT YOU LIST, BRIEFLY DESCRIBE THE REASONS YOU BELIEVE IT TO BE PRESENT AND REPORT ANY ANALYTICAL DATA IN YOUR POSSESSION.

[illegible]

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)

In accordance with existing Missouri State Operating Permit (#MO-0108472), acute toxicity tests to *Ceriodaphnia Dubia* and *Pimephales Promelas* have been conducted annually on the plant effluent and on the receiving water.

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)
Gulf Coast Analytical Laboratories	7979 Innovation Park Dr. Baton Rouge, LA 70820	(225) 769-4900	All analyses
CK Associates Environmental Consultants	17170 Perkins Rd Baton Rouge, LA 70810	(225) 755-1000	Toxicity Test *Data presented in Table C for period from January 1, 2018 - December 31, 2018

3.30 CERTIFICATION

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT)

Brian McGinnis, President FSRAC

TELEPHONE NUMBER WITH AREA CODE

215-299-6047

SIGNATURE (SEE INSTRUCTIONS)

Brian McGinnis

DATE SIGNED

2-13-19

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

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS												OUTFALL NO.		
PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.														
1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)					
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES		
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS			
A. Biochemical Oxygen Demand (BOD)	5	9.78					4	mg/L	lbs	5	9.78	4		
B. Chemical Oxygen Demand (COD)	2.6	5.08					4	mg/L	lbs	25.2	49.28	4		
C. Total organic Carbon (TOC)	0.375 J	0.733					1	mg/L	lbs	15.9	31.09	1		
D. Total Suspended Solids (TSS)	ND (2.5)	9.78					1	mg/L	lbs	25	48.89	1		
E. Ammonia (as N)	1.8	3.34					4	mg/L	lbs	5.7	11.15	4		
F. Flow	VALUE 234,464		VALUE		VALUE		365	gpd	--	VALUE 234,464		365		
G. Temperature (winter)	VALUE Not Available		VALUE		VALUE			°C		VALUE				
H. Temperature (summer)	VALUE Not Available		VALUE		VALUE			°C		VALUE				
I. pH	MINIMUM 7.1	MAXIMUM 7.9	MINIMUM	MAXIMUM			12	STANDARD UNITS						
PART B – Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.														
1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS														
A. Bromide (24959-67-9)		X												
B. Chlorine, Total Residual		X												
C. Color		X												
D. Fecal Coliform		X												
E. Fluoride (16984-48-8)		X												
F. Nitrate - Nitrate (as N)	X		2.01	3.93					1	mg/L	lbs	0.053	0.104	1

J - Indicates the result is between the Method Detection Limit and Reporting Detection Limit.
ND # - Indicates the compound was analyzed for but not detected, and provides a value equal to 1/2 of the Method Detection Limit.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen, Total Organic (as N)	X		0.65 J	1.27					1	mg/L	lbs	4.40	8.60	1
H. Oil and Grease		X												
I. Phosphorus (as P), Total (7723-14-0)	X		0.598	1.17					1	mg/L	lbs	0.375	0.733	1
J. Sulfate (as SO ₄) (14808-79-8)	X		385	752.84					1	mg/L	lbs	390	762.62	1
K. Sulfide (as S)	X		ND (0.0025)	0.0098					1	mg/L	lbs	0.005	0.0098	1
L. Sulfite (as SO ₃) (14265-45-3)	X		ND (1.0)	3.911					1	mg/L	lbs	2	3.911	1
M. Surfactants		X												
N. Aluminum, Total (7429-90-5)	X		0.012	0.0235					1	mg/L	lbs	0.019	0.037	1
O. Barium, Total (7440-39-3)	X		0.0293	0.0573					1	mg/L	lbs	0.075	0.146	1
P. Boron, Total (7440-42-8)		X												
Q. Cobalt, Total (7440-48-4)		X												
R. Iron, Total (7439-89-6)	X		0.7590	1.485					12	mg/L	lbs	15.4	12.5	12
S. Magnesium, Total (7439-95-4)	X		28.4	55.53					1	mg/L	lbs	28.5	55.73	1
T. Molybdenum, Total (7439-98-7)	X		0.0268	0.0524					1	mg/L	lbs	0.028	0.056	1
U. Manganese, Total (7439-96-5)	X		0.0504	0.0986					1	mg/L	lbs	0.746	1.459	1
V. Tin, Total (7440-31-5)		X												
W. Titanium, Total (7440-32-6)		X												

MO 780-1514 (06-13)

PAGE 7

J - Indicates the result is between the Method Detection Limit and Reporting Detection Limit.

ND # - Indicates the compound was analyzed for but not detected, and provides a value equal to 1/2 of the Method Detection Limit.

*Aluminum was detected in the method blank at a concentration >1/2 the LOQ. This is probable laboratory contamination that may also be present in the samples.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-9)		X												
2M. Arsenic, Total (7440-38-2)	X		0.0159	0.0311					12	mg/L	lbs	0.028	0.021	12
3M. Beryllium, Total (7440-41-7)	X		ND (0.000125)	0.0003					4	mg/L	lbs	ND (0.000125)	0.0003	4
4M. Cadmium, Total (7440-43-9)	X		ND (0.000125)	0.0005					4	mg/L	lbs	ND (0.000125)	0.00005	4
5M. Chromium III (16065-83-1)	X		ND (0.001315)	0.00514					4	mg/L	lbs	0.0043	0.0084	4
6M. Chromium VI (18540-29-9)	X		0.00263	0.00514					4	mg/L	lbs	0.0043	0.0084	4
7M. Copper, Total (7440-50-8)	X		0.00147 J	0.00287					4	mg/L	lbs	0.0003	0.0006	4
8M. Lead, Total (7439-92-1)	X		ND (0.000125)	0.00049					4	mg/L	lbs	ND (0.000125)	0.00049	4
9M. Mercury, Total (7439-97-6)	X		ND (0.00005)	0.0002					4	mg/L	lbs	ND (0.00005)	0.0002	4
10M. Nickel, Total (7440-02-0)	X		0.0257	0.05025					4	mg/L	lbs	0.0228	0.04458	4
11M. Selenium, Total (7782-49-2)		X												
12M. Silver, Total (7440-22-4)		X												
13M. Thallium, Total (7440-28-0)		X												
14M. Zinc, Total (7440-66-6)	X		ND (0.0025)	0.0098					4	mg/L	lbs	0.024	0.0469	4
15M. Cyanide, Amenable to Chlorination	X		0.016	0.0313					4	mg/L	lbs	0.027	0.0528	4
16M. Phenols, Total	X		0.48	0.939					4	mg/L	lbs	0.94	1.838	4
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

MO 780-1514 (06-13)

PAGE 8

J - Indicates the result is between the Method Detection Limit and Reporting Detection Limit.

ND # - Indicates the compound was analyzed for but not detected, and provides a value equal to 1/2 of the Method Detection Limit.