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-0121827
Owner:	Associated Electric Cooperative, Inc. (AECI)
Address:	PO Box 754, Springfield, MO 65801
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	AECI, St. Francis Power Plant
Facility Address:	40753 County Road 101, Campbell, MO 63933
Legal Description:	See Pages 2-3
UTM Coordinates:	See Pages 2-3
Receiving Stream:	Oxbow to St. Francis River (U)
First Classified Stream and ID:	St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.:	(08020203-0502)

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

FACILITY DESCRIPTION

St. Francis Power Plant is a two unit, 501 MW combined cycle natural gas fired generating station. Unit 1 is a 245 MW unit that came online in 1999, while Unit 2 is a 256 MW unit that came online in 2001. St. Francis Power Plant's intake water is from wells located at the facility. St. Francis uses best technology available (BTA) cooling water towers. Outfall 003 is the combined discharge from internal outfalls 001 and 002. Outfall 007 is the combined discharge from internal outfalls 005 and 006. The outfalls discharge into an oxbow, which flows via surface and subsurface routes to an open oxbow of the St. Francis River. See Pages Two and Three for facility description. A Certified Operator is not required.

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.

August 1, 2014
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

December 31, 2018
Expiration Date

John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (continued)**:**

Outfall #001 – SIC # 4911
Internal outfall; Cooling tower Blowdown from Unit #1

UTM Coordinates:	x= 752409; y= 4052709
Legal Description:	NE ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
Receiving Stream:	Oxbow to St. Francis River (U)
First Classified Stream and ID:	St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.:	(08020203-0502)
Design Flow:	0.7 MGD
Average Flow:	0.15 MGD

Outfall #002 – SIC # 4911
Internal outfall; Oil/Water Separator with Unit #1; pH adjustment

UTM Coordinates:	x= 752409; y= 4052709
Legal Description:	NE ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
Receiving Stream:	Oxbow to St. Francis River (U)
First Classified Stream and ID:	St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.:	(08020203-0502)
Design Flow:	0.576 MGD
Average Flow:	0.098 MGD

Outfall #003 – SIC # 4911
Lined basin. Cooling water pond; combined discharge from internal outfalls 001 and 002, fire water supply and fire protection test water.

UTM Coordinates:	x= 752343; y= 4052651
Legal Description:	NW ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
Receiving Stream:	Oxbow to St. Francis River (U)
First Classified Stream and ID:	St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.:	(08020203-0502)
Design Flow:	1.4 MGD
Average Flow:	0.063 MGD

Outfall #004 – SIC #4911
Stormwater; This outfall was eliminated by a no exposure certification in the 2006 permit renewal. This permit authorizes the continued use of existing or new storm sewers where there is no exposure of industrial materials and activities to rain, snow, snowmelt and/or runoff to convey uncontaminated storm runoff. Such outfalls do not require monitoring or limitations when appropriate best management practices are implemented. Special conditions have been added to the permit to develop a storm water pollution prevention plan (SWPPP) and appropriate best management practices to maintain the no exposure certification during the permit cycle.

FACILITY DESCRIPTION (continued)**:**

Outfall #005 – SIC # 4911
Internal outfall; Cooling tower Blowdown from Unit #2

UTM Coordinates:	x= 752399; y = 4052485
Legal Description:	NE ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
Receiving Stream:	Unnamed Oxbow to St. Francis River (U)
First Classified Stream and ID:	St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.:	(08020203-0502)
Design Flow:	0.701 MGD
Average Flow:	0.129 MGD

Outfall #006 – SIC # 4911
Internal outfall; Oil/ Water Separator with Unit #2, pH adjustment

UTM Coordinates:	x= 752399; y = 4052485
Legal Description:	NE ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
Receiving Stream:	Unnamed Oxbow to St. Francis River (U)
First Classified Stream and ID:	St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.:	(08020203-0502)
Design Flow:	0.569 MGD
Average Flow:	0.195 MGD

Outfall #007 – SIC # 4911
Lined basin. Cooling water pond; combined discharge from internal outfalls 005 and 006 and fire protection test water.

UTM Coordinates:	x= 752352; y= 4052539
Legal Description:	NW ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
Receiving Stream:	Unnamed Oxbow to St. Francis River (U)
First Classified Stream and ID:	St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.:	(08020203-0502)
Design Flow:	1.27 MGD
Average Flow:	0.08 MGD

Sanitary wastewater from the power plant is treated with an onsite system.

A. 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 **August 1, 2014**, and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfalls #001 & #005 - Cooling Tower Blowdown						
Flow	MGD	*		*	daily	24 hr. total
Total Suspended Solids	mg/L	100		30	once/month	grab
pH – Units	SU	**		**	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE SEPTEMBER 28, 2014.						
Freely Available Chlorine	mg/L	0.5		0.2	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2015.						
Outfall #002 & #006 - Oil Water Separators						
Flow	MGD	*		*	once/month	24 hr. total
Total Suspended Solids	mg/L	100		30	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab
pH – Units	SU	**		**	continuous	continuous
pH – Minutes of Exceedances (Note 1)	minutes			446	continuous	continuous
pH – Number of excursions (Note 1)	Count			0	continuous	continuous
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE SEPTEMBER 28, 2014. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

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

Note 1: St. Francis Power Plant has continuous pH measurement on Outfalls 002 and 006. With continuous pH measurement, the facility may have excursions of the set pH for up to 446 minutes (7 hours, 26 minutes) in any calendar month; however the facility is not allowed to have an individual excursion lasting more than 60 minutes. The permittee shall report the minutes per month exceeding the pH effluent limits, along with number of excursions lasting sixty (60) minutes or more.

A. 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 **August 1, 2014**, and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfalls #003 & #007 - Cooling Water Ponds						
Flow	MGD	*		*	once/month	24 hr. total
Oil & Grease	mg/L	15		10	once/month	grab
Total Sulfate	mg/L	*		*	once/month	grab
Total Nitrogen	mg/L	*		*	once/month	grab
Total Phosphorus	mg/L	*		*	once/month	grab
Total Residual Chlorine	µg/L	17 (130 ML)		8 (130 ML)	once/month	grab
Temperature	°F	*		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE SEPTEMBER 28, 2014.						
Whole Effluent Toxicity (WET) test	TU_a	*			once/year	24 hr. composite**
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE SEPTEMBER 28, 2014. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

** A 24-hour composite sample is composed of 48 aliquots (subsamples) collected at 30 minute intervals by an automatic sampling device.

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit. This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 130 µg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. 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 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.

B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Parts I & III standard conditions dated November 1, 2013 and March 1, 2014, and hereby incorporated as though fully set forth herein.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
   (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
      (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
      (2) controls any pollutant not limited in the permit.
   (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

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

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

3. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.

4. Water Quality Standards
   (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
   (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
      (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
      (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
      (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
      (5) There shall be no significant human health hazard from incidental contact with the water;
      (6) There shall be no acute toxicity to livestock or wildlife watering;
      (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
      (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

5. Changes in Discharges of Toxic Substances

   The permittee shall notify the Director as soon as it knows or has reason to believe:
   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 µg/L);
      (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
      (4) The level established in Part A of the permit by the Director.
   (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

6. Report as no-discharge when a discharge does not occur during the report period.

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

C. SPECIAL CONDITIONS (continued)

8. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

9. Before releasing water that has accumulated in secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen. When the presence of hydrocarbons is indicated, the water shall be appropriately treated or taken to an authorized facility for treatment or disposal. If treated on-site, treated water must be tested and have a TPH concentration less than 10 mg/L before being discharged. This condition does not apply to stormwater that is treated in an oil/water separator that was permitted pursuant to a construction permit issued by the Department and that has oil and grease effluent limitations applied to the discharge from the oil/water separator.

10. The purpose of a Storm Water Pollution Prevention Plan (SWPPP) is the prevention of pollution of waters of the state. St. Francis Power Plant maintains no exposure certification for stormwater flows at the facility. To ensure that a facility continues to install, use, operate and maintain the best management practices for no exposure certification, the permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be prepared within 30 days and implemented within 90 days of permit issuance. The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The SWPPP must be reviewed and updated, if needed, every five (5) years or as site conditions change. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

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

    The SWPPP must include the following:
    (a) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter storm water.
    (b) The SWPPP must include a schedule and documentation of site inspections. The inspections must include observation and evaluation of BMP effectiveness. Deficiencies must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report, including photographs. Any corrective measure that necessitates major construction may also need a construction permit. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to DNR personnel upon request.
    (c) A provision for designating an individual to be responsible for environmental matters.
    (d) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.
    (e) A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.

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

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT					
OUTFALL	AEC	Acute Toxic Unit (TU_a)	FREQUENCY	SAMPLE TYPE	MONTH
003	100%	*	once/year	24 hr. composite	August
007	100%	*	once/year	24 hr. composite	August

*Monitoring only

Dilution Series						
100%	50%	25%	12.5%	6.25%	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

C. SPECIAL CONDITIONS (continued)

12. Whole Effluent Toxicity (WET) Test (continued)

(a) Freshwater Species and Test Methods

(1) Species and short-term test methods for estimating the acute toxicity of NPDES effluents are found in the fifth edition of *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/821/R-02/012, 2002; Table IA, 40 CFR Part 136). The permittee shall concurrently conduct 48-hour static non-renewal toxicity tests with the following vertebrate species:

- The fathead minnow, *Pimephales promelas* (Acute Toxicity Test Method 2000.0).

And the following invertebrate species:

- The daphnid, *Ceriodaphnia dubia* (Acute Toxicity Test Method 2002.0).

(2) Chemical and physical analysis of an 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, synthetic laboratory control water may be used.

(3) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.

(4) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analysis performed upon any other effluent concentration.

(5) All chemical analyses shall be performed and results shall be recorded in the appropriate field of the report form. The parameters for chemical analysis include Temperature (°C), pH (SU), Conductivity (µmohs/cm), Dissolved Oxygen (mg/L), Total Residual Chlorine (mg/L), Sulfate (mg/L), Total Alkalinity (mg/L), and Total Hardness (mg/L).

(b) Reporting of Acute Toxicity Monitoring Results

(1) WET test results shall be submitted to the Southeast Regional Office, or by eDMR, with the permittee's Discharge Monitoring Reports annually by September 28, 2014. The submittal shall include:

1. A full laboratory report for all toxicity testing.
2. Copies of chain-of-custody forms.
3. The WET form provided by the Department upon permit issuance.

(2) 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 toxic or effluent concentration that would cause death in 50 percent of the test organisms over a specified period of time.

(c) Permit Reopener for Acute Toxicity

In accordance with 40 CFR Parts 122 and 124, this permit may be modified to include effluent limitations or permit conditions to address acute toxicity in the effluent or receiving waterbody, as a result of the discharge; or to implement new, revised, or newly interpreted water quality standards applicable to acute toxicity.

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF RENEWAL & CONSTRUCTION
OF
MO-0121827
AECI, ST. FRANCIS POWER PLANT

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

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

Part I – Facility Information

Facility Type: IND
Facility SIC Code(s): 4911

Facility Description:
St. Francis Power Plant is a two unit, 501 MW combined cycle natural gas fired generating station, located on approximately 45 acres, nine miles northwest of Campbell, MO on Highway 53. Unit 1 is a 245 MW unit that came online in 1999, while Unit 2 is a 256 MW unit that came online in 2001. St. Francis Power Plant's intake water is from wells located at the facility. St. Francis uses best available control technology (BACT) cooling water towers. All outfalls combine and discharge into an oxbow, which flows via a surface and subsurface routes to an open oxbow of the St. Francis River. Outfall 004 was removed from monitoring requirements in the 2006 renewal, as the facility achieved no exposure certification; however a Stormwater Prevention Pollution Plan (SWPPP) is required to help the facility maintain their no exposure certification. Domestic wastewater from the facility is treated by an onsite system. Domestic flows are 0.4 gpm (576 gpd).

The facility is subject to federal effluent guidelines for Steam Electric Generating Stations, 40 CFR 423. The facility is subject to New Source Performance Standards of 40 CFR 423.15. St. Francis Power plant is not a base load plant.

Outfalls #001 and #005 are the cooling tower blowdown wastewater streams. Cooling Tower blowdown is subject to 40 CFR 423.15, which includes effluent limits for pH, freely available chlorine, 126 priority pollutants, total chromium, and total zinc. Oil and grease effluent limits were removed from the outfalls in this permit cycle due to no reasonable potential to exceed water quality standards. The permittee has stated in the permit application that chemicals using the 126 priority pollutants, total chromium, and total zinc are not used in association with the cooling tower blowdown.

Outfalls #002 and #006 have continuous pH monitoring, as allowed in 40 CFR 401.17, which allows for 446 minutes per calendar month of exceedance of pH values, with no individual excursion lasting more than sixty minutes. The facility has elected to install equipment necessary to adjust pH using sulfuric acid. The pH adjustment equipment includes a sump pump, pH probes, sulfuric acid pump feeder, and a secondary containment tray on a concrete pad. The acid pumps will run only when pH approaches 9.0 SU. Continuous pH monitors are used and acid is only used when necessary to adjust pH to acceptable range. Flows from the oil/water separator are covered under the low volume waste sources, as defined in 40 CFR 423.15. 40 CFR 423.15 requires the monitoring of total suspended solids, and oil and grease.

Outfalls #003 and #007are line cooling water basins. The basins receive the combined flows of the cooling tower blowdown and the oil/water separator. Outfall #003 is designed to take the flows from Unit #1 cooling tower blowdown (Outfall #001) and the oil/water separator (Outfall #002). Outfall #007 is designed to take the flows from Unit #2 cooling tower blowdown (Outfall #005) and the oil/water separator (Outfall #006). Outfalls #003 and #007 have scheduled monitoring for total suspended solids, oil and grease, sulfate, total residual chlorine, and whole effluent toxicity test.

Outfall #004 was eliminated by a no exposure certification in the 2006 permit renewal. This permit authorizes the continued use of existing or new storm sewers where there is no exposure of industrial materials and activities to rain, snow, snowmelt and/or runoff to convey uncontaminated storm runoff. Such outfalls do not require monitoring or limitations when appropriate best management practices are implemented. Special conditions have been added to the permit to develop a stormwater pollution prevention plan and appropriate best management practices to maintain the no exposure certification during the permit cycle.

In addition to the narrative description below for each of the outfalls, there is a facility map with outfalls marked in **Appendix A-1: Facility Map** and a process flow diagram for the outfalls located in **Appendix A-2: Flow Diagram**.

From 2001 through 2002, AECI conducted a Water Quality Study on the effects of the discharge on the Oxbow and on the St. Francis River. The results of the study showed total residual chlorines in the river and groundwater occurring naturally above the standards, and low metal concentrations from the discharge. The Water Quality Study was terminated in 2003.

Other environmental permits and identification numbers associated to AECI St. Francis Power Plant, include:
MDNR Air Major Facility: 2906900066
EPA Registry ID#: 110017976403

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?

Yes ☒: St. Francis Power Plant is adding sulfuric acid to Outfalls #002 and #006, as necessary to keep pH in the appropriate range. With this permit a construction permit was issued for the installation of pH adjustment equipment for the addition of sulfuric acid.

- Sulfate monitoring was added to Outfalls 003 and 007 based on the recommendation of the Water Quality Review Sheet. With the change in the Water Quality Standard for sulfate in 2012, along with the introduction of additional sulfuric acid to the process, and the changes in water classifications, monitoring is being established for sulfate. At renewal, the information will be evaluated to see if reasonable potential exists to exceed the standard. Chloride and hardness are not being required for monitoring, at this time. The results of the Water Quality Study in 2001-2002 showed that naturally occurring chloride concentrations may exceed the water quality standard and the hardness data can be determined from the gaging stations on the St. Francis River upstream of the discharge.
- Oil and grease effluent limits were adjusted to meet the water quality standard of 10 mg/L, 10 CSR 20-7 Table A. The previous permit contained the effluent limit guideline limits of 20 mg/L. Reviewing the discharge monitoring reports for the facility, the facility is in compliance with the 10 mg/L effluent limits.
- Total Nitrogen and Total Phosphorus monitoring was added to the Outfalls #003 and #007 per 10 CSR 20-7.015(9)(D)7.
- Total Suspended Solids were removed from monitoring and final effluent limit on Outfalls #003 and #007, as there is additional settling prior to discharge and compliance with TSS effluent limits is on Outfalls #001, #002, #005, and #006.
- An annual acute WET test is required for Outfalls #003 and #007 in accordance with the Department's WET Test Policy.
- Previous permit established total available chlorine using the water quality standard for total residual chlorine. Total residual chlorine is the sum of the free chlorine residual and the combined chlorine residual, thus is more protective than just the free chlorine effluent limit. Missouri Water Quality Standards are for total residual chlorine, which is why the effluent limit is applied on Outfalls #003 and #007.

Application Date: 02/17/2011 Expiration Date: 08/17/2011 Last Inspection: 02/03/2011 In Compliance ☒

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	1.08	Sedimentation	Cooling tower blowdown	~0.37
002	0.9	Oil/water separator	Categorical low volume wastes	~0.37
003	2.16	Sedimentation/ flotation	Cooling tower Blowdown, low volume waste from #001 & #002	~0.28
004	NA	No exposure	Stormwater	
005	1.08	Sedimentation	Cooling tower blowdown	~0.33
006	0.9	Oil/water separator	Categorical low volume wastes	~0.33
007	1.9	Sedimentation/ flotation	Cooling tower Blowdown, low volume waste from #005 & #006	~0.28

Outfall #001 – SIC # 4911
Internal outfall; Cooling tower Blowdown from Unit #1

UTM Coordinates:	x= 752409; y= 4052709
Legal Description:	NE ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
Receiving Stream:	Oxbow to St. Francis River (U)
First Classified Stream and ID:	St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.:	(08020203-0502)
Design Flow:	0.7 MGD
Average Flow:	0.15 MGD

Outfall #002 – SIC # 4911
Internal outfall; Oil/Water Separator with Unit #1; pH adjustment

UTM Coordinates:	x= 752409; y= 4052709
Legal Description:	NE ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
Receiving Stream:	Oxbow to St. Francis River (U)
First Classified Stream and ID:	St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.:	(08020203-0502)
Design Flow:	0.576 MGD
Average Flow:	0.098 MGD

Outfall #003 – SIC # 4911
Lined basin. Cooling water pond; combined discharge from internal outfalls 001 and 002, fire water supply and fire protection test water.

UTM Coordinates:	x= 752343; y= 4052651
Legal Description:	NW ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
Receiving Stream:	Oxbow to St. Francis River (U)
First Classified Stream and ID:	St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.:	(08020203-0502)
Design Flow:	1.4 MGD
Average Flow:	0.063 MGD

Outfall #005 – SIC # 4911
Internal outfall; Cooling tower Blowdown from Unit #2

UTM Coordinates:	x= 752399; y = 4052485
Legal Description:	NE ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
Receiving Stream:	Oxbow to St. Francis River (U)
First Classified Stream and ID:	St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.:	(08020203-0502)
Design Flow:	0.701 MGD
Average Flow:	0.129 MGD

Outfall #006 – SIC # 4911
Internal outfall; Oil/ Water Separator with Unit #2, pH adjustment

UTM Coordinates:	x= 752399; y = 4052485
Legal Description:	NE ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
Receiving Stream:	Oxbow to St. Francis River (U)
First Classified Stream and ID:	St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.:	(08020203-0502)
Design Flow:	0.569 MGD
Average Flow:	0.195 MGD

Outfall #007 – SIC # 4911
Lined basin. Cooling water pond; combined discharge from internal outfalls 005 and 006 and fire protection test water.

UTM Coordinates:	x= 752352; y= 4052539
Legal Description:	NW ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
Receiving Stream:	Oxbow to St. Francis River (U)
First Classified Stream and ID:	St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.:	(08020203-0502)
Design Flow:	1.27 MGD
Average Flow:	0.08 MGD

Receiving Water Body's Water Quality & Facility Performance History:
The facility had temperature monitoring from Outfalls 003 and 007 over the previous permit cycle and on occasion reported discharge temperatures above water quality standard of 90ºF. While these temperatures occur during the ambient high temperature months, the water quality standard does not account for ambient temperature. The facility employs best available control technology with cooling towers; which after the water leaves the cooling towers (Outfalls 001 & 005), the water flows to the cooling water ponds (Outfalls #003 & #007), where it is stored for reuse at the plant or for discharge to the Oxbow Lake to the St. Francis River.

Free Available Chlorine monitoring and limits in the 40 CFR 423.15 are 0.5 mg/L as a daily maximum and 0.2 mg/L monthly average. Outfalls #001 and #005 discharge to a settling pond for further treatment and discharge through Outfalls #003 and #007. As total residual chlorine includes free chlorine, this is a more protective effluent limit. The appropriate water quality based total residual chlorine effluent limits will be applied to the final discharge outfalls since water quality based standards for total residual chlorine would be more protective than the federal categorical effluent limits.

Part II – Operator Certification Requirements

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation. As per [10 CSR 20-9.020(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Not Applicable ☒: This facility is not required to have a certified operator.

Part III – Receiving Stream Information

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

All Other Waters [10 CSR 20-7.015(8)]: ☒

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

The previous permit stated that water flows by subsurface and surface flows to the St. Francis River, which appears to meet the requirements of 10 CSR 20-7.031(1)(F) Classified waters: All waters listed as L1, L2, and L3 in Table G: Lake Classifications and Use Designations and P, P1, and C in Table H: Stream Classifications and Use Designations. During normal flow periods, some rivers back water into tributaries which are not otherwise classified. These permanent backwater areas are considered to have the same classification as the water body into which the tributary flows. Even without this regulation, due to the distance to the St. Francis River, St. Francis River classifications are applicable.

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	EDU**
Oxbow to St. Francois River	U	--	General Criteria	08020203-0502	Lower St. Francois
St. Francois River	P	02968	AQL, IRR, LWW, SCR, WBC(A)***		

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).
** - Ecological Drainage Unit
***-UAA not conducted

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Oxbow to St. Francis River (U)	0.0	0.0	0.0
St. Francis River(P)*	49.9	315.8	916.7

* Data taken from USGS gaging station 07040000 located on the St. Francis River near Fisk (~20 miles upstream) from 1977 to 2010. The low flow values were calculated using a Log Person Type III Probability Distribution.

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

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Part IV – Rationale and Derivation of Effluent Limitations & Permit Conditions

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

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

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

Applicable ☒: Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44. Effluent limitations from the previous state operating permit have been reassessed and removed the monitoring requirement from Outfalls #003 and #007, as there are TSS effluent limits on Outfalls #001, #002, #005, and #006. Since this is an additional settling location prior to discharge and the facility is required to be in compliance prior to entering the pond, monitoring was removed.

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

Not Applicable ☒: Renewal, no degradation proposed and no further review necessary. The proposed addition of sulfuric acid for pH control is not subject to an Antidegradation Review. Please see **Appendix C: Antidegradation Analysis** for the department's decision. The department's decision recommended establishing monitoring for sulfate, chloride, and total hardness. With the change in the Water Quality Standard for sulfate in 2012, along with the introduction of additional sulfuric acid to the process, and the changes in water classifications, monitoring is being established for sulfate. At renewal, the information will be evaluated to see if reasonable potential exists to exceed the standard. Chloride and hardness are not being required to be monitored for, at this time. The results of the Water Quality Study in 2001-2002 showed that naturally occurring chloride concentrations may exceed the water quality standard and the hardness data can be determined from the gauging stations on the St. Francis River upstream of the discharge.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:
As per [10 CSR 20-6.010(3)(B)], …An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.

BIOSOLIDS & SEWAGE SLUDGE:
Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, 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 a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: http://dnr.mo.gov/env/wpp/pub/index.html, items WQ422 through WQ449.

Not Applicable ☒: This condition is not applicable to the permittee for this facility.

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.

PRETREATMENT PROGRAM:
The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)]. Pretreatment programs are required at any POTW (or combination of POTW operated by the same authority) and/or municipality with a total design flow greater than 5.0 MGD and receiving industrial wastes that interfere with or pass through the treatment works or are otherwise subject to the pretreatment standards. Pretreatment programs can also be required at POTWs/municipals with a design flow less than 5.0 MGD if needed to prevent interference with operations or pass through.

Not Applicable ☒: The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

REASONABLE POTENTIAL ANALYSIS (RPA):
Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standards. In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that 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 that pollutant.

Applicable ☒: A RPA was conducted on appropriate parameters. Please see **APPENDIX B: RPA RESULTS**.

REMOVAL EFFICIENCY:
Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

Not Applicable ☒: Influent monitoring is not being required to determine percent removal**.**

SANITARY SEWER OVERFLOWS (SSO) AND INFLOW AND INFILTRATION (I&I):
Sanitary Sewer Overflows (SSOs) are defined as an untreated or partially treated sewage release are considered bypassing under state regulation [10 CSR 20-2.010(11)] and should not be confused with the federal definition of bypass. SSO's have a variety of causes including blockages, line breaks, and sewer defects that allow excess storm water and ground water to (1) enter and overload the collection system, and (2) overload the treatment facility. Additionally, SSO's can be also be caused by lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations. Additionally, Missouri RSMo §644.026.1 mandates that the Department require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities.

Not Applicable ☒: This facility is not required to develop or implement a program for maintenance and repair of the collection system; however, it is a violation of Missouri State Environmental Laws and Regulations to allow untreated wastewater to discharge to waters of the state.

SCHEDULE OF COMPLIANCE (SOC):
A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Not Applicable ☒; This permit does not contain a SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):
In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities: (2) Authorized under section 402(p) of the CWA for the control of storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Storm Water Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of storm water discharges.

Applicable ☒: A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the Department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan. The facility received no exposure certification in 2006.

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

Not Applicable ☒: This operating permit is not drafted under premises of a petition for variance.

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

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

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

Where: C = downstream concentration
C_s = upstream concentration
Q_s = upstream flow
C_e = effluent concentration
Q_e = effluent flow

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

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

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

Not Applicable ☒: A WLA study was either not submitted or determined not applicable by Department staff.

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

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

Applicable ☒: Under the Federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(4)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; §644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc…); and §644.051.5 is the basic authority to require testing conditions. WET test will be required by **all** facilities meeting the following criteria:

- ☐ Facility is a designated Major.
- ☐ Facility continuously or routinely exceeds its design flow.
- ☐ Facility that exceeds its design population equivalent (PE) for BOD_5 whether or not its design flow is being exceeded.
- ☒ Facility (whether primarily domestic or industrial) that alters its production process throughout the year.
- ☐ Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- ☒ Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH_3)
- ☐ Facility is a municipality with a Design Flow ≥ 22,500 gpd.
- ☐ Other – please justify.

40 CFR 122.41(M) - BYPASSES:
The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from "bypassing" untreated or partially treated sewage (wastewater) beyond the headworks. A bypass is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-2.010(11) defines a bypass as the diversion of wastewater from any portion of wastewater treatment facility or sewer system to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri's Standard Conditions I, Section B, part 2.b. Additionally, anticipated bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

Not Applicable ☒: This facility does not bypass.

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):
Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs. A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

Not Applicable ☒: This facility does not discharge to a 303(d) listed stream.

Part V – Effluent Limits Determination

Outfalls #001& #005 – Cooling Tower Blowdown Outfalls

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	1	*		*	N	
PH	SU	1	**		**	Y	6.0-9.0
TOTAL SUSPENDED SOLIDS	MG/L	1	100		30	N	
FREELY AVAILABLE CHLORINE	MG/L	1	0.5		0.2	N	

* - Monitoring requirement only.
** - pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
*** - Parameter not previously established in previous state operating permit.

Basis for Limitations Codes:

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

OUTFALLS #001 & #005 – DERIVATION AND DISCUSSION OF LIMITS:

- **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.

- **pH**. The categorical effluent limit for pH is 6.0-9.0 SU (40 CFR 423.15(a)). The Missouri Water Quality Standard is more protective, with pH limited between 6.5-9.0 SU. The permit reflects the Missouri Water Quality standard of 6.5-9.0 SU.

- **Freely available chlorine**. Free Available Chlorine monitoring and limits in 40 CFR 423.15 are 0.5 mg/L as a daily maximum and 0.2 mg/L monthly average. Monitoring will be established at once/year to satisfy the monitoring requirements for that waste source. Outfalls #001 and #005 discharge to a settling pond for further treatment and discharge through Outfalls #003 and #007. The appropriate water quality based total residual chlorine effluent limits will be applied to the final discharge outfalls since water quality based standards for total residual chlorine would be more protective than the federal categorical effluent limits.

- **Total Suspended Solids.** The previous permit applied effluent limits to the Cooling Tower Blowdown in accordance with the categorical effluent limits of 40 CFR 423.15 with a daily maximum of 100 mg/L and a monthly average of 30 mg/L.

- **Zinc, Total**. The categorical effluent limit in 40 CFR 423.15 for total zinc is 1.0 mg/L. The Missouri Water Quality Standard would be more protective than the categorical effluent limit, with a water quality standard of 0.165 mg/L. However, in the permit application for renewal the facility stated that no chemicals containing zinc are used, thus monitoring is waived.

- **Chromium, Total**. The categorical effluent limit in 40 CFR 423.15 for total chromium is 0.2 mg/L. The Missouri Water Quality Standard does not have a standard for total Chromium; however for Chromium III would be more protective than the categorical effluent limit, with a water quality standard of 0.103 mg/L. However, in the permit application for renewal the facility stated that no chemicals containing chromium are used, thus monitoring is waived.

- **126 Priority Pollutants**. The categorical effluent limit in 40 CFR 423.15 for the 126 priority pollutants is no detectable amount. The Missouri Water Quality Standard has individual effluent limits for the 126 priority pollutants; thus the categorical effluent limit is more protective. However, in the permit application for renewal the facility stated that no chemicals containing the 126 priority pollutants are used, thus monitoring is waived.

Comparison of Categorical Effluent Limits and Water Quality Based Effluent Limits

Pollutant	Units	Categorical Effluent Limit	Water Quality Based Effluent	Facility certified not used in the process
pH	SU	6.0-9.0	**6.5-9.0**	
Freely available Chlorine	mg/L	**0.5/0.2**	NA	
Total Suspended Solids	mg/L	**100/30**	NA	
Chromium, Total	mg/L	0.2	**0.103**	**YES**
Zinc, Total	mg/L	1.0	**0.165**	**YES**
126 Priority Pollutants	mg/L	**No detectable amount**	NA	**YES**

Outfalls #002& #006 – Oil/Water Separators

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	1	*		*	N	
TSS	MG/L	1	100		30	N	
PH	SU	1, 2	**		**	Y	***
PH	MIN	1			446	N	
PH	COUNT	1			0	N	
OIL & GREASE (MG/L)	MG/L	2	15		10	Y	20/15 MG/L

* - Monitoring requirement only.
** - pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
*** - Parameter not previously established in previous state operating permit.

Basis for Limitations Codes:

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

OUTFALLS #002 & #006 – DERIVATION AND DISCUSSION OF LIMITS:

- **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.

- **Total Suspended Solids (TSS).** Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. In the federal effluent limit guidelines for low volume waste through an oil water separator, Total Suspended Solids have a daily maximum of 100 mg/L and monthly average of 30 mg/L. Missouri does not have Water Quality Standards for total suspended solids, thus the permit contains the federal effluent limits.

- **pH**. The categorical effluent limit for pH is 6.0-9.0 SU (40 CFR 423.15). The Missouri Water Quality Standard is more protective, with pH limited between 6.5-9.0 SU. The permit reflects the Missouri Water Quality standard of 6.5-9.0 SU. Previous permit did not require reporting of lowest/ highest pH values recorded, only the reporting of the minutes above the Water Quality Standard and the number of excursions lasting sixty or more minutes; the permittee shall report the minimum and maximum pH of the month.

- **pH- Minutes of Exceedance per month.** St. Francis Power Plant has continuous pH measurement on Outfalls 002 and 006. With continuous pH measurement, the facility may have excursions of the set pH for up to 446 minutes (7 hrs, 26 minutes) in any calendar month, per 40 CFR 401.17

- **pH- Number of Excursion of pH effluent limits.** Number of pH excursions lasting sixty or more minutes. Under 40 CFR 401.17, the permittee shall not have an individual pH excursion lasting sixty (60) minutes or more.

- **Oil & Grease**. The categorical effluent limit for oil and grease is a daily maximum of 20 mg/L and a monthly average of 15 mg/L (40 CFR 423.15(c)). The Missouri Water Quality Standards are more protective than the effluent limit guideline with a daily maximum of 15 mg/L and a monthly average of 10 mg/L. The effluent limits in the permit have been adjusted to meet the Missouri Water Quality Standards. In review of the facility's discharge monitoring reports, the facility will be in compliance with the more protective effluent limit.

Comparison of Categorical Effluent Limits and Water Quality Based Effluent Limits

Pollutant	Units	Categorical Effluent Limit	Water Quality Based Effluent
Total Suspended Solids	mg/L	**100/30**	NA
Oil and Grease	mg/L	20/15	**15/10**
pH	SU	6.0-9.0	**6.5-9.0**

Outfalls #003& #007 – Cooling Water Ponds, combined flows from Cooling Tower Blowdown and Oil/Water Separators

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	1	*		*	N	
CHLORINE, TOTAL RESIDUAL	MG/L	2	17 (130 ML)		8 (130 ML)	Y	0.019/0.010
OIL & GREASE	MG/L	1.2	15		10	Y	20/15 MG/L
SULFATE	MG/L	6.9	*		*	Y	***
TEMPERATURE	°F	2	*		*	N	
WHOLE EFFLUENT TOXICITY (WET) TEST	TU_a	11	Please see WET Test in the Derivation and Discussion Section below.			Y	ONCE/YEAR

* - Monitoring requirement only.
** - pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
*** - Parameter not previously established in previous state operating permit.

Basis for Limitations Codes:

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

OUTFALLS #003 & #007 – DERIVATION AND DISCUSSION OF LIMITS:

- **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.

- **Total Suspended Solids.** Effluent limitations from the previous state operating permit have been reassessed and removed from the monitoring requirement as there are TSS effluent limits on Outfalls #001, #002, #005, and #006. Since this is an additional settling location prior to discharge and the facility is required to be in compliance prior to entering the pond, monitoring was removed.

- **Sulfate.** Monitoring only. The water quality standard for sulfate changed in 2012. With the addition of sulfuric acid for pH control, the Antidegradation review requested monitoring for sulfate. See Appendix C.

- **Oil & Grease**. The categorical effluent limit for oil and grease is a daily maximum of 20 mg/L and a monthly average of 15 mg/L (40 CFR 423.15(c)). The Missouri Water Quality Standards are more protective than the effluent limit guideline with a daily maximum of 15 mg/L and a monthly average of 10 mg/L. The effluent limits in the permit have been adjusted to meet the Missouri Water Quality Standards. In review of the facility's discharge monitoring reports, the facility will be in compliance with the more protective effluent limit

- **Total Residual Chlorine (TRC)**. Previous permit stated freely available chlorine, but used the water quality standard for total residual chlorine. Free Available Chlorine monitoring and limits in the 40 CFR 423.15 are 0.5 mg/L as a daily maximum and 0.2 mg/L monthly average. As total residual chlorine includes free chlorine, this is a more protective effluent limit. Previous permit did not follow the TSD on setting effluent limits. Warm-water Protection of Aquatic Life CCC = 10 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background TRC = 0.0 µg/L.

  Chronic WLA: $C_e = ((2.16 + 0.0)10 – (0.0 * 0.0))/2.16$ $C_e = 10$ µg/L

  Acute WLA: $C_e = ((2.16 + 0.0)19 – (0.0 * 0.0))/2.16$ $C_e = 19$ µg/L

  $LTA_c = 10\ (0.527) = 5.3$ µg/L [CV = 0.6, 99th Percentile]
  $LTA_a = 19\ (0.321) = 6.1$ µg/L [CV = 0.6, 99th Percentile]
  MDL = 5.3 (3.11) = **17** µg/L [CV = 0.6, 99th Percentile]
  AML = 5.3 (1.55) = **8** µg/L [CV = 0.6, 95th Percentile, n = 4]

  Standard compliance language for TRC, including the minimum level (ML), is included in the permit.

- **Temperature.** Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. The facility employs best available control technology with cooling towers; which after the water leaves the cooling towers (Outfalls 001 & 005), the water flows to the cooling water ponds (Outfalls #003 & #007), where it is stored for reuse at the plant or for discharge to the Oxbow Lake to the St. Francis River. 10 CSR 20-7.031(4)(D)5 states that temperature shall not exceed the monthly temperature criteria established of 90°F.

- **pH**. pH monitoring is not required at Outfalls #003 & #007, as the pH is monitored and limited at the internal process outfalls, #001, #002, #005, and #006.

- **Total Phosphorus and Total Nitrogen**. Monitoring required for facilities greater than 100,000 gpd design flow per 10 CSR 20-7.015(9)(D)7.

- **Zinc, Total**. The categorical effluent limit in 40 CFR 423.15 for total zinc is 1.0 mg/L. The Missouri Water Quality Standard would be more protective than the categorical effluent limit, with a water quality standard of 0.165 mg/L. However, in the permit application for renewal the facility stated that no chemicals containing zinc are used, thus monitoring is waived.

- **Chromium, Total**. The categorical effluent limit in 40 CFR 423.15 for total chromium is 0.2 mg/L. The Missouri Water Quality Standard does not have a standard for total Chromium; however for Chromium III would be more protective than the categorical effluent limit, with a water quality standard of 0.103 mg/L. However, in the permit application for renewal the facility stated that no chemicals containing chromium are used, thus monitoring is waived.

- **126 Priority Pollutants**. The categorical effluent limit in 40 CFR 423.15 for the 126 priority pollutants is no detectable amount. The Missouri Water Quality Standard has individual effluent limits for the 126 priority pollutants; thus the categorical effluent limit is more protective. However, in the permit application for renewal the facility stated that no chemicals containing the 126 priority pollutants are used, thus monitoring is waived for this permit cycle.

- **Whole Effluent Toxicity (WET) Test**: Monitoring only. Previous permit was limited to single dilution testing in August when biocides were used and only once per permit cycle. Under the WET test policy for the Department, multiple dilution testing is required. The August WET test is retained as this is not a base load plant and normally operates during peak demand conditions. WET Testing schedules and intervals are established in accordance with the Department's Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring.* It is recommended that WET testing be conducted during the period of lowest stream flow. 10 CSR 20.7.031 (4)(I) states that the requirements of section (4)(B), "Toxic Substance," shall be met. Therefore, whole effluent toxicity tests are proposed. Section (4)(B) states that water contaminants shall not cause the criteria in Tables A and B of the Water Quality Standards to be exceeded.

  ☒ Acute

  ☒ No less than **ONCE/YEAR:**

  ☒ Facility is designated as a Major facility or has a design flow ≥ 1.0 MGD.

  ☒ Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.

  ☒ Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH_3)

  Acute and/or Chronic Allowable Effluent Concentrations (AECs) for facilities that discharge to unclassified streams are 100%, 50%, 25%, 12.5%, & 6.25%.

Comparison of Categorical Effluent Limits and Water Quality Based Effluent Limits

Pollutant	Units	Categorical Effluent Limit	Water Quality Based Effluent	Facility certified not used in the process
pH	SU	6.0-9.0	**6.5-9.0**	
Freely available Chlorine	mg/L	0.5	**0.0017**	
Chromium, Total	mg/L	0.2	**0.103**	**YES**
Zinc, Total	mg/L	1.0	**0.165**	**YES**
126 Priority Pollutants	mg/L	**No detectable amount**	NA	**YES**
Oil and Grease	mg/L	20/15	**15/10**	
Temperature	°F	NA	*	

Part VI – Finding of Affordability

Pursuant to Section 644.145, RSMo., the Department is required to determine whether a permit or decision is affordable and makes a finding of affordability for certain permitting and enforcement decisions. This requirement applies to discharges from combined or separate sanitary sewer systems or publically-owned treatment works.

Not Applicable ☒: The Department is not required to determine findings of affordability because the facility is not a **combined or separate sanitary sewer system for a publically-owned treatment works.**

Part VII – 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 that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow 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.

This permit will expire in **fourth quarter of 2018** in order to meet the permit synchronization goals.

PUBLIC NOTICE:

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

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit. For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

☒ - The Public Notice period for this operating permit was from June 13, 2014 to July 14, 2014. No responses received.

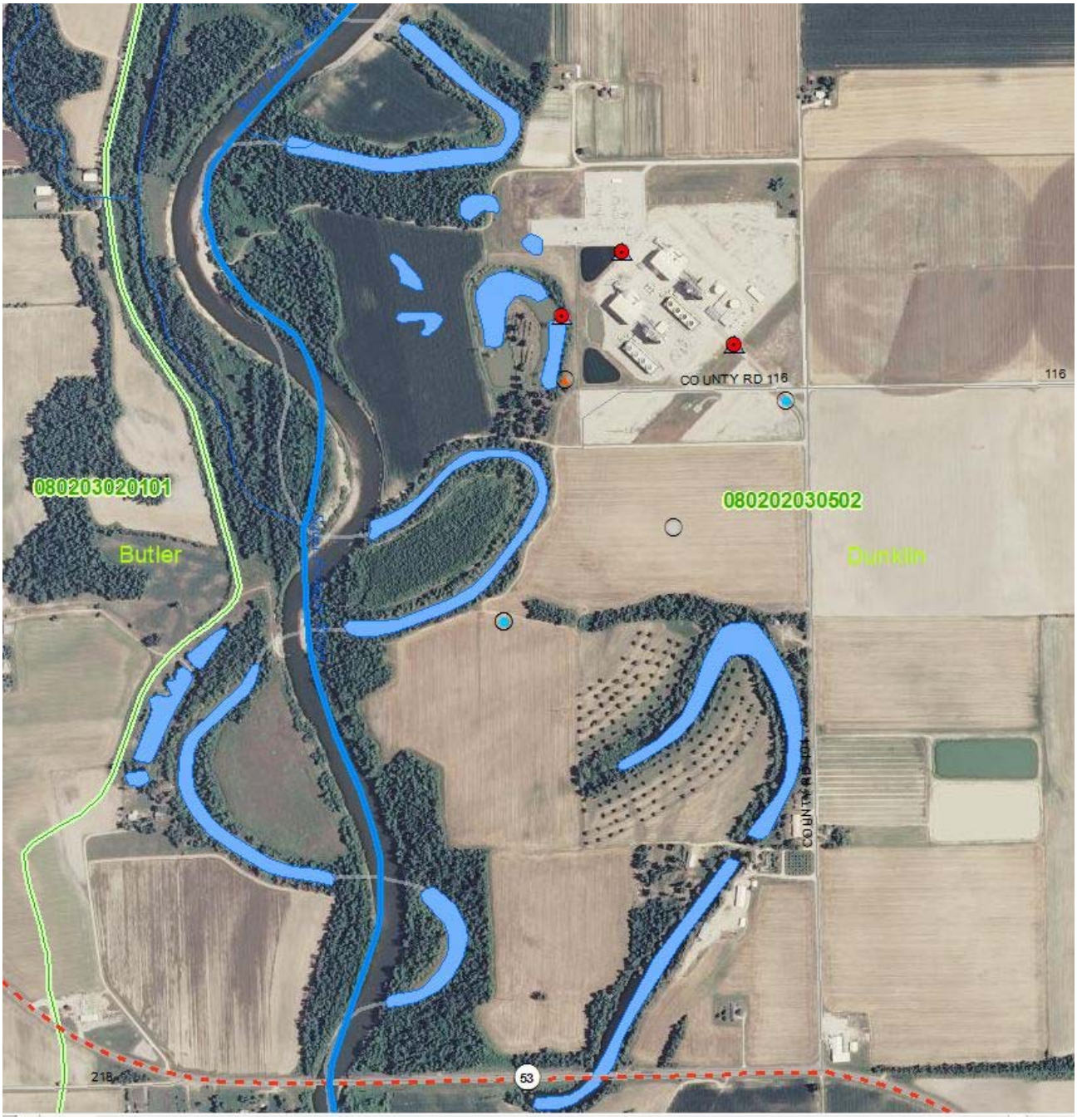
DATE OF FACT SHEET: MARCH 11, 2014

COMPLETED BY:

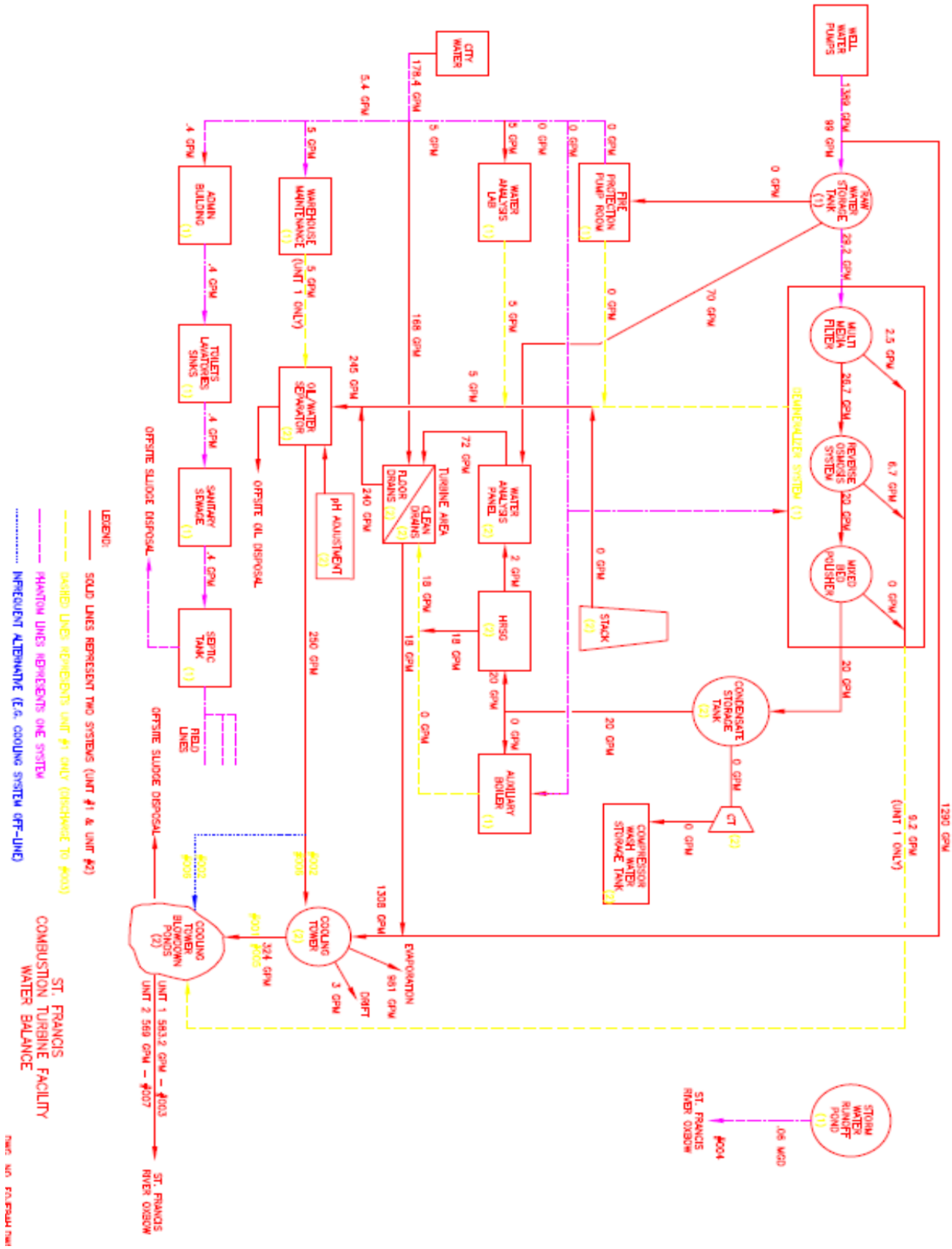
LEASUE MEYERS, EIT
ENVIRONMENTAL ENGINEER
NPDES ENGINEERING SECTION
LEASUE.MEYERS@DNR.MO.GOV

Appendices

APPENDIX A-1: FACILITY MAP



APPENDIX A-2: FACILITY FLOW DIAGRAM



APPENDIX B: RPA RESULTS:

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2)

Parameter	CMC	RWC Acute	CCC	RWC Chronic	n**	Range max/min	CV***	MF	RP Yes/No
Outfall #001- TSS mg/L	100*	48	30*	48	59	23/1	0.98	2.07	YES
Outfall #002- Oil & Grease mg/L	15*	6	10	6	59	5/2.5	.29	1.45	NO
Outfall #002-TSS mg/L	100*	9	30*	9	59	6/0	.44	2.42	NO
Outfall #003-Oil & Grease mg/L	15*	6	10*	6	58	5/2.5	.29	1.89	NO
Outfall #003 – TSS mg/L	100*	153	30*	153	59	87/2	.71	1.76	YES
Ouftall #005-TSS mg/L	100*	135	30*	135	59	57/1	1.26	2.37	YES
Outfall #006-TSS mg/L	100*	10	30*	10	59	7/1	.45	1.46	NO
Outfall #006 – Oil & Grease mg/L	15*	7	10	7	59	5.2/2.5	.29	1.29	NO
Outfall #007 – TSS mg/L	100*	129	30*	129	59	69/0	.8	1.87	YES
Outfall #007 – Oil & Grease mg/L	15*	7	10	7	59	5/0	.37	1.38	NO

N/A – Not Applicable
* – Permit Limits for Comparison.
** – If the number of samples is greater than 10, then the CV value must be used in the WQBEL for the applicable constituent.
*** – Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.
RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).
n – Is the number of samples.
MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.
RP – Reasonable Potential. It is where 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).

APPENDIX C: ANTIDEGRADATION ANALYSIS:

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

OCT 17 2011

Mr. Jerry Bindel
Associated Electric Cooperative, Inc. (AECI)
2814 S. Golden
Springfield, MO 65801

RE: Antidegradation Review Applicability for AECI, St. Francis Power Plant in Dunklin County, MO-0121827

Dear Mr. Bindel:

In accordance with the Missouri Antidegradation Rule and Implementation Procedure, your proposed addition of sulfuric acid for pH control is not subject to an Antidegradation Review. If you are planning on continuing on with the proposed activity, the next step is to submit updated permit application information along with a copy of this letter and the enclosed *Antidegradation Review Applicability Review Sheet* to the appropriate Departmental Office.

The enclosed *Antidegradation Review Applicability Review Sheet* summarizes this determination based upon your review request received on September 14, 2011. Your request proposes to add sulfuric acid for pH control to Outfalls #002 and 006.

It is recommended that monitoring requirements be added to the permit for Sulfate, Chloride and Hardness at Outfalls #003 and #007.

For your convenience, the Water Protection Program has developed a new Internet web page (http://www.dnr.mo.gov/env/wpp/permits/antideg-implementation.htm) where you may access information related to implementation of the antidegradation rule. The Internet web site includes links to forms, data sources, publications, as well as links to related Internet web sites.

Mr. Jerry Bindel
Page 2

If you should have questions, please feel free to contact Mr. Keith Forck by telephone at (573) 526-4232, by e-mail at keith.forck@dnr.mo.gov, or by mail at the Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, MO 65102-0176.

Sincerely,

WATER PROTECTION PROGRAM

Refaat Mefrakis, P.E. Chief
NPDES Permits and Engineering Section

RM:kfp

Enclosure

c: Southeast Regional Office Permit File
Mr. Curt Gateley, Water Protection Program
File Copy

Missouri Department of Natural Resources
Water Protection Program
Water Pollution Control Branch
NPDES Permits and Engineering Section

Antidegradation Review Applicability Review Sheet

FACILITY INFORMATION

FACILITY NAME: AECI, St. Francis Power Plant PERMIT #: MO-0121827

ECOLOGICAL DRAINAGE UNIT: MS Alluvial Basin/St. Francis/Little 12-DIGIT HUC: 08020203-0502

LEGAL DESCRIPTION: NE¼, NE¼, Sec. 3, T22N, R8W COUNTY: Dunklin

ECOREGION: Big River Floodplain UTM COORDINATES: X = 752409, Y = 4052709

OUTFALL CHARACTERISTICS

OUTFALL	DESIGN FLOW (MGD)	TREATMENT TYPE	EFFLUENT TYPE	UTM COORDINATES
002	1.4	Oil / Water Separator	Industrial	X = 752425, Y = 4052682
006	0.58	Oil / Water Separator	Industrial	X = 752478, Y = 4052477

RECEIVING WATERBODY INFORMATION

WATERBODY NAME: Unnamed Oxbow to St. Francis River CLASS: U

PROJECT INFORMATION

DESCRIPTION: AECI, St. Francis Power Plant is a two-unit combined cycle gas fired power plant for electric generation. The facility currently has issues with the alkaline boiler blowdown water and the associated pH at the oil/water separators (Outfall #002 and #006). Outfall #002 serves Unit #1 and flows into this unit's cooling tower pond (Outfall #003). Outfall #006 serves Unit #2 and flows into this unit's cooling tower pond (Outfall #007).

PROPOSAL: AECI is proposing adding continuous pH monitoring and automatic pH adjustment by addition of sulfuric acid to Outfall #002 and #006 as the untreated alkaline boiler blowdown water is alkaline with pH ranging from 9.2 to 9.8.

DISCUSSION: Control of pH is necessary as the primary water entering the oil/water separator is alkaline boiler blowdown. Sulfuric acid is the most effective and convenient agent for control of pH as sulfuric acid is used elsewhere in the plant with an approximate usage of 96 gallons per day. Each proposed pH adjustment unit will only use approximately 0.5 gallons per day with nearly negligible impact on the sulfate discharge concentrations.

DETERMINATION: Facility is not subject to an Antidegradation Review as this proposed project results in insignificant degradation. It only proposes to potentially increase the concentration of sulfate in the discharge by one milligram per liter while controlling the pH of the discharge. Monitoring requirements are recommended for Sulfate, Chloride, and Hardness at Outfalls #003 and #007.

Reviewer: Keith Forck
Date October 4, 2011
Unit Chief: John Rustige

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

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

PART I – GENERAL CONDITIONS

SECTION A – SAMPLING, MONITORING, AND RECORDING

1. **Sampling Requirements.**
a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.

2. **Monitoring Requirements**.
a. Records of monitoring information shall include:
   i. The date, exact place, and time of sampling or measurements;
   ii. The individual(s) who performed the sampling or measurements;
   iii. The date(s) analyses were performed;
   iv. The individual(s) who performed the analyses;
   v. The analytical techniques or methods used; and
   vi. The results of such analyses.
b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.

3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

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

5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

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

SECTION B – REPORTING REQUIREMENTS

1. **Planned Changes.**
   a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
      i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
      ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1);
      iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
      iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.

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

b. The following shall be included as information which must be reported within 24 hours under this paragraph.
   i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
   ii. Any upset which exceeds any effluent limitation in the permit.
   iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.

c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.

3. **Sanitary Sewer Overflow Reporting.** The following requirements solely reflect reporting obligations, and reporting does not necessarily reflect noncompliance, which may depend on the circumstances of the incident reported.
   a. Twenty-Four Hour (24-Hour) Reporting. The permittee or owner shall report any incident in which wastewater escapes the collection system such that it reaches waters of the state or it may pose an imminent or substantial endangerment to the health or welfare of persons. Relevant information shall be provided orally or via the current electronic method approved by the Department within 24 hours from the time the permittee becomes aware of the incident. A written submission shall also be provided within five (5) business days of the time the permittee or owner becomes aware of the incident. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The five (5) day reports may be provided via the current electronic method approved by the Department.
   b. Incidents Reported via Discharge Monitoring Reports (DMRs). The permittee or owner shall report any event in which wastewater escapes the collection system, which does not enter waters of the state and is not expected to pose an imminent or substantial endangerment to the health or welfare of persons, which occur typically during wet weather events. Relevant information shall be provided with the permittee's or owner's DMRs.

4. **Anticipated Noncompliance**. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.

5. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.

6. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, 4, and 7 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.

7. **Other Information**. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

8. **Discharge Monitoring Reports.**
   a. Monitoring results shall be reported at the intervals specified in the permit.
   b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
   c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.

SECTION C – BYPASS/UPSET REQUIREMENTS

1. **Definitions.**
   a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility.
   b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
   c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2. **Bypass Requirements.**
   a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.
   b. Notice.
      i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
      ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
   c. Prohibition of bypass.
      i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
         1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
         2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
         3. The permittee submitted notices as required under paragraph 2. b. of this section.
      ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.

3. **Upset Requirements.**
   a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
   b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      i. An upset occurred and that the permittee can identify the cause(s) of the upset;
      ii. The permitted facility was at the time being properly operated; and
      iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
      iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
   c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

SECTION D – ADMINISTRATIVE REQUIREMENTS

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
   a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
   b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.
   c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.
   d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed $10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

2. **Duty to Reapply.**
   a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
   b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
   c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. **Proper Operation and Maintenance**. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6. **Permit Actions.**
   a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
      i. Violations of any terms or conditions of this permit or the law;
      ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
      iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
      iv. Any reason set forth in the Law or Regulations.
   b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. **Permit Transfer.**
   a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
   b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
   c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.

8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
   a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
   d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.

12. **Closure of Treatment Facilities.**
   a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
   b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.

13. **Signatory Requirement.**
   a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
   b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
   c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.

14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

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

PART III – SLUDGE AND BIOSOLIDS FROM DOMESTIC AND INDUSTRIAL WASTEWATER TREATMENT FACILITIES

SECTION A – GENERAL REQUIREMENTS

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation for domestic wastewater and industrial process wastewater. This permit also incorporates applicable federal sludge disposal requirements under 40 CFR 503 for domestic wastewater. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFR 503 for domestic wastewater. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address the federal requirements.
2. These Part III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW), privately owned facilities and sludge or biosolids generated at industrial facilities.
3. Sludge and Biosolids Use and Disposal Practices:
    a. The permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
    b. The permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
    c. The permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.
4. Sludge Received from other Facilities:
    a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
    b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge
5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.
6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Actor under Chapter 644 RSMo.
8. In addition to STANDARD CONDITIONS, the Department may include sludge limitations in the special conditions portion or other sections of a site specific permit.
9. Alternate Limits in the Site Specific Permit.
    Where deemed appropriate, the Department may require an individual site specific permit in order to authorize alternate limitations:
    a. A site specific permit must be obtained for each operating location, including application sites.
    b. To request a site specific permit, an individual permit application, permit fee, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.
10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the Department, as follows:
    a. The Department will prepare a permit modification and follow permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owner of the property located adjacent to each land application site, where appropriate.
    b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.

SECTION B – DEFINITIONS

1. Best Management Practices include agronomic loading rates, soil conservation practices 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 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 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 (PFRP) in accordance with 40 CFR 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. Industrial wastewater means any wastewater, also known as process water, not defined as domestic wastewater. Per 40 CFR Part 122, process water 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.
8. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including septic tanks, sand filters, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological discs, and other similar facilities. It does not include wastewater treatment lagoons and constructed wetlands for wastewater treatment.
9. Operating location as defined in 10 CSR 20-2.010 is all contiguous lands owned, operated or controlled by one (1) person or by two (2) or more persons jointly or as tenants in common.
10. Plant Available Nitrogen (PAN) is the nitrogen that will be available to plants during the growing seasons after biosolids application.
11. 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.
12. 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)
13. Sludge lagoon is part of a mechanical wastewater treatment facility. A sludge lagoon is an earthen basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
14. Septage is the material pumped from residential septic tanks and similar treatment works (with a design population of less than 150 people). The standard for biosolids from septage is different from other sludges.

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

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

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

1. This section applies to permittees that haul sludge to another treatment facility for disposal or use contract haulers to remove and dispose of sludge.
2. Permittees that use contract haulers are responsible for compliance with all the terms of this permit including final disposal, unless the hauler has a separate permit for sludge or biosolids disposal issued by the Department; or the hauler transports the sludge to another permitted treatment facility.
3. Haulers who land apply septage must obtain a state permit.
4. Testing of sludge, other than total solids content, is not required if sludge is hauled to a municipal wastewater treatment facility or other permitted wastewater treatment facility, unless it is required by the accepting facility.

SECTION E – INCINERATION OF SLUDGE

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

SECTION F – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS

1. Surface disposal sites of domestic facilities shall comply with the requirements in 40 CFR 503 Subpart C; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. 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 sludge storage lagoons as storage facilities, accumulated 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 sludge removed will be dependent on sludge generation and accumulation in the facility. Enough 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 sludge on the bottom of the lagoon, upon prior approval of the Department; or
    b. Permittee shall close the lagoon in accordance with Section H.

SECTION G – LAND APPLICATION

1. The permittee shall not land apply sludge or biosolids unless land application is authorized in the facility description or the special conditions of the issued NPDES permit.
2. Land application sites within a 20 miles radius of the wastewater treatment facility are authorized under this permit when biosolids are applied for beneficial use in accordance with these standard conditions unless otherwise specified in a site specific permit. If the permittee's land application site is greater than a 20 mile radius of the wastewater treatment facility, approval must be granted from the Department.
3. Land application shall not adversely affect a threatened or endangered species or its designated critical habitat.
4. Biosolids shall not be applied unless authorized in this permit or exempted under 10 CSR 20, Chapter 6.
    a. This permit does not authorize the land application of domestic sludge except for when sludge meets the definition of biosolids.
    b. This permit authorizes "Class A or B" biosolids derived from domestic wastewater and/or process water sludge 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.
5. Public Contact Sites:

    Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the Department after two years of proper operation with acceptable testing documentation that shows the biosolids meet Class A criteria. A shorter length of testing will be allowed with prior approval from the Department. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site specific permit.
    a. After Class B biosolids have been land applied, public access must be restricted for 12 months.
    b. Class B biosolids are only land applied to root crops, home gardens or vegetable crops whose edible parts will not be for human consumption.

6. Agricultural and Silvicultural Sites:

    Septage – Based on Water Quality guide 422(WQ422) published by the University of Missouri
    a. Haulers that land apply septage must obtain a state permit
    b. Do not apply more than 30,000 gallons of septage per acre per year.
    c. Septage 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 other mechanical type treatment facilities.
    d. To meet Class B sludge requirements, maintain septage at 12 pH for at least thirty (30) minutes before land application. 50 pounds of hydrated lime shall be added to each 1,000 gallons of septage in order to meet pathogen and vector stabilization for septage biosolids applied to crops, pastures or timberland.
    e. 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.

    Biosolids - Based on Water Quality guide 423, 424, and 425 (WQ423, WQ424, WQ425) published by the University of Missouri;
    a. Biosolids shall be monitored to determine the quality for regulated pollutants
    b. The number of samples taken is directly related to the amount of sludge produced by the facility (See Section I of these Standard Conditions). Report as dry weight unless otherwise specified in the site specific permit. 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 reach the maximum concentration of pollutants allowed.
    c. Table 1 gives the maximum concentration allowable to protect water quality standards

TABLE 1

Biosolids Ceiling Concentration [1]	
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

[1] Land application is not allowed if the sludge concentration exceeds the maximum limits for any of these pollutants

d. The low metal concentration biosolids has reduced requirements because of its higher quality and can safely be applied for 100 years or longer at typical agronomic loading rates. (See Table 2)

TABLE 2

Biosolids Low Metal Concentration [1]	
Pollutant	Milligrams per kilogram dry weight
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	36
Zinc	2,800

[1] You may apply low metal biosolids without tracking cumulative metal limits, provided the cumulative application of biosolids does not exceed 500 dry tons per acre.

e. Each pollutant in Table 3 has an annual and a total cumulative loading limit, based on the allowable pounds per acre for various soil categories.

TABLE 3

Pollutant	CEC 15+		CEC 5 to 15		CEC 0 to 5	
	Annual	Total [1]	Annual	Total [1]	Annual	Total [1]
Arsenic	1.8	36.0	1.8	36.0	1.8	36.0
Cadmium	1.7	35.0	0.9	9.0	0.4	4.5
Copper	66.0	1,335.0	25.0	250.0	12.0	125.0
Lead	13.0	267.0	13.0	267.0	13.0	133.0
Mercury	0.7	15.0	0.7	15.0	0.7	15.0
Nickel	19.0	347.0	19.0	250.0	12.0	125.0
Selenium	4.5	89.0	4.5	44.0	1.6	16.0
Zinc	124.0	2,492.0	50.0	500.0	25.0	250.0

[1] Total cumulative loading limits for soils with equal or greater than 6.0 pH (salt based test) or 6.5 pH (water based test)

TABLE 4 - Guidelines for land application of other trace substances [1]

Cumulative Loading	
Pollutant	Pounds per acre
Aluminum	4,000[2]
Beryllium	100
Cobalt	50
Fluoride	800
Manganese	500
Silver	200
Tin	1,000
Dioxin	(10 ppt in soil)[3]
Other	[4]

[1] Design of land treatment systems for Industrial Waste, 1979. Michael Ray Overcash, North Carolina State University and Land Treatment of Municipal Wastewater, EPA 1981.)

[2] This applies for a soil with a pH between 6.0 and 7.0 (salt based test) or a pH between 6.5 to 7.5 (water based test). Case-by-case review is required for higher pH soils.

[3] Total Dioxin Toxicity Equivalents (TEQ) in soils, based on a risk assessment under 40 CFR 744, May 1998.

[4] Case by case review. Concentrations in sludge should not exceed the 95th percentile of the National Sewage Sludge Survey, EPA, January 2009.

Best Management Practices – Based on Water Quality guide 426 (WQ426) published by the University of Missouri

a. Use best management practices when applying biosolids.
b. Biosolids cannot discharge from the land application site
c. Biosolid application is subject to the Missouri Department of Agriculture State Milk Board concerning grazing restrictions of lactating dairy cattle.
d. Biosolid application must be in accordance with section 4 of the Endangered Species Act.
e. Do not apply more than the agronomic rate of nitrogen needed.
f. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil and crop removals unless the nitrogen content of the biosolids does not exceed 50,000 milligrams per kilogram of total nitrogen on a dry weight basis and biosolids application rate is less than two dry tons per acre per year.
    i. PAN can be determined as follows and is in accordance with WQ426
    (Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor[1]).
        [1] Volatilization factor is 0.7 for surface application and 1 for subsurface application.
g. Buffer zones are as follows:
    i. 300 feet of a water supply well, sinkhole, lake, pond, 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 if dwellings;
    iv. 100 feet of wetlands or permanent flowing streams;
    v. 50 feet of a property line or other waters of the state, including intermittent flowing streams.
h. Slope limitation for application sites are as follows;
    i. A slope 0 to 6 percent has 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, 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.
i. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
j. Do not apply biosolids to sites with soil that is snow covered, frozen or saturated with liquid without prior approval by the Department.
k. Biosolids / sludge applicators must keep detailed records up to five years.

SECTION H – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical, industrial, and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. 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 residues, including sludge, biosolids. Mechanical plants, sludge lagoons, ash ponds and other storage structures must obtain approval of a closure plan from the Department. 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. Residuals 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. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
    b. If a wastewater treatment lagoon has been in operation for 15 years or more 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.

i. PAN can be determined as follows:

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

[1] Volatilization factor is 0.7 for surface application and 1 for subsurface application.

4. When closing a domestic wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered "septage" under the similar treatment works definition. See Section B of these standard conditions. 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. Residuals left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berm shall be demolished, and the site shall be graded and contain ≥70% vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoons and/or earthen structure and/or ash pond 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 and/or industrial process wastewater plant; all sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
   a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain ≥70% vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
   b. Per 10 CSR 20-6.015(4)(B)6, Hazardous Waste shall not be land applied or disposed during industrial and mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations under 10 CSR 25.
   c. After demolition of the mechanical plant / industrial plant, the site must only contain clean fill defined in RSMo 260.200 (5) 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 or other beneficial use. Other solid wastes must be removed.
8. If sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or H, 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 503, Subpart C.

SECTION I – MONITORING FREQUENCY

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

TABLE 5

Design Sludge Production (dry tons per year)	Monitoring Frequency (See Notes 1 and 2)			
	Metals, Pathogens and Vectors	Nitrogen TKN [1]	Nitrogen PAN [2]	Priority Pollutants and TCLP [3]
0 to 100	1 per year	1 per year	1 per month	1 per year
101 to 200	biannual	biannual	1 per month	1 per year
201 to 1,000	quarterly	quarterly	1 per month	1 per year
1,001 to 10,000	1 per month	1 per month	1 per week	--[4]
10,001 +	1 per week	1 per week	1 per day	--[4]

[1] Test total Kjeldahl nitrogen, if biosolids application is 2 dry tons per acre per year or less

[2] Calculate plant available nitrogen, if biosolids application is more than 2 dry tons per acre per year.

[3] Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) and toxicity characteristic leaching procedure (40 CFR 261.24) is required only for permit holders that must have a pre-treatment program.

[4] One sample for each 1,000 dry tons of sludge.

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: Total Phosphorus: Total phosphorus and total potassium shall be tested at the same monitoring frequency as metals.

If you own a wastewater treatment lagoon or sludge lagoon that is cleaned out once a year or less, you may choose to sample only when the sludge is removed or the lagoon is closed. Test one composite sample for each 100 dry tons of sludge or biosolids removed from the lagoon during the year within the lagoon at closing. Composite sample must represent various areas at one-foot depth.

2. Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the Department.
3. At this time, the Department recommends monitoring requirements shall be performed in accordance with, "POTW Sludge Sampling and Analysis Guidance Document," United States Environmental Protection Agency, August 1989, and the subsequent revisions.

SECTION J – RECORD KEEPING AND REPORTING REQUIREMENTS

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

   DNR regional office listed in your permit
   (see cover letter of permit)
   ATTN: Sludge Coordinator

   EPA Region VII
   Water Compliance Branch (WACM)
   Sludge Coordinator
   11201 Renner Blvd.
   Lenexa, KS 66219

5. Annual Report Contents. The annual report shall include the following:
    a. Sludge and biosolids testing performed. Include a copy or summary of all test results, even if not required by the permit.
    b. Sludge or biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at the end of the year, and the quantity used or disposed.
    c. Gallons and % solids data used to calculate the dry ton amounts.
    d. Description of any unusual operating conditions.
    e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
        i. This must include the name, 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 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 sludge or biosolids 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. If biosolids application exceeds 2 dry tons/acre/year, reports biosolids nitrogen results, Plant Available Nitrogen (PAN) in pounds/acre, crop nitrogen requirement.
        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, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.

APIO 4167

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

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED

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

1. This application is for:
- ☐ An operating permit and antidegradation review public notice
- ☐ A construction permit following an appropriate operating permit and antidegradation review public notice
- ☐ A construction permit and concurrent operating permit and antidegradation review public notice
- ☐ A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)
- ☐ An operating permit for a new or unpermitted facility — Construction Permit # _____
- ☒ An operating permit renewal: permit # MO- 0121827 — Expiration Date August 17, 2011
- ☐ An operating permit modification: permit # MO-_____ — Reason: _____

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

2. FACILITY

NAME		TELEPHONE WITH AREA CODE / FAX	
St. Francis Power Plant		573-328-1181 / FAX 573-328-4722	
ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
40753 CR 101	Campbell	MO	63933

3. OWNER

NAME	E-MAIL ADDRESS	TELEPHONE WITH AREA CODE / FAX	
Associated Electric Cooperative, Inc.	jbindel@aeci.org	417-881-1204 / FAX 417-885-9394	
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
P.O.Box 754	Springfield	MO	65801

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

4. CONTINUING AUTHORITY

NAME		TELEPHONE WITH AREA CODE / FAX	
Associated Electric Cooperative, Inc.		417-881-1204 / FAX 417-885-9394	
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
P.O.Box 754	Springfield	MO	65801

5. OPERATOR

NAME	CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE / FAX	
Siemens Westinghouse Corporation		573-328-1181 / FAX 573-328-4722	
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
40753 CR 101	Campbell	MO	63933

6. FACILITY CONTACT

NAME	TITLE	TELEPHONE WITH AREA CODE / FAX
Jerry Bindel	Principal Environmental Analyst	417-885-9272 / FAX 417-885-9394

7. ADDITIONAL FACILITY INFORMATION

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

003 NE ¼ E ¼ Sec 3 T 22N R SE Dunklin County
UTM Coordinates Easting (X): 705305.99 Northing (Y): 4052586.22
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

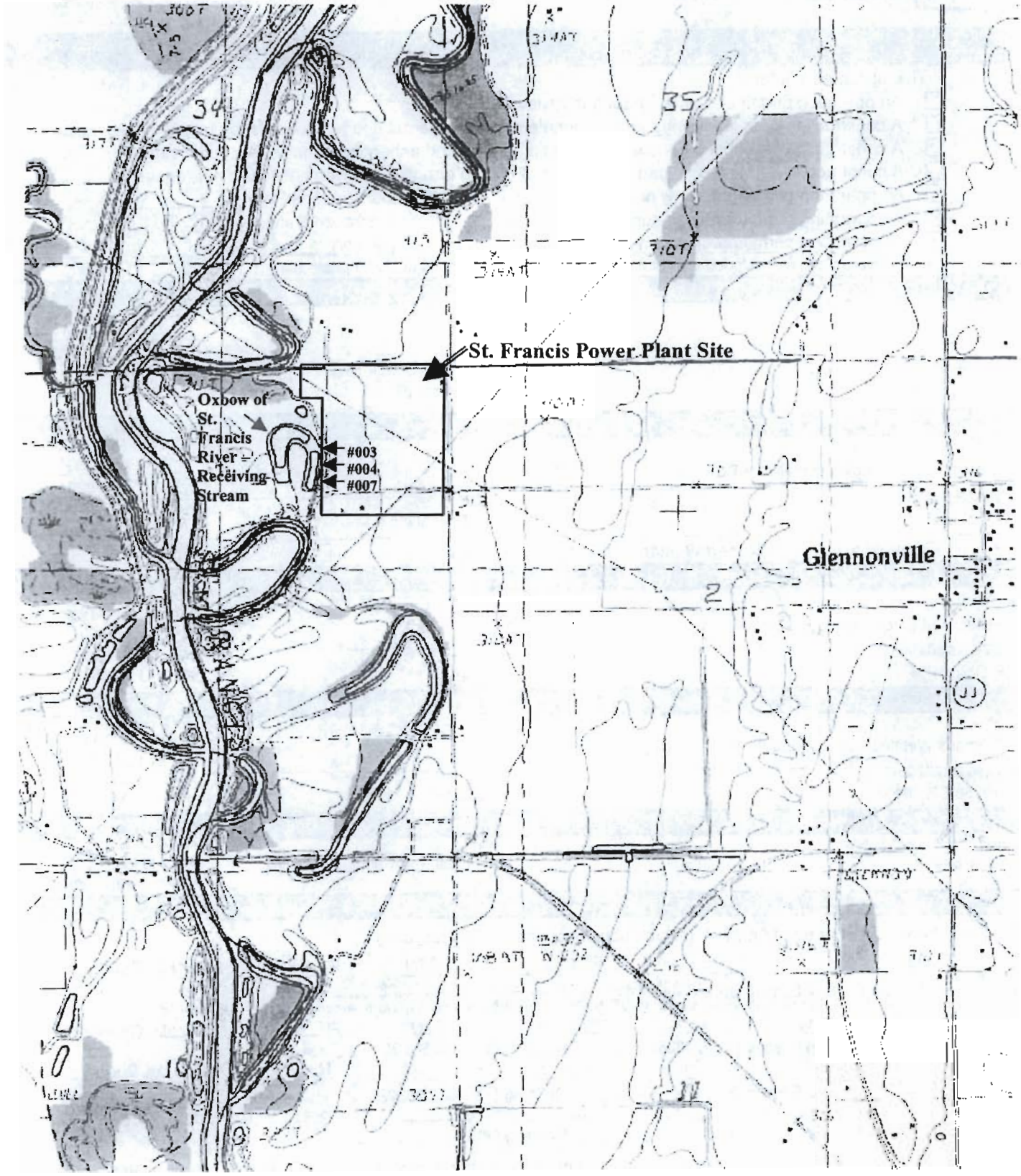
004 NE ¼ E ¼ Sec 3 T 22N R SE Dunklin County
UTM Coordinates Easting (X): 705305.99 Northing (Y): 4052586.22

007 NE ¼ E ¼ Sec 3 T 22N R SE Dunklin County
UTM Coordinates Easting (X): 705305.99 Northing (Y): 4052586.22

____ ¼ ____ ¼ Sec____ T____ R____ ____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

7.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.
003 – SIC 4911 and NAICS 221112 004 – SIC 4911 and NAICS 221112
007 – SIC 4911 and NAICS 221112 000 – SIC _____ and NAICS _____

ST. FRANCIS POWER PLANT



NPDES FORM 3510-11

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

NO EXPOSURE CERTIFICATION FOR EXCLUSION FROM NPDES STORMWATER PERMITTING

Form Approved
OMB No. 2040-0211

Submission of this No Exposure Certification constitutes notice that the entity identified in Section A does not require permit authorization for its stormwater discharges associated with industrial activity in the State identified in Section B under EPA's Stormwater Multi Sector General Permit due to the existence of a condition of no exposure.

A condition of no exposure exists at an industrial facility when all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product. A storm resistant shelter is not required for the following industrial materials and activities:

- drums, barrels, tanks, and similar containers that are tightly sealed, provided those containers are not deteriorated and do not leak. "Sealed" means banded or otherwise secured and without operational taps or valves;
- adequately maintained vehicles used in material handling; and
- final products, other than products that would be mobilized in stormwater discharges (e.g., rock salt).

A No Exposure Certification must be provided for each facility qualifying for the no exposure exclusion. In addition, the exclusion from NPDES permitting is available on a facility-wide basis only, not for individual outfalls. If any industrial activities or materials are or will be exposed to precipitation, the facility is not eligible for the no exposure exclusion.

By signing and submitting this No Exposure Certification form, the entity in Section A is certifying that a condition of no exposure exists at its facility or site, and is obligated to comply with the terms and conditions of 40 CFR 122.26(g).

ALL INFORMATION MUST BE PROVIDED ON THIS FORM.

Detailed instructions for completing this form and obtaining the no exposure exclusion are provided on pages 3 and 4.

A. Facility Operator Information

1. Name: Siemens Westinghouses Corp. 2. Phone: 573-328-1181

3. Email: alex.baker@siemens.com

4. Mailing Address: a. Street 40753 CR 101

b. City: Campbell c. State MO d. Zip Code: 63933-0441

B. Facility/Site Location Information

1. Facility Name: St. Francis Power Plant

2. a. Street Address: 40753 CR 101

b. City: Campbell c. County: Dunklin

d. State: mo e. Zip Code: 63933-0441

3. Is the facility located on Indian Lands? ☐ YES ☑ NO

4. Is this a Federal facility? ☐ YES ☑ NO

5. a. Latitude: 36° 35' 11" b. Longitude: -90° 10' 43"

6. a. Was the facility or site previously covered under an NPDES stormwater permit? ☐ YES ☑ NO

b. If yes, enter NPDES permit number or tracking number: _____

7. SIC/Activity Codes: Primary: 4911 Secondary (if applicable): ____

8. Total size of site associated with industrial activity: 45 acres

9. a. Have you paved or roofed over a formerly exposed, pervious area in order to qualify for the no exposure exclusion? ☐ YES ☑ NO

b. If yes, please indicate approximately how much area was paved or roofed over. Completing this question does not disqualify you for the no exposure exclusion. However, your permitting authority may use this information in considering whether stormwater discharges from your site are likely to have an adverse impact on water quality, in which case you could be required to obtain permit coverage.

Less than one acre ☐ One to five acres ☐ More than five acres ☐

C. Exposure Checklist

Are any of the following materials or activities exposed to precipitation, now or in the foreseeable future? (Please check either "Yes" or "No" in the appropriate box.) **If you answer "Yes" to any of these questions (1) through (11), you are <u>not</u> eligible for the no exposure exclusion.**

	Yes	No
1. Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed to stormwater	☐	☑
2. Materials or residuals on the ground or in stormwater inlets from spills/leaks	☐	☑
3. Materials or products from past industrial activity	☐	☑
4. Material handling equipment (except adequately maintained vehicles)	☐	☑
5. Materials or products during loading/unloading or transporting activities	☐	☑
6. Materials or products stored outdoors (except final products intended for outside use [e.g., new cars] where exposure to stormwater does not result in the discharge of pollutants)	☐	☑
7. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers	☐	☑
8. Materials or products handled/stored on roads or railways owned or maintained by the discharger	☐	☑
9. Waste material (except waste in covered, non leaking containers [e.g., dumpsters])	☐	☑
10. Application or disposal of process wastewater (unless otherwise permitted)	☐	☑
11. Particulate matter or visible deposits of residuals from roof stacks and/or vents not otherwise regulated (i.e., under an air quality control permit) and evident in the stormwater outflow	☐	☑

D. Certification Statement

I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of "no exposure" and obtaining an exclusion from NPDES stormwater permitting.

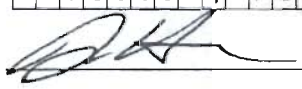
I certify under penalty of law that there are no discharges of stormwater contaminated by exposure to industrial activities or materials from the industrial facility or site identified in this document (except as allowed under 40 CFR 122.26(g)(2)).

I understand that I am obligated to submit a no exposure certification form once every five years to the NPDES permitting authority and, if requested, to the operator of the local municipal separate storm sewer system (MS4) into which the facility discharges (where applicable). I understand that I must allow the NPDES permitting authority, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under an NPDES permit prior to any point source discharge of stormwater from the facility.

Additionally, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name: Duane Highley

Print Title: Director, Power Production

Signature: 

Date: 02 / 16 / 2011
Mo Day Year

Email: dhighley@aeci.org

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

A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below).	YES ☒	NO ☐
B.	Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C and D.	YES ☒	NO ☐
C.	Is application for storm water discharges only? If yes, complete EPA Form 2F.	YES ☐	NO ☒
D.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.		
E.	Is wastewater land applied? If yes, complete Form I.	YES ☐	NO ☒
F.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES ☐	NO ☒

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

NAME			
Mr. Bill Bader			
ADDRESS	**CITY**	**STATE**	**ZIP CODE**
Route 1, Box 430	Campbell	MO	63933

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE WITH AREA CODE
Duane Highley Director, Power Production	417-881-1204
SIGNATURE	**DATE SIGNED**
	2-16-2011

MO 780-1478 (01-09)

BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.

Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

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

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
(SEE MAP FOR APPROPRIATE REGIONAL OFFICE)

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

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

St. Francis Power Plant

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

MO - 0121827

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

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

A. FIRST 4911 B. SECOND

C. THIRD D. FOURTH

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) ___ ¼ ___ ¼ SEC ___ T ___ R ___						___ County
003	NE 1/4	E 1/4	SEC 3	T 22N	R 8E	Dunklin County
004	NE 1/4	E 1/4	SEC 3	T 22N	R 8E	Dunklin County
007	NE 1/4	E 1/4	SEC 3	T 22N	R 8E	Dunklin County

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER.

OUTFALL NUMBER (LIST)	RECEIVING WATER
003	St. Francis River (oxbow of)
004	St. Francis River (oxbow of)
007	St. Francis River (oxbow of)

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS:

Combined cycle gas fired power plant.

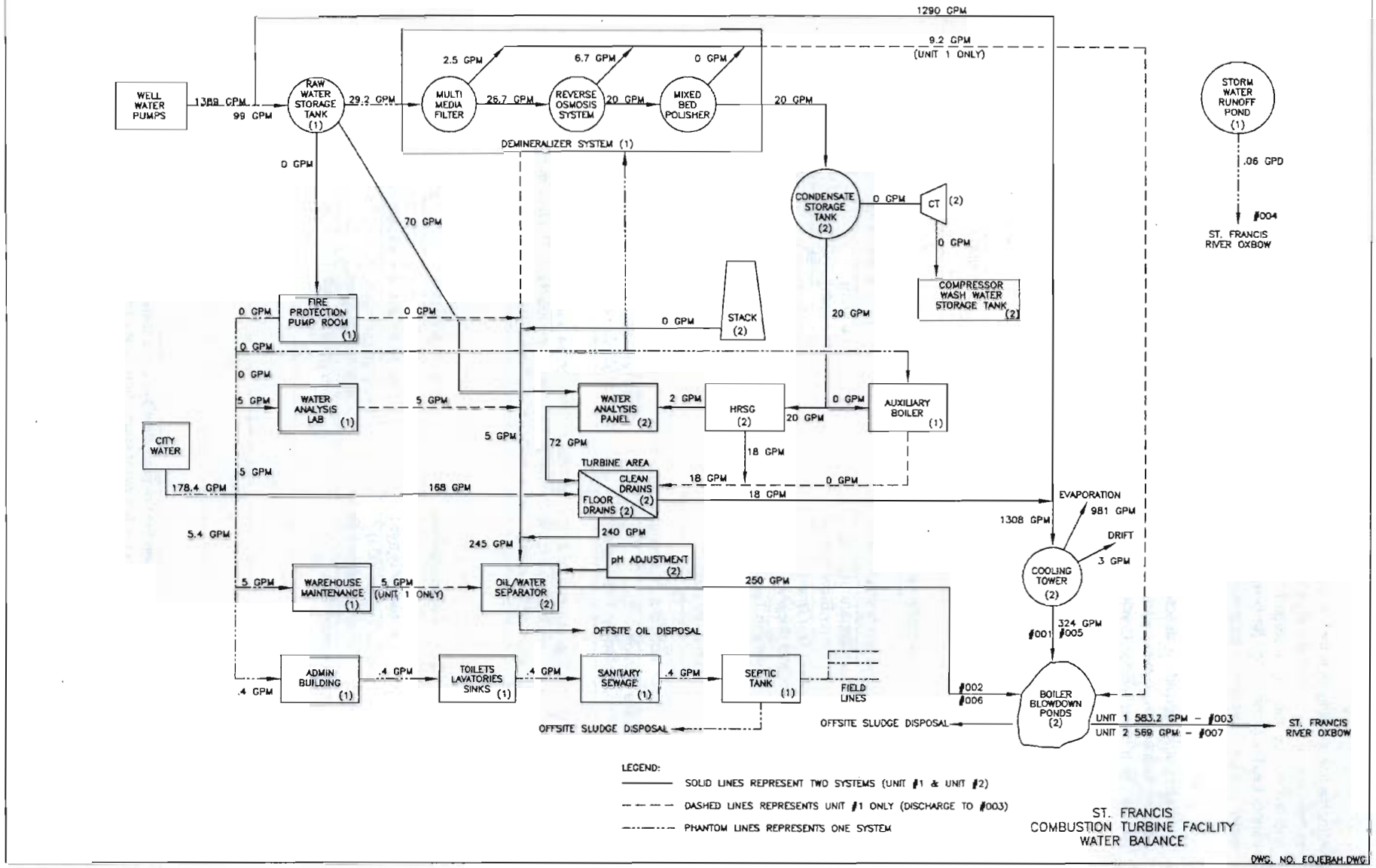
2.40

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

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.

1. OUTFALL NO.	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT	
(LIST)	A. OPERATION (LIST)	B. AVERAGE FLOW (INCLUDE UNITS) (MAXIMUM FLOW)	A. DESCRIPTION	B. LIST CODES FROM TABLE A
003	Unit 1 process wastewater	583.17 gpm (977 gpm)	sedimentation/flotation	4-A
	Process wastewater is treated in an oil/water separator and a lined basin having a capacity of 1.2 million gallons.			
Sources	Oil/Water Separator (002)	250 gpm (400 gpm)	flotation	1-H
	Cooling Tower Blowdown (001)	324 gpm (487 gpm)	sedimentation	1-U
	Demineralizer Drain	9.17 gpm (90 gpm)		
	Fire Water Supply	0 gpm (0.381 gpm)**		
	Fire Protection Test	0 gpm (0.002 gpm)*		
004	Stormwater runoff	60,000 gpd (2.9 mgd)	sedimentation	4-A
	Site runoff from 20 acre plant site. Runoff is treated in a 440,000 gallon capacity stormwater control pond.			
Sources	Site Run-off	60,000 gpd (2.9 mgd)		
	Fire Protection Test Water	0 gpm (0.002 gpm)*		
	(Note: The stormwater discharge flow is based on an annual average rainfall of 50 inches, a runoff coefficient of 0.8, no evaporation, and the discharge averaged over 365 days. The maximum was based on a 10-year, 24-hour rainfall event of 5.4 inches discharging over a 24-hour period.)			
007	Unit 2 process wastewater	569 gpm (880 gpm)	sedimentation/flotation	4-A
	Process wastewater is treated in an oil/water separator and a lined basin having a capacity of 1.2 million gallons.			
Sources	Oil/Water Separator (006)	245 gpm (395 gpm)	flotation	1-H
	Cooling Tower Blowdown (005)	324 gpm (487 gpm)	sedimentation	1-U
	Fire Protection Test	0 gpm (0.002 gpm)*		

*Typically only discharged once per year when the fire protection system is tested; approximately 1,000 gallons discharged at that time.
**Discharge occurs once every 5 years when the fire water supply tank is emptied for inspection - approximately 200,000 gallons.


1290 GPM
9.2 GPM
(UNIT 1 ONLY)
WELL WATER PUMPS
1388 GPM
99 GPM
RAW WATER STORAGE TANK (1)
29.2 GPM
2.5 GPM
MULTI MEDIA FILTER
26.7 GPM
6.7 GPM
REVERSE OSMOSIS SYSTEM
20 GPM
0 GPM
MIXED BED POLISHER
20 GPM
DEMINERALIZER SYSTEM (1)
STORM WATER RUNOFF POND (1)
.06 GPD
#004
ST. FRANCIS RIVER OXBOW
0 GPM
70 GPM
CONDENSATE STORAGE TANK (2)
0 GPM
CT (2)
0 GPM
COMPRESSOR WASH WATER STORAGE TANK (2)
FIRE PROTECTION PUMP ROOM (1)
0 GPM
0 GPM
STACK (2)
0 GPM
20 GPM
0 GPM
0 GPM
5 GPM
WATER ANALYSIS LAB (1)
5 GPM
WATER ANALYSIS PANEL (2)
2 GPM
HRSG (2)
20 GPM
0 GPM
AUXILIARY BOILER (1)
CITY WATER
5 GPM
72 GPM
18 GPM
TURBINE AREA
CLEAN DRAINS (2)
FLOOR DRAINS (2)
18 GPM
0 GPM
18 GPM
5 GPM
178.4 GPM
168 GPM
EVAPORATION
981 GPM
1308 GPM
DRIFT
.3 GPM
5.4 GPM
240 GPM
245 GPM
pH ADJUSTMENT (2)
5 GPM
WAREHOUSE MAINTENANCE (1)
5 GPM
(UNIT 1 ONLY)
OIL/WATER SEPARATOR (2)
250 GPM
COOLING TOWER (2)
324 GPM
#001 #005
OFFSITE OIL DISPOSAL
.4 GPM
ADMIN BUILDING (1)
.4 GPM
TOILETS LAVATORIES SINKS (1)
.4 GPM
SANITARY SEWAGE (1)
.4 GPM
SEPTIC TANK (1)
FIELD LINES
#002
#006
BOILER BLOWDOWN PONDS (2)
OFFSITE SLUDGE DISPOSAL
OFFSITE SLUDGE DISPOSAL
UNIT 1 583.2 GPM – #003
UNIT 2 569 GPM – #007
ST. FRANCIS RIVER OXBOW
LEGEND:
SOLID LINES REPRESENT TWO SYSTEMS (UNIT #1 & UNIT #2)
DASHED LINES REPRESENTS UNIT #1 ONLY (DISCHARGE TO #003)
PHANTOM LINES REPRESENTS ONE SYSTEM
ST. FRANCIS
COMBUSTION TURBINE FACILITY
WATER BALANCE
DWG. NO. EQJERAH.DWG

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 *(list)*	2. OPERATION(S) CONTRIBUTING FLOW *(list)*	3. FREQUENCY		4. FLOW				
		A. DAYS PER WEEK *(specify average)*	B. MONTHS PER YEAR *(specify average)*	A. FLOW RATE *(in mgd)*		B. TOTAL VOLUME *(specify with units)*		C. DURATION *(in days)*
				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 GUIDELINE EXPRESSED IN TERMS OF PRODUCTION *(OR 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

B. OPTIONAL: YOU MAY ATTACH ADDITIONAL SHEETS DESCRIBING ANY ADDITIONAL WATER POLLUTION CONTROL PROGRAMS *(OR OTHER ENVIRONMENTAL PROJECTS WHICH MAY EFFECT 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.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
Zirconium	Compressor and turbine blade coatings - may be present in trace amounts in Outfalls #003 and #007.		

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 A RECEIVING WATER IN RELATION TO YOUR DISCHARGE WITHIN THE LAST THREE YEARS?

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

Whole Effluent Toxicity (WET) testes were performed on Outfalls #003 and #007 in August 2007. Both Outfalls passed the Pimephales promelas and Ceriodaphnia dubia acute toxicity tests.

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)*
Environmental Analysis South, Inc.	4000 East Jackson Blvd. Jackson, MO 63755	573-204-8817	all analyses with the exception of flow, temperature, pH, oil and grease

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)	TELEPHONE NUMBER (AREA CODE AND NUMBER
Duane Highley Director, Power Production	417-881-1204
SIGNATURE (SEE INSTRUCTIONS)	DATE SIGNED
	2-16-2011

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets *(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 *(continued from page 3 of Form 2-C)*

OUTFALL NO. 003

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

1. POLLUTANT	2. EFFLUENT						D. NO. OF ANALYSES	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)*			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)*	5.42						1	mg/l				
B. Chemical Oxygen Demand *(COD)*	92						1	mg/l				
C. Total Organic Carbon *(TOC)*	10						1	mg/l				
D. Total Suspended Solids *(TSS)*	53				8.2		13	mg/l				
E. Ammonia *(as N)*	2.27						1	mg/l				
F. Flow	VALUE 0.81		VALUE		VALUE		12	MGD		VALUE		
G. Temperature *(winter)*	VALUE 46.4		VALUE		VALUE 45.5		2	°F		VALUE		
H. Temperature *(summer)*	VALUE 89.6		VALUE		VALUE 87.8		3	°F		VALUE		
I. pH	MINIMUM 8.38	MAXIMUM 8.76	MINIMUM	MAXIMUM			2	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of 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						D. NO. OF ANALYSES	4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*			A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Bromide (24959-67-9)	X		3.82						1	mg/l				
B. Chlorine Total Residual	X		<0.13				<0.13		13	mg/l				
C. Color	X		80						1					
D. Fecal Coliform		X												
E. Fluoride (16984-48-8)		X												
F. Nitrate-Nitrite *(as N)*	X		0.357						1	mg/l				

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen Total Organic *(as N)*		X												
H. Oil and Grease	X		<5				<5		12	mg/l				
I. Phosphorus *(as P)* Total (7723-14-0)		X												
J. RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												
K. Sulfate *(as SO^4)* (14808-79-8)	X		531						1	mg/l				
L. Sulfide *(as S)*	X		<1.0						1	mg/l				
M. Sulfite *(as SO^3)* (14265-45-3)		X												
N. Surfactants	X		<0.0500*						1	mg/l				
O. Aluminum Total (7429-90-5)		X												
P. Barium Total (7440-39-3)		X												
Q. Boron Total (7440-42-8)		X												
R. Cobalt Total (7440-48-4)		X												
S. Iron total (7439-89-6)		X												
T. Magnesium Total (7439-95-4)		X												
U. Molybdenum Total (7439-98-7)		X												
V. Manganese Total (7439-96-5)		X												
W. Tin Total (7440-31-5)		X												
X. Titanium Total (7440-32-6)		X												

* Analytical hold time exceeded

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets *(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 *(continued from page 3 of Form 2-C)*

OUTFALL NO. 004

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 ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL-YSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand *(BOD)*							1	mg/l				
B. Chemical Oxygen Demand *(COD)*							1	mg/l				
Total Kjeldahl Nitrigen (TKN)							1					
D. Total Suspended Solids *(TSS)*							1	mg/l				
E. Ammonia *(as N)*							1	mg/l				
F. Flow	VALUE		VALUE		VALUE		1	MGD		VALUE		
G. Temperature *(winter)*	VALUE		VALUE		VALUE		1	°F		VALUE		
H. Temperature *(summer)*	VALUE		VALUE		VALUE		1	°F		VALUE		
I. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM			1	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of 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. BE-LIEVED PRE-SENT	B. BE-LIEVED AB-SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL-YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Bromide (24959-67-9)		X												
B. Chlorine Total Residual		X												
C. Color		X												
D. Fecal Coliform		X												
E. Fluoride (16984-48-8)		X												
F. Nitrate–Nitrite *(as N)*	X		mg/l						1	mg/l				

CONTINUED FROM FRONT

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								1	mg/l				
H. Oil and Grease	X								1	mg/l				
I. Phosphorus *(as P)* Total (7723-14-0)	X								1	mg/l				
J. RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												
K. Sulfate *(as SO_4)* (14808-79-8)		X												
L. Sulfide *(as S)*		X												
M. Sulfite *(as SO_3)* (14265-45-3)		X												
N. Surfactants		X												
O. Aluminum Total (7429-90-5)		X												
P. Barium Total (7440-39-3)		X												
Q. Boron Total (7440-42-8)		X												
R. Cobalt Total (7440-48-4)		X												
S. Iron total (7439-89-6)		X												
T. Magnesium Total (7439-95-4)		X												
U. Molybdenum Total (7439-98-7)		X												
V. Manganese Total (7439-96-5)		X												
W. Tin Total (7440-31-5)		X												
X. Titanium Total (7440-32-6)		X												

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets *(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 *(continued from page 3 of Form 2-C)*

OUTFALL NO. 007

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)*	<2						1	mg/l				
B. Chemical Oxygen Demand *(COD)*	<5						1	mg/l				
C. Total Organic Carbon *(TOC)*	5.05						1	mg/l				
D. Total Suspended Solids *(TSS)*	13.0						13	mg/l				
E. Ammonia *(as N)*	0.408						1	mg/l				
F. Flow	VALUE 0.286		VALUE		VALUE 0.151		12	MGD		VALUE		
G. Temperature *(winter)*	VALUE 46.2		VALUE		VALUE 44.6		2	°F		VALUE		
H. Temperature *(summer)*	VALUE 89.6		VALUE		VALUE 87.5		3	°F		VALUE		
I. pH	MINIMUM 8.38	MAXIMUM 8.46	MINIMUM	MAXIMUM			2	STANDARD UNITS				

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

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Bromide (24959-67-9)	X		2.12						1	mg/l				
B. Chlorine Total Residual	X		<0.13				<0.13		13	mg/l				
C. Color	X		10						1	units				
D. Fecal Coliform		X												
E. Fluoride (16984-48-8)		X												
F. Nitrate–Nitrite *(as N)*	X		0.630						1	mg/l				

CONTINUED FROM FRONT

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 (1) CONCENTRATION	A. MAXIMUM DAILY VALUE (2) MASS	B. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	B. MAXIMUM 30 DAY VALUE (if available) (2) MASS	C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	C. LONG TERM AVRG. VALUE (if available) (2) MASS	D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	A. LONG TERM AVRG. VALUE (2) MASS	B. NO. OF ANALYSES
G. Nitrogen Total Organic *(as N)*		X												
H. Oil and Grease	X		<5				<5		12	mg/l				
I. Phosphorus *(as P)* Total (7723-14-0)		X												
J. RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												
K. Sulfate *(as SO^4)* (14808-79-8)	X		665						1	mg/l				
L. Sulfide *(as S)*	X		<1.0						1	mg/l				
M. Sulfite *(as SO^3)* (14265-45-3)		X												
N. Surfactants	X		208*						1	mg/l				
O. Aluminum Total (7429-90-5)		X												
P. Barium Total (7440-39-3)		X												
Q. Boron Total (7440-42-8)		X												
R. Cobalt Total (7440-48-4)		X												
S. Iron total (7439-89-6)		X												
T. Magnesium Total (7439-95-4)		X												
U. Molybdenum Total (7439-98-7)		X												
V. Manganese Total (7439-96-5)		X												
W. Tin Total (7440-31-5)		X												
X. Titanium Total (7440-32-6)		X												

*Analytical hold time exceeded

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets *(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 *(continued from page 3 of Form 2-C)*

OUTFALL NO. 003

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

1. POLLUTANT	2. EFFLUENT						D. NO. OF ANALYSES	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)*			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)*	5.42						1	mg/l				
B. Chemical Oxygen Demand *(COD)*	92						1	mg/l				
C. Total Organic Carbon *(TOC)*	10						1	mg/l				
D. Total Suspended Solids *(TSS)*	53				8.2		13	mg/l				
E. Ammonia *(as N)*	2.27						1	mg/l				
F. Flow	VALUE 0.81		VALUE		VALUE		12	MGD		VALUE		
G. Temperature *(winter)*	VALUE 46.4		VALUE		VALUE 45.5		2	°F		VALUE		
H. Temperature *(summer)*	VALUE 89.6		VALUE		VALUE 87.8		3	°F		VALUE		
I. pH	MINIMUM 8.38	MAXIMUM 8.76	MINIMUM	MAXIMUM			2	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of 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						D. NO. OF ANALYSES	4. UNITS		5. INTAKE *(optional)*		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*			A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Bromide (24959-67-9)	X		3.82						1	mg/l				
B. Chlorine Total Residual	X		<0.13				<0.13		13	mg/l				
C. Color	X		80						1					
D. Fecal Coliform		X												
E. Fluoride (16984-48-8)		X												
F. Nitrate–Nitrite *(as N)*	X		0.357						1	mg/l				

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" A. BELIEVED PRESENT	2. MARK "X" B. BELIEVED ABSENT	3. EFFLUENT A. MAXIMUM DAILY VALUE (1) CONCENTRATION	A. MAXIMUM DAILY VALUE (2) MASS	B. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	B. MAXIMUM 30 DAY VALUE (if available) (2) MASS	C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	C. LONG TERM AVRG. VALUE (if available) (2) MASS	D. NO. OF ANALYSES	4. UNITS A. CONCENTRATION	4. UNITS B. MASS	5. INTAKE (optional) A. LONG TERM AVRG. VALUE (1) CONCENTRATION	5. INTAKE (optional) A. LONG TERM AVRG. VALUE (2) MASS	5. INTAKE (optional) B. NO. OF ANALYSES
G. Nitrogen Total Organic *(as N)*		X												
H. Oil and Grease	X		<5				<5		12	mg/l				
I. Phosphorus *(as P)* Total (7723-14-0)		X												
J. RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												
K. Sulfate *(as SO^4)* (14808-79-8)	X		531						1	mg/l				
L. Sulfide *(as S)*	X		<1.0						1	mg/l				
M. Sulfite *(as SO^3)* (14265-45-3)		X												
N. Surfactants	X		<0.0500*						1	mg/l				
O. Aluminum Total (7429-90-5)		X												
P. Barium Total (7440-39-3)		X												
Q. Boron Total (7440-42-8)		X												
R. Cobalt Total (7440-48-4)		X												
S. Iron total (7439-89-6)		X												
T. Magnesium Total (7439-95-4)		X												
U. Molybdenum Total (7439-98-7)		X												
V. Manganese Total (7439-96-5)		X												
W. Tin Total (7440-31-5)		X												
X. Titanium Total (7440-32-6)		X												

* Analytical hold time exceeded

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets *(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 *(continued from page 3 of Form 2-C)*

OUTFALL NO. 004

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						D. NO. OF ANAL-YSES	3. UNITS *(specify if blank)*		4. INTAKE *(optional)*		B. NO. OF ANAL-YSES
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*			A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand *(BOD)*							1	mg/l				
B. Chemical Oxygen Demand *(COD)*							1	mg/l				
Total Kjeldahl Nitrigen (TKN)							1					
D. Total Suspended Solids *(TSS)*							1	mg/l				
E. Ammonia *(as N)*							1	mg/l				
F. Flow	VALUE		VALUE		VALUE		1	MGD		VALUE		
G. Temperature *(winter)*	VALUE		VALUE		VALUE		1	°F		VALUE		
H. Temperature *(summer)*	VALUE		VALUE		VALUE		1	°F		VALUE		
I. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM			1	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of 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						D. NO. OF ANAL-YSES	4. UNITS		5. INTAKE *(optional)*		B. NO. OF ANAL-YSES
	A. BE-LIEVED PRE-SENT	B. BE-LIEVED AB-SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*			A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Bromide (24959-67-9)		X												
B. Chlorine Total Residual		X												
C. Color		X												
D. Fecal Coliform		X												
E. Fluoride (16984-48-8)		X												
F. Nitrate-Nitrite *(as N)*	X		mg/l						1	mg/l				

CONTINUED FROM FRONT

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 (1) CONCENTRATION	A. MAXIMUM DAILY VALUE (2) MASS	B. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	B. MAXIMUM 30 DAY VALUE (if available) (2) MASS	C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	C. LONG TERM AVRG. VALUE (if available) (2) MASS	D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	A. LONG TERM AVRG. VALUE (2) MASS	B. NO. OF ANALYSES
G. Nitrogen Total Organic *(as N)*	X								1	mg/l				
H. Oil and Grease	X								1	mg/l				
I. Phosphorus *(as P)* Total (7723-14-0)	X								1	mg/l				
J. RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												
K. Sulfate *(as SO^4)* (14808-79-8)		X												
L. Sulfide *(as S)*		X												
M. Sulfite *(as SO^3)* (14265-45-3)		X												
N. Surfactants		X												
O. Aluminum Total (7429-90-5)		X												
P. Barium Total (7440-39-3)		X												
Q. Boron Total (7440-42-8)		X												
R. Cobalt Total (7440-48-4)		X												
S. Iron total (7439-89-6)		X												
T. Magnesium Total (7439-95-4)		X												
U. Molybdenum Total (7439-98-7)		X												
V. Manganese Total (7439-96-5)		X												
W. Tin Total (7440-31-5)		X												
X. Titanium Total (7440-32-6)		X												

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets *(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 *(continued from page 3 of Form 2-C)*

OUTFALL NO. 007

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 ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL-YSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand *(BOD)*	<2						1	mg/l				
B. Chemical Oxygen Demand *(COD)*	<5						1	mg/l				
C. Total Organic Carbon *(TOC)*	5.05						1	mg/l				
D. Total Suspended Solids *(TSS)*	13.0						13	mg/l				
E. Ammonia *(as N)*	0.408						1	mg/l				
F. Flow	VALUE 0.286		VALUE		VALUE 0.151		12	MGD		VALUE		
G. Temperature *(winter)*	VALUE 46.2		VALUE		VALUE 44.6		2	°F		VALUE		
H. Temperature *(summer)*	VALUE 89.6		VALUE		VALUE 87.5		3	°F		VALUE		
I. pH	MINIMUM 8.38	MAXIMUM 8.46	MINIMUM	MAXIMUM			2	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of 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. BE-LIEVED PRE-SENT	B. BE-LIEVED AB-SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*		D. NO. OF ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL-YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Bromide (24959-67-9)	X		2.12						1	mg/l				
B. Chlorine Total Residual	X		<0.13				<0.13		13	mg/l				
C. Color	X		10						1	units				
D. Fecal Coliform		X												
E. Fluoride (16984-48-8)		X												
F. Nitrate–Nitrite *(as N)*	X		0.630						1	mg/l				

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen Total Organic *(as N)*		X												
H. Oil and Grease	X		<5				<5		12	mg/l				
I. Phosphorus *(as P)* Total (7723-14-0)		X												
J. RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												
K. Sulfate *(as SO^4)* (14808-79-8)	X		665						1	mg/l				
L. Sulfide *(as S)*	X		<1.0						1	mg/l				
M. Sulfite *(as SO^3)* (14265-45-3)		X												
N. Surfactants	X		208*						1	mg/l				
O. Aluminum Total (7429-90-5)		X												
P. Barium Total (7440-39-3)		X												
Q. Boron Total (7440-42-8)		X												
R. Cobalt Total (7440-48-4)		X												
S. Iron total (7439-89-6)		X												
T. Magnesium Total (7439-95-4)		X												
U. Molybdenum Total (7439-98-7)		X												
V. Manganese Total (7439-96-5)		X												
W. Tin Total (7440-31-5)		X												
X. Titanium Total (7440-32-6)		X												

*Analytical hold time exceeded

MISSOURI DEPATMENT OF NATURAL RESOUCRES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
(SEE MAP FOR APPROPRIATE REGIONAL OFFICE)
FORM D – APPLICATION FOR DISCHARGE PERMIT – PRIMARY INDUSTRIES

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

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

1.00 NAME OF FACILITY

ST. FRANCIS POWER PLANT

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

MO - 0121827

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).

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

INDUSTRY CATEGORY

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

APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES

TABLE II

NPDES # (*IF ASSIGNED*)	OUTFALL NUMBER
MO-0121827	003

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

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)		D. NO. OF ANALYSES	A. 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, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	☒	☐	☐	<0.01						1	MG/L				
2M. Arsenic, Total (7440-38-2)	☒	☐	☐	<0.015						1	MG/L				
3M. Beryllium, Total (7440-41-7)	☒	☐	☐	<0.001						1	MG/L				
4M. Cadmium, Total (7440-43-9)	☒	☐	☐	<0.003						1	MG/L				
5M. Chromium, Total (7440-47-3)	☒	☐	☐	<0.005						1	MG/L				
6M. Copper, Total (7550-50-8)	☒	☐	☐	0.004						1	MG/L				
7M. Lead, Total (7439-97-6)	☒	☐	☐	<0.01						1	MG/L				
8M. Mercury, Total (7439-97-6)	☒	☐	☐	<0.0002						1	MG/L				
9M. Nickel, Total (7440-02-0)	☒	☐	☐	<0.010						1	MG/L				
10M. Selenium, Total (7782-49-2)	☒	☐	☐	<0.01						1	MG/L				
11M. Silver, Total (7440-22-4)	☒	☐	☐	<0.005						1	MG/L				
12M. Thallium, Total (7440-28-0)	☒	☐	☐	<0.02						1	MG/L				
13M. Zinc, Total (7440-66-6)	☒	☐	☐	0.014						1	MG/L				
14M. Cyanide, Total (57-12-5)	☒	☐	☐	0.032						1	MG/L				
15M. Phenols, Total	☒	☐	☐	<0.0500						1	MG/L				
DIOXIN															
2,3,7,8 – Tetra – chlorodibenzo-P-Dioxin (1764-01-6)	☐	☐	☒	**DESCRIBE RESULTS**											

CONTINUED FROM PAGE 3

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" A. TESTING REQUIRED	2. MARK "X" B. BELIEVED PRESENT	2. MARK "X" C. BELIEVED ABSENT	3. EFFLUENT A. MAXIMUM DAILY VALUE (1) CONCENTRATION	A. MAXIMUM DAILY VALUE (2) MASS	B. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	B. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	C. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	C. LONG TERM AVRG. VALUE (*if available*) (2) MASS	D. NO. OF ANALYSES	4. UNITS A. CONCENTRATION	4. UNITS B. MASS	5. INTAKE (*optional*) A. LONG TERM AVRG. VALUE (1) CONCENTRATION	5. INTAKE (*optional*) A. LONG TERM AVRG. VALUE (2) MASS	5. INTAKE (*optional*) B. NO OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	☒	☐	☐	<50.0						1	UG/L				
2V. Acrylonitnle (107-13-1)	☒	☐	☐	<10.0						1	UG/L				
3V. Benzene (71-43-2)	☒	☐	☐	<1.0						1	UG/L				
4V. Bis (*Chloromethyl*) Ether (542-88-1)	☒	☐	☐							1	UG/L				
5V. Bromoform (75-25-2)	☒	☐	☐	<1.0						1	UG/L				
6V. Carbon Tetrachloride (56-23-5)	☒	☐	☐	<1.0						1	UG/L				
7V. Chlorobenzene (108-90-7)	☒	☐	☐	<1.0						1	UG/L				
8V. Chlorodibromomethane (124-48-1)	☒	☐	☐	<1.0						1	UG/L				
9V. Chloroethane (75-00-3)	☒	☐	☐	<1.0						1	UG/L				
10V. 2-Chloroethylvinyl Ether (110-75-8)	☒	☐	☐	<5.0						1	UG/L				
11V. Chloroform (67-66-3)	☒	☐	☐	<1.0						1	UG/L				
12V. Dichlorobromomethane (75-27-4)	☒	☐	☐	<1.0						1	UG/L				
13V. Dichloro-difluoromethane (75-71-8)	☒	☐	☐	<1.0						1	UG/L				
14V. 1,1 – Dichloroethane (75-34-3)	☒	☐	☐	<1.0						1	UG/L				
15V. 1,2 – Dichloroethane (107-06-2)	☒	☐	☐	<1.0						1	UG/L				
16V. 1,1 – Dichloroethylene (75-35-4)	☒	☐	☐	<1.0						1	UG/L				
17V. 1,2 – Dichloropropane (78-87-5)	☒	☐	☐	<1.0						1	UG/L				
18V. 1,2 –Dichloropropylene (542-75-6)	☒	☐	☐	<1.0						1	UG/L				
19V. Ethylbenzene (100-41-4)	☒	☐	☐	<1.0						1	UG/L				
20V. Methyl Bromide (74-83-9)	☒	☐	☐	<1.0						1	UG/L				
21V. Methyl Chloride (74-87-3)	☒	☐	☐	<1.0						1	UG/L				

CONTINUED FROM THE FRONT

NPDES # (IF ASSIGNED)	OUTFALL NUMBER
MO-0121827	003

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	A. TEST-ING RE-QUIRED	B. BE-LIEVED PRE-SENT	C. BE-LIEVED AB-SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANAL-YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC.MS FRACTION – VOLATILE COMPOUNDS *(continued)*															
22V. Methylene Chloride (75-09-2)	☒	☐	☐	<5.0						1	UG/L				
23V. 1,1,2,2 – Tetra-chloroethane (79-34-5)	☒	☐	☐	<1.0						1	UG/L				
24V. Tetrachloroethylene (127-18-4)	☒	☐	☐	<1.0						1	UG/L				
25V. Toluene (108-88-3)	☒	☐	☐	<1.0						1	UG/L				
26V. 1,2 – Trans Dichloroethylene (156-60-5)	☒	☐	☐	<1.0						1	UG/L				
27V. 1,1,1 – Tri – chloroethane (71-55-6)	☒	☐	☐	<1.0						1	UG/L				
28V. 1,1,2 – Tri-chloroethane (79-00-5)	☒	☐	☐	<1.0						1	UG/L				
29V. Trichloro – ethylene (79-01-6)	☒	☐	☐	<1.0						1	UG/L				
30V. Trichloro – fluoromethane (75-69-4)	☒	☐	☐	<1.0						1	UG/L				
31V. Vinyl Chloride (75-01-4)	☒	☐	☐	<1.0						1	UG/L				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2 – Chlorophenol (95-57-8)	☒	☐	☐	<9.52						1	UG/L				
2A. 2,4 – Dichloro – phenol (120-83-2)	☒	☐	☐	<9.52						1	UG/L				
3A. 2,4 – Dimethyl – phenol (105-67-9)	☒	☐	☐	<9.52						1	UG/L				
4A. 4,6 – Dinitro - O-Cresol (534-52-1)	☒	☐	☐	<23.8						1	UG/L				
5A. 2,4 – Dinitro – phenol (51-28-5)	☒	☐	☐	<23.8						1	UG/L				
6A. 2-Nitrophenol (88-75-5)	☒	☐	☐	<9.52						1	UG/L				
7A. 4-Nitrophenol (100-02-7)	☒	☐	☐	<9.52						1	UG/L				
8A. P – Chloro – M Cresol (59-50-7)	☒	☐	☐	<9.52						1	UG/L				
9A. Pentachloro – phenol (87-86-5_	☒	☐	☐	<9.52						1	UG/L				
10A. Phenol (108-952)	☒	☐	☐	<9.52						1	UG/L				
11A. 2,4,6 – Trichloro-phenol (88-06-2)	☒	☐	☐	<9.52						1	UG/L				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	A. TEST-ING RE-QUIRED	B. BE-LIEVED PRE-SENT	C. BE-LIEVED AB-SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANAL-YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	☒	☐	☐	<9.52						1	UG/L				
2B. Acenaphtylene (208-96-8)	☒	☐	☐	<9.52						1	UG/L				
3B. Anthracene (120-12-7)	☒	☐	☐	<9.52						1	UG/L				
4B. Benzidine (92-87-5)	☒	☐	☐	<95.2						1	UG/L				
5B. Benzo (a) Anthracene (56-55-3)	☒	☐	☐	<9.52						1	UG/L				
6B. Benzo (a) Pyrene (50-32-8)	☒	☐	☐	<9.52						1	UG/L				
7B. 3,4 – Benzofluoranthene (205-99-2)	☒	☐	☐	<9.52						1	UG/L				
8B. Benzo (ghi) Perylene (191-24-2)	☒	☐	☐	<9.52						1	UG/L				
9B. Benzo (k) Fluoranthene (207-08-9)	☒	☐	☐	<9.52						1	UG/L				
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	☒	☐	☐	<9.52						1	UG/L				
11B. Bis (2-Chloroethyl) Ether (111-44-4)	☒	☐	☐	<9.52						1	UG/L				
12B. Bis (2-Chloroisopropyl) Ether (39638-32-9)	☒	☐	☐	<9.52						1	UG/L				
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	☒	☐	☐	<9.52						1	UG/L				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	☒	☐	☐	<9.52						1	UG/L				
15B. Butyl Benzyl Phthalate (85-68-7)	☒	☐	☐	<9.52						1	UG/L				
16B. 2-Chloronaphthalene (91-58-7)	☒	☐	☐	<9.52						1	UG/L				
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	☒	☐	☐	<9.52						1	UG/L				
18B. Chrysene (218-01-9)	☒	☐	☐	<9.52						1	UG/L				
19B. Dibenzo (a.h) Anthracene (53-70-3)	☒	☐	☐	<9.52						1	UG/L				
20B. 1,2 – Dichlorobenzene (95-50-1)	☒	☐	☐	<9.52						1	UG/L				
21B. 1,3 – Dichlorobenzene (541-73-1)	☒	☐	☐	<9.52						1	UG/L				

CONTINUED FROM PAGE 5

NPDES # (IF ASSIGNED)	OUTFALL NUMBER
MO-0121827	003

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" A. TESTING REQUIRED	2. MARK "X" B. BELIEVED PRESENT	2. MARK "X" C. BELIEVED ABSENT	3. EFFLUENT A. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT A. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT B. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT B. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT C. LONG TERM AVRG. VALUE (if available) (2) MASS	D. NO. OF ANALYSES	4. UNITS A. CONCENTRATION	4. UNITS B. MASS	5. INTAKE (optional) A. LONG TERM AVRG. VALUE (1) CONCENTRATION	5. INTAKE (optional) A. LONG TERM AVRG. VALUE (2) MASS	5. INTAKE (optional) B. NO OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
22B. 1, 4-Dichlorobenzene (106-46-7)	☒	☐	☐	<9.52						1	UG/L				
23B. 3, 3'-Dichlorobenzidine (91-94-1)	☒	☐	☐	<9.52						1	UG/L				
24B. Diethyl Phthalate (84-66-2)	☒	☐	☐	<9.52						1	UG/L				
25B. Dimethyl Phthalate (131-11-3)	☒	☐	☐	<9.52						1	UG/L				
26B. Di-N-butyl Phthalate (84-74-2)	☒	☐	☐	<9.52						1	UG/L				
27B. 2,4-Dinitrotoluene (121-14-2)	☒	☐	☐	<9.52						1	UG/L				
28B. 2,6-Dinitrotoluene (606-20-2)	☒	☐	☐	<9.52						1	UG/L				
29B. Di-N-Octyl Phthalate (117-84-0)	☒	☐	☐	<9.52						1	UG/L				
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)	☒	☐	☐	<9.52						1	UG/L				
31B. Fluoranthene (206-44-0)	☒	☐	☐	<9.52						1	UG/L				
32B. Fluorene (86-73-7)	☒	☐	☐	<9.52						1	UG/L				
33B. Hexachlorobenzene (87-68-3)	☒	☐	☐	<9.52						1	UG/L				
34B. Hexachlorobutadiene (87-68-3)	☒	☐	☐	<9.52						1	UG/L				
35B. Hexachloro-cyclopentadiene (77-47-4)	☒	☐	☐	<9.52						1	UG/L				
36B. Hexachloroethane (67-72-1)	☒	☐	☐	<9.52						1	UG/L				
37B. Indeno (1,2,3-c-d) Pyrene (193-39-5)	☒	☐	☐	<9.52						1	UG/L				
38B. Isophorone (78-59-1)	☒	☐	☐	<9.52						1	UG/L				
39B. Naphthalene (91-20-3)	☒	☐	☐	<9.52						1	UG/L				
40B. Nitrobenzene (98-95-3)	☒	☐	☐	<9.52						1	UG/L				
41B. N-Nitro-sodimethylamine (62-75-9)	☒	☐	☐	<9.52						1	UG/L				
42B. N-Nitroso N-Propylamine (621-64-7)	☒	☐	☐	<9.52						1	UG/L				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X" A. TESTING REQUIRED	2. MARK "X" B. BELIEVED PRESENT	2. MARK "X" C. BELIEVED ABSENT	3. EFFLUENT A. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT A. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT B. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT B. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	3. EFFLUENT C. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	3. EFFLUENT C. LONG TERM AVRG. VALUE (*if available*) (2) MASS	3. EFFLUENT D. NO. OF ANALYSES	4. UNITS A. CONCENTRATION	4. UNITS B. MASS	5. INTAKE (*optional*) A. LONG TERM AVRG. VALUE (1) CONCENTRATION	5. INTAKE (*optional*) A. LONG TERM AVRG. VALUE (2) MASS	5. INTAKE (*optional*) B. NO OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
43B. N-Nitrosodiphenylamine (86-30-6)	☒	☐	☐	<9.52						1	UG/L				
44B. Phenanthrene (85-01-8)	☒	☐	☐	<9.52						1	UG/L				
45B. Pyrene (129-00-0)	☒	☐	☐	<9.52						1	UG/L				
46B. 1,2,4-Trichlorobenzene (120-82-1)	☒	☐	☐	<9.52						1	UG/L				
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)	☐	☐	☒												
2P. α-BHC (319-84-6)	☐	☐	☒												
3P. β-BHC (319-84-6)	☐	☐	☒												
4P. γ-BHC (58-89-9)	☐	☐	☒												
5P. δ-BHC (319-86-8)	☐	☐	☒												
6P. Chlordane (57-74-9)	☐	☐	☒												
7P. 4,4'-DDT (50-29-3)	☐	☐	☒												
8P. 4,4'-DDE (72-55-9)	☐	☐	☒												
9P. 4,4'-DDD (72-54-8)	☐	☐	☒												
10P. Dieldrin (60-57-1)	☐	☐	☒												
11P. α-Endosulfan (115-29-7)	☐	☐	☒												
12P. β-Endosulfan (115-29-7)	☐	☐	☒												
13P. Endosulfan Sulfate (1031-07-8)	☐	☐	☒												
14P. Endrin (72-20-8)	☐	☐	☒												
15P. Endrin Aldehyde (7421-93-4)	☐	☐	☒												
16P. Heptachlor (76-44-8)	☐	☐	☒												

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NPDES # (IF ASSIGNED)	OUTFALL NUMBER
MO-0121827	003

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	A. TEST-ING RE-QUIRED	B. BE-LIEVED PRE-SENT	C. BE-LIEVED AB-SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANAL-YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICISES (continued)															
17P. Heptachlor Epoxide (1024-57-3)	☐	☐	☒												
18P. PCB-1242 (53469-21-9)	☐	☐	☒												
19P. PBC-1254 (11097-69-1)	☐	☐	☒												
20P. PCB-1221 (11104-28-2)	☐	☐	☒												
21P. PCB-1232 (11141-16-5)	☐	☐	☒												
22P. PCB-1248 (12672-29-6)	☐	☐	☒												
23P. PCB-1260 (11096-82-5)	☐	☐	☒												
24P. PCB-1016 (12674-11-2)	☐	☐	☒												
25P. Toxaphene (8001-35-2)	☐	☐	☒												

APPLICATION FOR DISCHARGE PERMIT
FORM D – PRIMARY INDUSTRIES

TABLE II

NPDES # *(IF ASSIGNED)*	OUTFALL NUMBER
MO-0121827	007

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

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"			3. EFFLUENT						D. NO. OF ANALYSES	4. UNITS		5. INTAKE *(optional)*		
	A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE *(if available)*		C. LONG TERM AVRG. VALUE *(if available)*			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, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	☒	☐	☐	0.016						1	MG/L				
2M. Arsenic, Total (7440-38-2)	☒	☐	☐	<0.015						1	MG/L				
3M. Beryllium, Total (7440-41-7)	☒	☐	☐	<0.001						1	MG/L				
4M. Cadmium, Total (7440-43-9)	☒	☐	☐	<0.003						1	MG/L				
5M. Chromium, Total (7440-47-3)	☒	☐	☐	<0.005						1	MG/L				
6M. Copper, Total (7550-50-8)	☒	☐	☐	0.009						1	MG/L				
7M. Lead, Total (7439-97-6)	☒	☐	☐	<0.01						1	MG/L				
8M. Mercury, Total (7439-97-6)	☒	☐	☐	<0.0002						1	MG/L				
9M. Nickel, Total (7440-02-0)	☒	☐	☐	<0.010						1	MG/L				
10M. Selenium, Total (7782-49-2)	☒	☐	☐	0.017						1	MG/L				
11M. Silver, Total (7440-22-4)	☒	☐	☐	<0.005						1	MG/L				
12M. Thallium, Total (7440-28-0)	☒	☐	☐	<0.02						1	MG/L				
13M. Zinc, Total (7440-66-6)	☒	☐	☐	0.012						1	MG/L				
14M. Cyanide, Total (57-12-5)	☒	☐	☐	<0.005						1	MG/L				
15M. Phenols, Total	☒	☐	☐	<0.0500						1	MG/L				
DIOXIN															
2,3,7,8 – Tetra – chlorodibenzo-P-Dioxin (1764-01-6)	☐	☐	☒	**DESCRIBE RESULTS**											

CONTINUED FROM PAGE 3

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT						D. NO. OF ANAL-YSES	4. UNITS		5. INTAKE (*optional*)		
	A. TEST-ING RE-QUIRED	B. BE-LIEVED PRE-SENT	C. BE-LIEVED AB-SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (*if available*)		C. LONG TERM AVRG. VALUE (*if available*)			A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANAL-YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	☒	☐	☐	<50.0						1	UG/L				
2V. Acrylonitrile (107-13-1)	☒	☐	☐	<10.0						1	UG/L				
3V. Benzene (71-43-2)	☒	☐	☐	<1.0						1	UG/L				
4V. Bis (*Chloromethyl*) Ether (542-88-1)	☒	☐	☐							1	UG/L				
5V. Bromoform (75-25-2)	☒	☐	☐	<1.0						1	UG/L				
6V. Carbon Tetrachloride (56-23-5)	☒	☐	☐	<1.0						1	UG/L				
7V. Chlorobenzene (108-90-7)	☒	☐	☐	<1.0						1	UG/L				
8V. Chlorodibromomethane (124-48-1)	☒	☐	☐	<1.0						1	UG/L				
9V. Chloroethane (75-00-3)	☒	☐	☐	<1.0						1	UG/L				
10V. 2-Chloroethylvinyl Ether (110-75-8)	☒	☐	☐	<5.0						1	UG/L				
11V. Chloroform (67-66-3)	☒	☐	☐	<1.0						1	UG/L				
12V. Dichlorobromomethane (75-27-4)	☒	☐	☐	<1.0						1	UG/L				
13V. Dichloro-difluoromethane (75-71-8)	☒	☐	☐	<1.0						1	UG/L				
14V. 1,1 – Dichloroethane (75-34-3)	☒	☐	☐	<1.0						1	UG/L				
15V. 1,2 – Dichloroethane (107-06-2)	☒	☐	☐	<1.0						1	UG/L				
16V. 1,1 – Dichloroethylene (75-35-4)	☒	☐	☐	<1.0						1	UG/L				
17V. 1,2 – Dichloropropane (78-87-5)	☒	☐	☐	<1.0						1	UG/L				
18V. 1,2 –Dichloropropylene (542-75-6)	☒	☐	☐	<1.0						1	UG/L				
19V. Ethylbenzene (100-41-4)	☒	☐	☐	<1.0						1	UG/L				
20V. Methyl Bromide (74-83-9)	☒	☐	☐	<1.0						1	UG/L				
21V. Methyl Chloride (74-87-3)	☒	☐	☐	<1.0						1	UG/L				

CONTINUED FROM THE FRONT

NPDES # (IF ASSIGNED)	OUTFALL NUMBER
MO-0121827	007

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" A. TESTING REQUIRED	B. BELIEVED PRESENT	C. BELIEVED ABSENT	3. EFFLUENT A. MAXIMUM DAILY VALUE (1) CONCENTRATION	A. MAXIMUM DAILY VALUE (2) MASS	B. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	B. MAXIMUM 30 DAY VALUE (if available) (2) MASS	C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	C. LONG TERM AVRG. VALUE (if available) (2) MASS	D. NO. OF ANALYSES	4. UNITS A. CONCENTRATION	4. UNITS B. MASS	5. INTAKE (optional) A. LONG TERM AVRG. VALUE (1) CONCENTRATION	5. INTAKE (optional) A. LONG TERM AVRG. VALUE (2) MASS	5. INTAKE (optional) B. NO OF ANALYSES
GC.MS FRACTION – VOLATILE COMPOUNDS *(continued)*															
22V. Methylene Chloride (75-09-2)	☒	☐	☐	<5.0						1	UG/L				
23V. 1,1,2,2 – Tetrachloroethane (79-34-5)	☒	☐	☐	<1.0						1	UG/L				
24V. Tetrachloroethylene (127-18-4)	☒	☐	☐	<1.0						1	UG/L				
25V. Toluene (108-88-3)	☒	☐	☐	<1.0						1	UG/L				
26V. 1,2 – Trans Dichloroethylene (156-60-5)	☒	☐	☐	<1.0						1	UG/L				
27V. 1,1,1 – Trichloroethane (71-55-6)	☒	☐	☐	<1.0						1	UG/L				
28V. 1,1,2 – Trichloroethane (79-00-5)	☒	☐	☐	<1.0						1	UG/L				
29V. Trichloro – ethylene (79-01-6)	☒	☐	☐	<1.0						1	UG/L				
30V. Trichloro – fluoromethane (75-69-4)	☒	☐	☐	<1.0						1	UG/L				
31V. Vinyl Chloride (75-01-4)	☒	☐	☐	<1.0						1	UG/L				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2 – Chlorophenol (95-57-8)	☒	☐	☐	<9.52						1	UG/L				
2A. 2,4 – Dichloro – phenol (120-83-2)	☒	☐	☐	<9.52						1	UG/L				
3A. 2,4 – Dimethyl – phenol (105-67-9)	☒	☐	☐	<9.52						1	UG/L				
4A. 4,6 – Dinitro - O-Cresol (534-52-1)	☒	☐	☐	<23.8						1	UG/L				
5A. 2,4 – Dinitro – phenol (51-28-5)	☒	☐	☐	<23.8						1	UG/L				
6A. 2-Nitrophenol (88-75-5)	☒	☐	☐	<9.52						1	UG/L				
7A. 4-Nitrophenol (100-02-7)	☒	☐	☐	<9.52						1	UG/L				
8A. P – Chloro – M Cresol (59-50-7)	☒	☐	☐	<9.52						1	UG/L				
9A. Pentachloro – phenol (87-86-5_	☒	☐	☐	<9.52						1	UG/L				
10A. Phenol (108-952)	☒	☐	☐	<9.52						1	UG/L				
11A. 2,4,6 – Trichloro-phenol (88-06-2)	☒	☐	☐	<9.52						1	UG/L				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" A. TEST-ING RE-QUIRED	2. MARK "X" B. BE-LIEVED PRE-SENT	2. MARK "X" C. BE-LIEVED AB-SENT	3. EFFLUENT A. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT A. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT B. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT B. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT C. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT D. NO. OF ANAL-YSES	4. UNITS A. CONCEN-TRATION	4. UNITS B. MASS	5. INTAKE (optional) A. LONG TERM AVRG. VALUE (1) CONCENTRATION	5. INTAKE (optional) A. LONG TERM AVRG. VALUE (2) MASS	5. INTAKE (optional) B. NO OF ANAL-YSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	☒	☐	☐	<9.52						1	UG/L				
2B. Acenaphtylene (208-96-8)	☒	☐	☐	<9.52						1	UG/L				
3B. Anthracene (120-12-7)	☒	☐	☐	<9.52						1	UG/L				
4B. Benzidine (92-87-5)	☒	☐	☐	<95.2						1	UG/L				
5B. Benzo (a) Anthracene (56-55-3)	☒	☐	☐	<9.52						1	UG/L				
6B. Benzo (a) Pyrene (50-32-8)	☒	☐	☐	<9.52						1	UG/L				
7B. 3,4 – Benzofluoranthene (205-99-2)	☒	☐	☐	<9.52						1	UG/L				
8B. Benzo (ghi) Perylene (191-24-2)	☒	☐	☐	<9.52						1	UG/L				
9B. Benzo (k) Fluoranthene (207-08-9)	☒	☐	☐	<9.52						1	UG/L				
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	☒	☐	☐	<9.52						1	UG/L				
11B. Bis (2-Chloroethyl) Ether (111-44-4)	☒	☐	☐	<9.52						1	UG/L				
12B. Bis (2-Chloroisopropyl) Ether (39638-32-9)	☒	☐	☐	<9.52						1	UG/L				
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	☒	☐	☐	<9.52						1	UG/L				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	☒	☐	☐	<9.52						1	UG/L				
15B. Butyl Benzyl Phthalate (85-68-7)	☒	☐	☐	<9.52						1	UG/L				
16B. 2-Chloronaphthalene (91-58-7)	☒	☐	☐	<9.52						1	UG/L				
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	☒	☐	☐	<9.52						1	UG/L				
18B. Chrysene (218-01-9)	☒	☐	☐	<9.52						1	UG/L				
19B. Dibenzo (a.h) Anthracene (53-70-3)	☒	☐	☐	<9.52						1	UG/L				
20B. 1,2 – Dichlorobenzene (95-50-1)	☒	☐	☐	<9.52						1	UG/L				
21B. 1,3 – Dichlorobenzene (541-73-1)	☒	☐	☐	<9.52						1	UG/L				

CONTINUED FROM PAGE 5

NPDES # (IF ASSIGNED): MO-0121827 | OUTFALL NUMBER: 007

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" A. TESTING REQUIRED	2. MARK "X" B. BELIEVED PRESENT	2. MARK "X" C. BELIEVED ABSENT	3. EFFLUENT A. MAXIMUM DAILY VALUE (1) CONCENTRATION	A. MAXIMUM DAILY VALUE (2) MASS	B. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	B. MAXIMUM 30 DAY VALUE (if available) (2) MASS	C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	C. LONG TERM AVRG. VALUE (if available) (2) MASS	D. NO. OF ANALYSES	4. UNITS A. CONCENTRATION	4. UNITS B. MASS	5. INTAKE (optional) A. LONG TERM AVRG. VALUE (1) CONCENTRATION	5. INTAKE (optional) A. LONG TERM AVRG. VALUE (2) MASS	5. INTAKE (optional) B. NO OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
22B. 1, 4-Dichlorobenzene (106-46-7)	☒	☐	☐	<9.52						1	UG/L				
23B. 3, 3'-Dichlorobenzidine (91-94-1)	☒	☐	☐	<9.52						1	UG/L				
24B. Diethyl Phthalate (84-66-2)	☒	☐	☐	<9.52						1	UG/L				
25B. Dimethyl Phthalate (131-11-3)	☒	☐	☐	<9.52						1	UG/L				
26B. Di-N-butyl Phthalate (84-74-2)	☒	☐	☐	<9.52						1	UG/L				
27B. 2,4-Dinitrotoluene (121-14-2)	☒	☐	☐	<9.52						1	UG/L				
28B. 2,6-Dinitrotoluene (606-20-2)	☒	☐	☐	<9.52						1	UG/L				
29B. Di-N-Octyl Phthalate (117-84-0)	☒	☐	☐	<9.52						1	UG/L				
30B. 1,2-Diphenylhydrazine *(as Azobenzene)* (122-66-7)	☒	☐	☐	<9.52						1	UG/L				
31B. Fluoranthene (206-44-0)	☒	☐	☐	<9.52						1	UG/L				
32B. Fluorene (86-73-7)	☒	☐	☐	<9.52						1	UG/L				
33B. Hexachlorobenzene (87-68-3)	☒	☐	☐	<9.52						1	UG/L				
34B. Hexachlorobutadiene (87-68-3)	☒	☐	☐	<9.52						1	UG/L				
35B. Hexachloro-cyclopentadiene (77-47-4)	☒	☐	☐	<9.52						1	UG/L				
36B. Hexachloroethane (67-72-1)	☒	☐	☐	<9.52						1	UG/L				
37B. Indeno (1,2,3-c-d) Pyrene (193-39-5)	☒	☐	☐	<9.52						1	UG/L				
38B. Isophorone (78-59-1)	☒	☐	☐	<9.52						1	UG/L				
39B. Naphthalene (91-20-3)	☒	☐	☐	<9.52						1	UG/L				
40B. Nitrobenzene (98-95-3)	☒	☐	☐	<9.52						1	UG/L				
41B. N-Nitro-sodimethylamine (62-75-9)	☒	☐	☐	<9.52						1	UG/L				
42B. N-Nitroso N-Propylamine (621-64-7)	☒	☐	☐	<9.52						1	UG/L				

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" A. TESTING REQUIRED	2. MARK "X" B. BELIEVED PRESENT	2. MARK "X" C. BELIEVED ABSENT	3. EFFLUENT A. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT A. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT B. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT B. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT C. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT D. NO. OF ANALYSES	4. UNITS A. CONCENTRATION	4. UNITS B. MASS	5. INTAKE (optional) A. LONG TERM AVRG. VALUE (1) CONCENTRATION	5. INTAKE (optional) A. LONG TERM AVRG. VALUE (2) MASS	5. INTAKE (optional) B. NO OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
43B. N-Nitrosodiphenylamine (86-30-6)	☒	☐	☐	<9.52						1	UG/L				
44B. Phenanthrene (85-01-8)	☒	☐	☐	<9.52						1	UG/L				
45B. Pyrene (129-00-0)	☒	☐	☐	<9.52						1	UG/L				
46B. 1,2,4-Trichlorobenzene (120-82-1)	☒	☐	☐	<9.52						1	UG/L				
GC/MS FRACTION - PESTICIDES															
1P. Aldrin (309-00-2)	☐	☐	☒												
2P. α-BHC (319-84-6)	☐	☐	☒												
3P. β-BHC (319-84-6)	☐	☐	☒												
4P. γ-BHC (58-89-9)	☐	☐	☒												
5P. δ-BHC (319-86-8)	☐	☐	☒												
6P. Chlordane (57-74-9)	☐	☐	☒												
7P. 4,4'-DDT (50-29-3)	☐	☐	☒												
8P. 4,4'-DDE (72-55-9)	☐	☐	☒												
9P. 4,4'-DDD (72-54-8)	☐	☐	☒												
10P. Dieldrin (60-57-1)	☐	☐	☒												
11P. α-Endosulfan (115-29-7)	☐	☐	☒												
12P. β-Endosulfan (115-29-7)	☐	☐	☒												
13P. Endosulfan Sulfate (1031-07-8)	☐	☐	☒												
14P. Endrin (72-20-8)	☐	☐	☒												
15P. Endrin Aldehyde (7421-93-4)	☐	☐	☒												
16P. Heptachlor (76-44-8)	☐	☐	☒												

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NPDES # (IF ASSIGNED)	OUTFALL NUMBER
MO-0121827	007

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

2.00 POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

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

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

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

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

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

3.00 CONTRACT ANALYSIS INFORMATION

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

☒ YES (LIST THE NAME, ADDRESS, AND TELEPHONE NUMBER OF, AND ANALYZED BY, EACH SUCH LABORATORY OR FIRM BELOW)
☐ NO (GO TO SECTION 4.00)

A. NAME	B. ADDRESS	C. TELEPHONE (area code and number)	D. POLLUTANTS ANALYZ
ENVIRONMENTAL ANALYSIS SOUTH, INC.	4000 EAST JACKSON BLVD. JACKSON, MO 63755	573-204-8817	ALL ANALYSES

4.00 CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH ... SUBMITTED INT HIS APPLICATION AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF T... IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATI... ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMI... INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	PHONE NUMBER (AR
DUANE HIGHLEY, DIRECTOR, POWER PRODUCTION	417-881-1204
SIGNATURE	DATE SIGNED

2.00 POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

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

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

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

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

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

3.00 CONTRACT ANALYSIS INFORMATION

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

☒ YES *(LIST THE NAME, ADDRESS, AND TELEPHONE NUMBER OF, AND ANALYZED BY, EACH SUCH LABORATORY OR FIRM BELOW)*
☐ NO *(GO TO SECTION 4.00)*

A. NAME	B. ADDRESS	C. TELEPHONE *(area code and number)*	D. POLLUTANTS ANALYZED *(list)*
ENVIRONMENTAL ANALYSIS SOUTH, INC.	4000 EAST JACKSON BLVD. JACKSON, MO 63755	573-204-8817	ALL ANALYSES

4.00 CERTIFICATION

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	PHONE NUMBER (AREA CODE AND NUMBER)
DUANE HIGHLEY / DIRECTOR, POWER PRODUCTION	417-881-1204
SIGNATURE	DATE SIGNED
	2/16/2011