

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-0119873

Owner: Chillicothe Municipal Utilities
Address: 920 Washington Street, Chillicothe, MO 64601

Continuing Authority: Same as above
Address: Same as above

Facility Name: Chillicothe Municipal Utilities Power Plant and Energy Center
Facility Address: 116 Water Works Road, Chillicothe, MO 64601

Legal Description: See Page Two
UTM Coordinates: See Page Two

Receiving Stream: Tributary to Coon Creek (U)
First Classified Stream and ID: Grand River (P) (430)
USGS Basin & Sub-watershed No.: (10280101-1708)

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

FACILITY DESCRIPTION

Facility is an industrial site that houses a retired coal fired steam plant, water treatment plant, warehouse/maintenance building and energy center. The energy center includes two duel fuel twinpak combustion turbine engine generators, transformers, five Caterpillar 3516B diesel engine generators with five 275 gallon day tanks, high voltage transmission lines, and a reverse osmosis water purification system. All process water and sanitary wastewater goes to a permitted wastewater treatment facility. See page two for outfall information.

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.

February 1, 2014
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

June 30, 2017
Expiration Date

John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (continued):

Outfall 001- Eliminated in 2008 permit renewal.

Outfall 002: Stormwater runoff, SIC#: 4911

Outfall 002 drains 9.65 acres, approximately 8.79 acres is pervious surface and 0.86 acres is impervious surface. This includes the earthen berm around the fuel storage tank and a 6000 gallon double walled fuel tank.

Design flow is 0.3269 MGD based on the 10 year, 24 hour rainfall event of 5 inches. Actual flow is dependent on precipitation.

UTM Coordinates: x= 451562; y= 4403804

Legal description: SW ¼, NE ¼, Sec. 02, T57N, R24W, Livingston County

Receiving Stream: Tributary to Coon Creek (U)

First Classified Stream and ID: Grand River (P) (430)

USGS Basin & Sub-watershed No.: (10280101-1708)

Outfall 003: Stormwater runoff, SIC#: 4911

Outfall 003 drains 7.63 acres, approximately 5.66 acres is pervious surface and 1.97 acres is impervious surface. This includes the concrete berm around the 300 gallon fuel storage tank and the area around the lime storage basin.

Design flow is 0.3764 MGD based on the 10 year, 24 hour rainfall event of 5 inches. Actual flow is dependent on precipitation.

UTM Coordinates: x= 451641; y= 4403878

Legal description: SW ¼, NE ¼, Sec. 02, T57N, R24W, Livingston County

Receiving Stream: Tributary to Coon Creek (U)

First Classified Stream and ID: Grand River (P) (430)

USGS Basin & Sub-watershed No.: (10280101-1708)

Outfall #004: Stormwater runoff, SIC#: 4911

Outfall 004 drains 5.17 acres, approximately 3.88 acres is pervious surface and 1.29 acres is impervious surface. This includes the area from the retired coal fired power plant surrounding and the area north of the drinking water treatment plan.

Design flow is 0.2517 MGD based on the 10 year, 24 hour rainfall event of 5 inches. Actual flow is dependent on precipitation.

UTM Coordinates: x= 451906; y= 4404049

Legal description : SE ¼, NE ¼, Sec. 02, T57N, R24W, Livingston County

Receiving Stream: Tributary to Coon Creek (U)

First Classified Stream and ID: Grand River (P) (430)

USGS Basin & Sub-watershed No.: (10280101-1708)

Process wastewater and domestic wastewater are treated at Chillicothe's WWTP, MO-0108227.

The Water Treatment Plant is covered under MOG640203.

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #002, #003, #004</u> ***						
Flow	MGD	*		*	once/quarter****	24 hr. estimate
Precipitation (Note 1)	inches	*		*	once/quarter****	24 hr. total
Chemical Oxygen Demand	mg/L	*		*	once/quarter****	grab
Total Suspended Solids	mg/L	100		30	once/quarter****	grab
Total Settleable Solids	mL/L/hr	1.5		1.0	once/quarter****	grab
pH – Units	SU	****		****	once/quarter****	grab
Oil & Grease	mg/L	15		10	once/quarter****	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE APRIL 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.
- *** All samples shall be collected from a discharge resulting from a precipitation event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable precipitation event. If a precipitation event does not occur within the reporting period, report as **no discharge**.
- **** See table below for quarterly sampling.

Minimum Sampling Requirements			
Quarter	Months	Effluent Parameters	Report is Due
First	January, February, March	Sample at least once during any month of the quarter	April 28 th
Second	April, May, June	Sample at least once during any month of the quarter	July 28 th
Third	July, August, September	Sample at least once during any month of the quarter	October 28 th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 th

Note 1: Precipitation monitoring will be reported with Outfall 002 on days when any outfall sampling occurs onsite.

B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Part I standard conditions dated November 1, 2013, 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. There shall be no discharge of polychlorinated biphenyl compounds (PCBs), such as those commonly used for transformer fluid.
4. Water Quality Standards
 - (a) To the extent required by law, 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. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 et. seq.) and the use of such pesticides shall be in a manner consistent with its label.
9. The permittee shall implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be prepared and implemented upon permit issuance. The SWPPP must be kept on-site and should not be sent to the Department unless specifically requested. The SWPPP must be reviewed and updated, 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 stormwater.
 - (b) The SWPPP must include a schedule for twice per month site inspections and brief written reports. 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 Department 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 the Department.
10. Permittee shall adhere to the following minimum Best Management Practices (BMPs):
 - (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
 - (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
 - (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
 - (d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
 - (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits.
 11. The purpose of the SWPPP and the BMPs listed herein is the prevention of pollution of waters of the state. 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.
 12. Before releasing water that has accumulated in secondary containment areas it must be examined for hydrocarbon odor and presence of a sheen. If the presence of hydrocarbons is indicated, this water must be tested for Total Petroleum Hydrocarbons (TPH). The suggested analytical method for testing TPH is non-Halogenated Organic by Gas Chromatography method 8015 (also known as OA1 and OA2). However, if the permittee so desires to use other approved testing methods (i.e. EPA 1664), they may do so. If the concentration for TPH exceeds 10mg/L, the water shall be taken to a WWTP for treatment.
 13. Release of a hazardous substance must be reported to the Department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the SWPPP and made available to the Department upon request.

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0119873
CHILLICOTHE MUNICIPAL UTILITIES POWER PLANT AND ENERGY CENTER

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: Industrial
Facility SIC Code(s): 4911

Facility Description:

Facility is an industrial site that houses a retired coal fired steam plant, water treatment plant, and energy center. The site encompasses 22.45 acres on the southwestern side of Chillicothe, with an overall design flow of 0.955 MGD. The facility is approximately a mile northwest of the intersection of Highway 36 and Highway 65. The facility burns natural gas and fuel oil for electricity. The facility is subject to 40 CFR 423.16 (pretreatment standards for existing sources), since process wastewater is discharged to the city's wastewater treatment plant. 40 CFR 423.16(d) is not applicable because the facility does not contain cooling towers and cooling tower blowdown. However 40 CFR 423 does not cover stormwater, thus this permit does not contain the requirements of steam electric generating plants, beyond there shall be no discharge of PCBs. In 2009, the Chillicothe Power Plant and Energy Center generated 1,528 MWh from natural gas and oil (<http://dnr.mo.gov/energy/utilities/2009/plant/pi-chillicothe-2009.pdf>).

The energy center includes two dual fuel (natural gas or diesel fuel) twinpack combustion turbine engine generators, transformers, five Caterpillar 3516B diesel engine generators with five 275 gallon day tanks (all located within a building), high voltage transmission lines, and a reverse osmosis water purification system. An uncovered 420,000 gallon diesel tank, located near the generator building has an earthen berm secondary containment structure. Two additional uncovered diesel tanks are located onsite; one is 300 gallons, with secondary containment, used for equipment fueling and the other is 6,000 gallons, used to supply fuel to the Caterpillar day tanks. Storm water runoff from the site leaves the property from three outfalls. Process wastewater and sanitary wastewater from the energy center is sent to the City of Chillicothe's municipal treatment facility, MO-0108227.

The coal fired steam plant was discontinued in January 2003. All ash and coal storage was removed and the cooling towers are no longer in service. The coal storage was stored in a contained area next to the coal fired power plant. The water treatment plant and the land application of lime softening sludge is permitted under the general permit for water treatment plants, MOG640203.

Outfall #001 was eliminated in the 2008 permit renewal as the facility has conducted landscaping during prior construction work that redirected storm water from Outfall #001 to Outfall #002.

Outfall #002 includes stormwater runoff from between the paved road south of the retired steam plant that runs northeast to southwest, and parallel to the railroad tracks, between the road and railroad tracks on the south side of the retired plant, water treatment plant, maintenance building, energy center, and from the grass covered area west of the diesel fuel storage tank at the energy center. The stormwater runoff includes the grass covered area northwest of the energy center, the gravel covered area of the energy center and the grass covered berm and area surrounding the diesel fuel storage tank and the 6000 diesel storage tank area. Additional items stored outside include sewer piping, concrete forms, telephone poles, transformers, and spools of electrical cable. Outfall #002 drains 9.65

acres, approximately 8.79 acres is pervious surface and 0.86 acres is impervious surface. The design flow is 0.3269 MGD based on the 10 year, 24 hour rainfall event of 5 inches.

Outfall #003 includes runoff from the grass and gravel covered areas north of the water treatment plant, lime sludge basin, substation east of the lime sludge basin and some of the area north of the energy center. Outside storage includes a small diesel storage tank, sewer piping, concrete forms, telephone poles, transformers, and spools of electrical cable. Outfall #003 enters the unnamed ditch on the north side of the energy center and flows southwest. Outfall #003 drains 7.63 acres, approximately 5.66 acres is pervious surface and 1.97 acres is impervious surface. The design flow is 0.3764 MGD based on the 10 year, 24 hour rainfall event of 5 inches.

Outfall #004 includes stormwater runoff from the retired coal fired power plant surroundings and the area north of the drinking water treatment plant. Stored items include a storage building, lime storage silo and outside drum storage. Runoff from the grass covered area on the north side of the water plant and on the east and north side of the retired coal plant combine into Outfall #004. Outfall #004 drains 5.17 acres, approximately 3.88 acres is pervious surface and 1.29 acres is impervious surface. The design flow is 0.2517 MGD based on the 10 year, 24 hour rainfall event of 5 inches.

Other environmental permits and identification numbers associated with the facility:

MDNR Air Major Air Facility: 2911700002

EPA Registry ID: 110005984970

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

Yes : The previous permit contained a special condition regarding temperature and its impact on the receiving stream; however it did not include temperature monitoring as parameter to be monitored. As the process wastewaters associated with the facility are discharged to the City's wastewater treatment plant, the special condition regarding temperature was removed. The PCB requirement was applicable in the previous permit, as the facility is subject to 40 CFR 423; however it was not specifically listed in the previous permit. Total Petroleum Hydrocarbons were removed from Table A Effluent limits and replaced as Special Condition 12. As the facility is a stormwater only facility, precipitation monitoring was added to the permit. The facility could get precipitation amounts from the NOAA cooperative facility in Chillicothe, the Chillicothe Agri-Science Center (KCDJ). The Chillicothe Agri-Science Center is located a mile north of the permittee.

<http://forecast.weather.gov/MapClick.php?CityName=Chillicothe&state=MO&site=EAX&lat=39.7916&lon=-93.5541#.UcM-sMqOHKE>

Application Date: 08/20/2012

Expiration Date: 02/21/2013

Last Inspection: 11/07/2012

Non-Compliance : missing discharge monitoring and inspection reports

Comments received during the prepublic notice review led to revisions in the drainage areas for the stormwater outfalls and changes in facility description.

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
#002	0.4881	BMPs	Stormwater	~3.97
#003	0.602	BMPs	Stormwater	~4.03
#004	0.390	BMPs	Stormwater	~4.26

Facility Performance History & Comments:

The facility was inspected in 2009 and 2012. The 2009 inspection found the facility in compliance. The 2012 inspection found that the facility had failed to document inspections as part of the permit's SWPPP requirements. In review of the previous permit cycle, the average (February 2008 through June 2013) performance of the facility is summarized below. Facility reported no discharge for 3 quarters of 2012 (drought), insufficient flow for the last quarter of 2010 and DMR non-receipt in third quarter in 2011. The design flow to the outfalls is based on the 10 year, 24 hour storm event, which may have been developed based on the requirements in 40 CFR 423 for runoff from coal storage area.

Outfall	Flow (mgd)	Chemical Oxygen Demand (mg/L)	Total Suspended Solids (mg/L)	Total Settleable Solids (mL/L/hr)	Oil & Grease (mg/L)	Total Petroleum Hydrocarbons (mg/L)
Effluent Limit	*	*	30	1.0	10	10
#002	0.031	15.58	5.7	0.2	5.0	5.0
#003	0.066	13.33	7.0	0.2	5.0	5.0
#004	0.043	7.79	5.0	0.2	4.9	5.0

* Monitoring only

Part II – Receiving Stream Information

Receiving Water Body’s Water Quality

There has not been a use attainability analysis conducted on the Tributary to Coon Creek, Coon Creek, or Grand River. Grand River is listed in Table 15 of the 2012 305(b) Report as Other Waters Rated as Impaired and Believed to Be Impaired (<http://dnr.mo.gov/env/wpp/waterquality/305b/2012-305b.pdf>). Grand River is listed in Gentry Co. for stream channelization affecting aquatic habitat, which is upstream of the Chillicothe discharge. The facility is located in the Upper Grand River Watershed. The confluence with Coon Creek is approximately 0.35 miles downstream of Outfall #002.

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 1st classified receiving stream’s beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC**
Tributary to Coon Creek	U	--	General Criteria	102801011708
Coon Creek	U	--	General Criteria	
Grand River	P	430	AQL, DWS, IRR, LWW, SCR, WBC(A)	

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

** - Hydrologic Unit Code

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

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

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

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

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

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

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

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

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

ANTI-BACKSLIDING:

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

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. In the previous permit, total petroleum hydrocarbons were an effluent limit in Table A. In review of the DMRS for total petroleum hydrocarbons, the facility consistently reported 5 mg/L. EPA Methods 413.1 and 418.1 were phased out due to their use of Freon as an extraction solvent. By moving the total petroleum hydrocarbon requirement to Special Condition 12, which requires sampling for OA-1 and OA-2, this will still be protective but will match test methods available. OA-1 includes BTEX, MTBE, and total xylenes. OA-2 includes petroleum fractions, such as unleaded gasoline, Mineral spirits, Hydraulic Fluid, Kerosene, Jet Fuel, JP-4, Diesel 1, Diesel 2, Diesel 3, Diesel 4, Diesel 5, Diesel 6, and Waste Oil.

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.

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. The land application of lime sludge from the facility's water treatment plant is covered under MOG640203.

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.

FLOW BASED PERMITTING:

A standard mass-balance equation cannot be calculated for storm water from this facility because the flow from the facility and flow in the receiving stream cannot be determined for conditions on any given day. The amount of storm water discharged from the facility will vary based on previous rainfall, soil saturation, humidity, detention time, BMPs, surface permeability, etc. Flow in the receiving stream will vary based on similar climactic conditions, size of watershed, and amount of surfaces with reduced permeability (houses, parking lots, and the like) in the watershed, hydrogeology, topography, etc.

It is likely that sufficient rainfall to cause a discharge for four continuous days from a facility will also cause some significant amount of flow in the receiving stream. Chronic WQSs are based on a four-day exposure (except Ammonia, which is based on a thirty day exposure). In the event that discharge does occur from this facility for four continuous days, some amount of flow will occur in the receiving stream. This flow will dilute storm water discharges from a facility. For these reasons, most industrial storm water facilities have limited potential to cause a violation of chronic water quality standards in the receiving stream.

Sufficient rainfall to cause a discharge for one hour or more from a facility would not necessarily cause significant flow in a receiving stream. Acute WQSs are based on a one hour of exposure, and must be protected at all times in unclassified streams, and within mixing zones of class P streams [10 CSR 20-7.031(3) and (4)]. Therefore, industrial storm water facilities with toxic contaminants do have the potential to cause a violation of acute WQSs if those toxic contaminants occur in sufficient amounts.

It is due to the items stated above that staff drafting this fact sheet are unable to perform statistical Reasonable Potential Analysis and calculate Wasteload Allocations via a mass-balance equation for effluent limit determination. However, staff may use their best professional judgment in determining if a facility has a potential to violate Missouri's Water Quality Standards. Effluent limitations are based on actual criteria that are subjected to Long Term Averages and then converted into Maximum Daily Limits or Average Monthly Limits.

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.

Applicable : The City of Chillicothe has an approved pretreatment program in accordance with the requirements of [40 CFR Part 403] and [10 CSR 20-6.100]. This facility sends its process wastewater and sanitary wastewater to the Chillicothe WWTP, MO-0108227. Steam electric power plants, which includes gas and oil fired plants, are considered a categorical industry per 10 CSR 20-6.100(2) for process wastewaters.

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 standard. In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any give 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.

Not Applicable : A RPA was not conducted for this facility, as it is a stormwater only facility.

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.

SPILL CLEAN-UP:

The Department may require the submittal of a written report detailing measures taken to clean up a spill. The report must include the type of material spilled, volume, date of spill, date clean-up completed, clean-up method, and final disposal method. If the spill occurs outside of normal business hours, or if the permit holder cannot reach regional office staff for any reason, the permit holder is instructed to report the spill to the Department's 24 hour Environmental Emergency Response hotline at (573) 634-2436. Leaving a message on a Department staff member voice-mail does not satisfy this reporting requirement. These reporting requirements apply whether or not the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the Noncompliance Reporting requirement found in Standard Conditions Part I.

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. With the various activities going on in the area with the water treatment plant and the energy center, Chillicothe may want to use the draft SWPPP template provided by EPA and consult the Industrial Stormwater Fact Sheets developed by EPA (<http://cfpub.epa.gov/npdes/stormwater/swsectors.cfm>) to ensure the SWPPP is as comprehensive as possible. A fact sheet of interest would be the [Sector O: Steam Electric Power Generating Facilities](#). The fact sheet provides further references and resources for developing the SWPPP. The previous permit included the SWPPP requirement and Chillicothe implemented and documented their SWPPP in their existing Spill Prevention Plan, according to the 2012 inspection. The 2012 inspection stated that the components of the SWPPP are present and inspected.

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.

Not Applicable : Wasteload allocations were not calculated, as the facility is a stormwater only facility. Previous permit limits were reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, effluent limitations have been retained from previous state operating permit

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.

Not Applicable : At this time, the permittee is not required to conduct WET test for this facility.

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 IV – Effluent Limits Determination

Outfalls #002-#004 – Stormwater 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	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	*		*	N	
PRECIPITATION	INCHES	*		*	Y	***
pH	SU	**		**	N	
CHEMICAL OXYGEN DEMAND	MG/L	*		*	N	
TOTAL SUSPENDED SOLIDS	MG/L	100		30	N	
TOTAL SETTLEABLE SOLIDS	ML/L/HR	1.5		1.0	N	
OIL AND GREASE	MG/L	15		10	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.

OUTFALL #002-#004: 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.
- **Precipitation.** The daily precipitation in inches shall be determined and recorded either from a nearby weather station or from an on-site rain gauge, whichever is preferable. The facility could get precipitation amounts from the NOAA cooperative facility in Chillicothe, the Chillicothe Agri-Science Center (KCDJ). The Chillicothe Agri-Science Center is located a mile north of the permittee. Report on Outfall 002 discharge monitoring report.
- **Chemical Oxygen Demand (COD).** Based on data submitted with application for renewal, the monitoring only requirement will be retained to continue demonstrating best management practices are in place and working at the facility.
- **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. Therefore, effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.** The effluent limits in the permit, daily maximum of 100 mg/L and monthly average of 30 mg/L are based on the 40 CFR 423 requirements for runoff and for water from wastestreams for cleaning.
- **Total Settleable Solids.** 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. Therefore, effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.** In the absence of effluent regulation, Best Professional Judgment used to set effluent limits consistent with other industrial stormwater facilities. Daily maximum 1.5 ml/L/hr., monthly average 1.0 ml/L/hr.

- **pH.** Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.** pH shall be maintained between six and half to nine (6.5-9.0) standard units.
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/quarter	once/quarter
Precipitation	once/quarter	once/quarter
Chemical Oxygen Demand	once/quarter	once/quarter
Total Suspended Solids	once/quarter	once/quarter
Total Settleable Solids	once/quarter	once/quarter
pH	once/quarter	once/quarter
Oil & Grease	once/quarter	once/quarter

Sampling Type & Frequency Justification:

Grab samples must be collected for pH, chemical oxygen demand, total suspended solids, settleable solids, Oil & Grease, and total petroleum hydrocarbons. This is due to in part that pH cannot be preserved and must be sampled in the field, oil and grease must immediately be preserved with acid, and that this is a stormwater facility and grab is the appropriate sampling type. Flow and precipitation are 24 hour measurements. Sampling and Reporting Frequency was retained from previous permit. As this is a stormwater only permit, monitoring was retained at quarterly.

Part V – 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 permit contains no new requirements that convey a new cost to the facility. The only new requirement is reporting of precipitation data, which is available through NOAA at the local cooperative location, Chillicothe Agri-Science Center.

Part VI – Administrative Requirements

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

PERMIT SYNCHRONIZATION:

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is 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 is scheduled to expire on June 30, 2017 to meet the goals of permit synchronization.

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 November 27, 2013 to December 27, 2013. No comments were received.

DATE OF FACT SHEET: OCTOBER 21, 2013

COMPLETED BY:

LEASUE MEYERS, EIT
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
leasue.meyers@dnr.mo.gov

APPENDIX A: CHILLICOTHE MUNICIPAL UTILITIES ENERGY CENTER MAP





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

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

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

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

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

Section B – Reporting Requirements

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



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - ii. Any upset which exceeds any effluent limitation in the permit.
 - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
 - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Sanitary Sewer Overflow Reporting.** The following requirements solely reflect reporting obligations, and reporting does not necessarily reflect noncompliance, which may depend on the circumstances of the incident reported.
- a. **Twenty-Four Hour (24-Hour) Reporting.** The permittee or owner shall report any incident in which wastewater escapes the collection system such that it reaches waters of the state or it may pose an imminent or substantial endangerment to the health or welfare of persons. Relevant information shall be provided orally or via the current electronic method approved by the Department within 24 hours from the time the permittee becomes aware of the incident. A written submission shall also be provided within five (5) business days of the time the permittee or owner becomes aware of the incident. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The five (5) day reports may be provided via the current electronic method approved by the Department.
 - b. **Incidents Reported via Discharge Monitoring Reports (DMRs).** The permittee or owner shall report any event in which wastewater escapes the collection system, which does not enter waters of the state and is not expected to pose an imminent or substantial endangerment to the health or welfare of persons, which occur typically during wet weather events. Relevant information shall be provided with the permittee's or owner's DMRs.
4. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
5. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
6. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, 4, and 7 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
7. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
8. **Discharge Monitoring Reports.**
- a. Monitoring results shall be reported at the intervals specified in the permit.
 - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
 - c. Monitoring results shall be reported to the Department no later than the 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.



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Section D – Administrative Requirements

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



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

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



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**

AP13029

FOR AGENCY USE ONLY	
CHECK NUMBER	007261 \$
DATE RECEIVED	8/20/12
FEE SUBMITTED	\$1350.-

8/22/12
 (P)

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- 0119873 Expiration Date February 21, 2013
- 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 Chillicothe Municipal Utilities Power Plant / E.C.		TELEPHONE WITH AREA CODE (660) 646-1661	
ADDRESS (PHYSICAL) 1611 Waterworks Road		FAX (660) 646-5511	
CITY Chillicothe	STATE MO	ZIP CODE 64601	

3. OWNER

NAME Chillicothe Municipal Utilities		E-MAIL ADDRESS see transmittal letter	TELEPHONE WITH AREA CODE (660) 646-1683
ADDRESS (MAILING) 920 Washington Street		FAX (660) 646-4181	
CITY Chillicothe	STATE MO	ZIP CODE 64601	

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

4. CONTINUING AUTHORITY

NAME Chillicothe Municipal Utilities		TELEPHONE WITH AREA CODE (660) 646-1683	
ADDRESS (MAILING) 920 Washington Street		FAX (660) 646-4181	
CITY Chillicothe	STATE MO	ZIP CODE 64601	

5. OPERATOR

NAME Mike Jacobs		CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE (660) 646-1661
ADDRESS (MAILING) 1611 Waterworks Road		FAX (660) 646-5511	
CITY Chillicothe	STATE MO	ZIP CODE 64601	

6. FACILITY CONTACT

NAME Mike Jacobs		TITLE Electric Production Superintendent	TELEPHONE WITH AREA CODE (660) 646-1661
		FAX (660) 646-5511	

7. ADDITIONAL FACILITY INFORMATION

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

001 NA 1/4 _____ 1/4 _____ Sec _____ T _____ R _____ NA County
 UTM Coordinates Easting (X): _____ Northing (Y): _____
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

002 SW 1/4 NE 1/4 Sec 2 T 57N R 24W LIV County
 UTM Coordinates Easting (X): +3946581 Northing (Y): -09333564

003 SW 1/4 NE 1/4 Sec 2 T 57N R 24W LIV County
 UTM Coordinates Easting (X): +3947005 Northing (Y): -09333531

004 SE 1/4 NE 1/4 Sec 2 T 57N R 24W LIV County
 UTM Coordinates Easting (X): +3947061 Northing (Y): -09333420

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

001 - SIC NA and NAICS NA 002 - SIC 4911 and NAICS 22112
 003 - SIC 4911 and NAICS 22112 004 - SIC 4911 and NAICS 22112

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

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

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

NAME Robert Christison Parcel# 024-11-0100-02-0-00-05.0			
ADDRESS 12315 Highway V	CITY Chillicothe	STATE MO	ZIP CODE 64601

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) Mike Jacobs, Electric Production Superintendent	TELEPHONE WITH AREA CODE (660) 646-1661
SIGNATURE 	DATE SIGNED 8-17-2012

MO 780-1479 (01-09)

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

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

HAVE YOU INCLUDED:

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

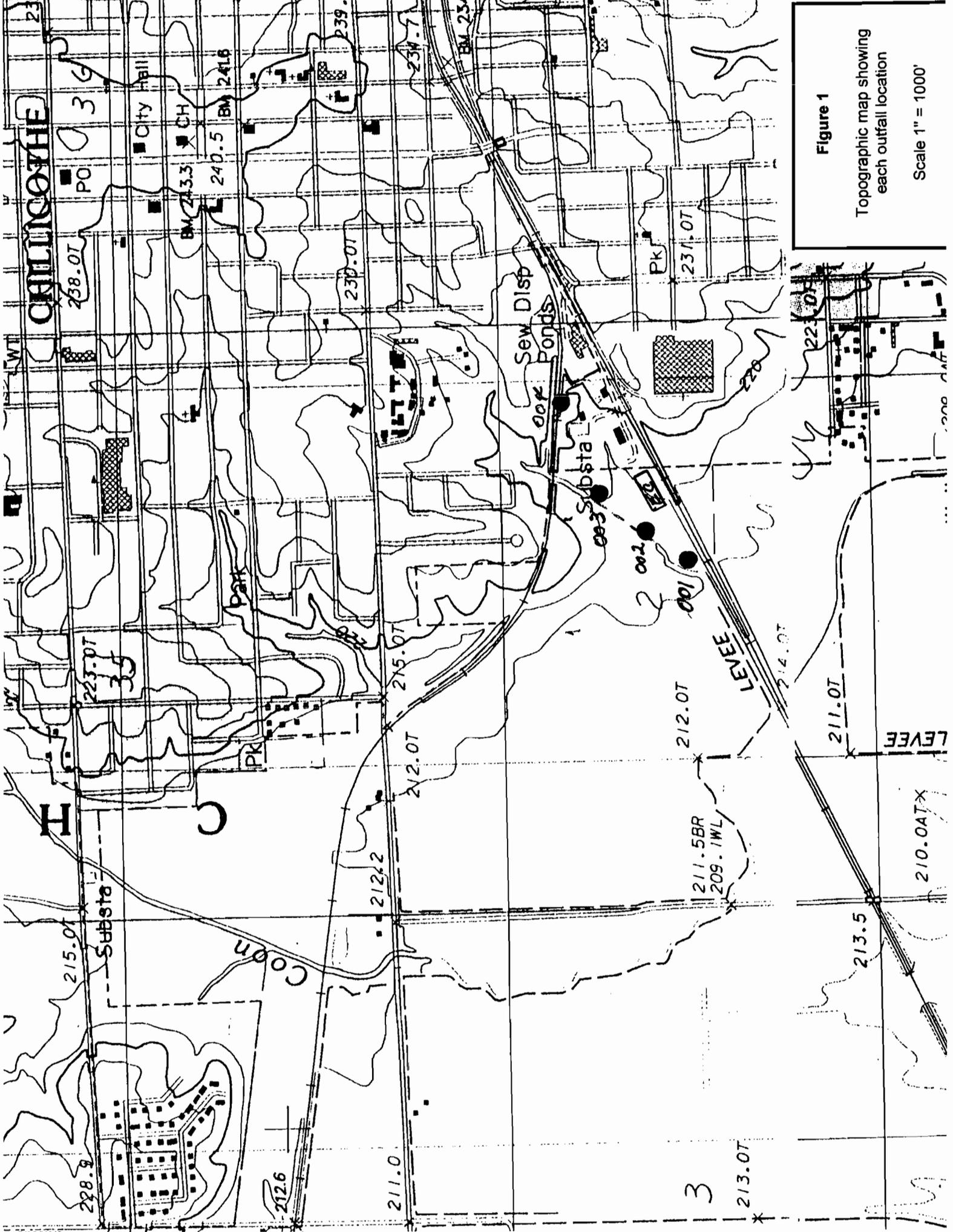


Figure 1
 Topographic map showing
 each outfall location
 Scale 1" = 1000'

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
	See Attachment # 1				

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
002	Earthen berm around fuel storage tank	NA
003	Concrete berm around fuel storage tank	NA
003	Lime sludge basin	SL
004	NA	

V. Nonstormwater Discharges

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
Mike Jacobs, Electric Production Sup		8-17-2014

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

Visual observation and historical knowledge of the site area as the methods used to assess that only storm water from runoff occurs in outfalls 002, 003 and 004.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided.
Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

Yes (list all such pollutants below)

No (go to Section IX)

Diuron (present in herbicide periodically used to control weeds)
2,4 D (presnet in herbicide periodically used to control weeds)

VIII. 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 3 years?

Yes (list all such pollutants below)

No (go to Section IX)

IX. Contract Analysis Information

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

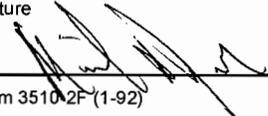
Yes (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)

No (go to Section X)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Inovatia Laboratories, LLC	120 East Davis Street PO Box 30 Fayette, MO 65248-0030	660-248-1911	Chemical oxygen demand Oil and Grease Total Suspended Solids pH Total Settleable Solids Total Petroleum Hydrocarbons

X. Certification

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

A. Name & Official Title (Type Or Print) Mike Jacobs, Electric Production Superintendent	B. Area Code and Phone No. (660) 646-1661
C. Signature 	D. Date Signed 6-17-2012

Attachment 1

Chillicothe Municipal Utilities Power Plant / Water Plant / Maintenance Building / Energy Center Revised 08/13/2012

Outfall	Area Description	Fraction per Outfall	Area Coverage per Outfall	C Values	Approximate Area (acres)	Daily [1] Rainfall (inches)	Q (cfs)	Q gal/day	Q (MGD)
002	Half of road and all of ditch between road and tracks	0.28	Lawn	0.15	2.60	0.2083	0.081	52,484	0.0525
	Grass area on west of energy center	0.07	Asphalt Driveway	0.90	0.65	0.2083	0.122	78,726	0.0787
	Gravel energy center	0.20	Lawn	0.15	1.84	0.2083	0.058	37,207	0.0372
	Grass area north of energy center	0.44	Gravel	0.22	4.09	0.2083	0.187	121,121	0.1211
	CT Units, RO building, Control House, Trailer House	0.02	Roof	0.90	0.21	0.2083	0.039	25,400	0.0254
	Subtotal for Outfall 002							314,937	0.3149
003	Area calculated by difference of total minus other areas considered for outfalls 001, 002 and 004	0.35	Lawn	0.15	2.76	0.2083	0.086	55,781	0.0558
		0.25	Asphalt Driveway/Roofs	0.90	1.97	0.2083	0.370	239,062	0.2391
		0.40	Gravel	0.22	3.16	0.2083	0.145	93,500	0.0935
	Subtotal for Outfall 003							388,343	0.3883
004	Area between tracks on north and south over to discharge point for outfall 004	0.25	Roof/Concrete Bin/ Asphalt Driveway	0.90	1.29	0.2083	0.242	156,466	0.1565
		0.40	Lawn	0.15	2.07	0.2083	0.065	41,727	0.0417
		0.35	Gravel	0.22	1.81	0.2083	0.083	53,551	0.0536
	Subtotal for Outfall 004							251,745	0.2517

Total acres = 22.45 Total for all 4 outfalls = 955,025.47 0.9550

[1] - Based on 10 year 24 hour rainfall event of 5 inches, converted to an hourly rate

Attachment 2

Description of Chillicothe Municipal Utilities Power Plant / Energy Center Outfalls (See Figures 1 & 2)

Outfall 002

Includes storm water runoff between the paved road south of the retired steam plant that runs northeast to southwest, and parallel to the rail road tracks, between the road and railroad tracks on the south side of the retired steam plant, water treatment plant, maintenance building and energy center and from the grass covered area west of the diesel fuel storage tank at the energy center.

Includes storm water runoff from the grass covered area northwest of the energy center, storm water runoff from the gravel covered area of the energy center and the grass covered berm and area surrounding the diesel fuel storage tank. The energy center includes two dual fuel (natural gas or diesel fuel) twinpak combustion turbine engine generators, transformers, five Caterpillar 3516B diesel engine generators with five 275 gallon day tanks (all located within a building), high voltage transmission lines, and a reverse osmosis water purification system. There is no treatment of the storm water prior to discharge.

Outfall 003

There is a ditch on the north side of the maintenance building and energy center that diverts storm water runoff on the south side of the ditch toward outfall 003.

Outfall 003 includes storm water runoff from the grass and gravel covered areas on the north and south side of the ditch that runs northeast to southwest, and which is located north of the maintenance warehouse and energy center. Storm water runoff from the paved roads, building roof areas of the maintenance building and water treatment plant and the area surrounding the maintenance building enter the ditch and travel to outfall 003. Runoff from the grass covered area north of the water treatment plant, lime sludge basin, some of the energy center and the water treatment plant flows toward the ditch and eventually enters outfall 003. Outside storage includes a small diesel storage tank (approximately 300 gallon capacity), sewer piping, concrete forms, telephone poles, transformers and spools of electrical cable. Outfall 003 enters the unnamed ditch on the north side of the energy center and flows to the southwest toward outfall 002. There is no treatment of the storm water prior to discharge.

Outfall 004

Outfall 004 includes storm water runoff from the retired coal fired power plant surroundings and the area north of the drinking water treatment plant. Stored items include a storage building, a lime storage silo and miscellaneous outside drum storage.

Runoff from the grass covered area on the north side of the water plant and on the east and north side of the retired steam plant combine into outfall 004. The combined flow enters the unnamed ditch on the north side of the water treatment plant and flows west then south towards outfall 003. (Storm water runoff on the south side of the retired steam plant and water treatment plant flows towards outfall 003.) There is no treatment of the storm water prior to discharge.



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
 (SEE MAP FOR APPROPRIATE REGIONAL OFFICE)
**FORM R – PERMIT APPLICATION FOR LAND APPLICATION
 OF INDUSTRIAL WASTEWATER BIOSOLIDS AND RESIDUALS**

FOR AGENCY USE ONLY

PERMIT NUMBER

MO -

DATE RECEIVED

INSTRUCTIONS: FORMS A & C or F (CAFOs) (and D where applicable) must also be submitted for land application of industrial wastewater sludge biosolids or residuals. Submit FORMS E and G for land disturbance permit if construction areas total five acres or more.

Attach **FORM I**, if wastewater will be land applied or irrigated.

1.00 FACILITY INFORMATION

1.10 Facility Name

Chillicothe Municipal Utilities

1.20 Application for: Construction Permit (attach Engineering report, Plans and Specifications per 10 CSR 20-8.020)

Operating Permit (if no construction permit, attach engineering documents)

NA

Date Land Application System Began Operation: _____

Operating Permit Renewal

1.30 Months when the business or enterprise will operate or generate sludge or residuals:

12 months per year

Part of year (list Months): _____

1.40 List the Facility outfalls which will be applicable to the land application system from outfalls listed on Form A, C, D and F.

Outfall Nos. NA

2.00 STORAGE BASINS

2.10 Number of storage basins: 1 Type of basin: Steel Concrete Fiberglass Earthen

Earthen with membrane liner

2.20 Storage basin dimensions at inside top of berm (feet): Report freeboard as feet from top of berm to emergency spillway or overflow pipe.

(Complete Attachment A: Profile Sketch)

Basin #1: Length 125' Width 125' Depth 15' Freeboard 7.5' Berm Width 40' % Slope 33

Basin #2: Length _____ Width _____ Depth _____ Freeboard _____ Berm Width _____ % Slope _____

2.21 Storage basin volumes (gallons): Permanent volume means two foot water depth for seal protection, and any required treatment volume capacity.

Basin #1: Gallons: _____ Permanent Volume + _____ Storage = 1MM Total volume (gallons)

Basin #2: Gallons: _____ Permanent Volume + _____ Storage = _____ Total volume (gallons)

2.30 Storage Basin operating levels (report as feet below emergency overflow level)

Basin #1: Maximum water level 7.5' ft. Minimum operating water level 2' ft.

Basin #2: Maximum water level _____ ft. Minimum operating water level _____ ft.

2.40 Storage Basin design storage capacity: (storage between minimum and maximum operating levels for 1-in10 year storm water flows.)

Basin #1: 365 days Basin #2: _____ days Basin #3: _____ days

2.50 Attach Water Balance Test results to verify earthen basin seal in accordance with 10 CSR 20-8.020(13) and (16), when required by the department.

2.60 Attach a sludge management plan for materials that are not land applied. NA

2.70 Attach a closure plan for lagoons, storage basins and treatment units. NA

3.00 LAND APPLICATION SYSTEM

3.10 Number of application sites 2 Total Available Acres 353 Minimum & Maximum % field slopes _____

Location: _____ ¼ _____ ¼ _____ ¼ _____ Sec. 57N T 24WR LIV County 199 Acres

Location: _____ ¼ _____ ¼ _____ ¼ _____ Sec. 57N T 24WR LIV County 154 Acres

Attach extra sheets as necessary.

3.12 Type of vegetation: Grass hay Pasture Timber Row crops Other (describe) _____

Specific Crops and Yields/acre: _____ Goal: _____ Actual for last five years: _____

3.20 Annual sludge production (gallons per year): 475k Actual 1MM Design (actual is 475,000; design of 1 million gal)
 (dry tons per year): _____ Actual _____ Design
 Human Population Equivalent: _____ Actual _____ Design

3.21 Land Application rate per acre:
 Design: _____ dry ton/year _____ dry ton/application _____ No. applications/year
 Actual: _____ dry ton/year 2.0 dry ton/application 1 - 3 No. applications/year
 Total amount land applied each year (total all sites) Design _____ dry ton/year Actual 408 dry ton/year
 Actual months used for land application: Jan Feb Mar Apr May Jun Jul Aug Sep
 Oct Nov Dec

3.22 Land Application Rate is based on:
 Nutrient Management Plan (N&P) PAN Conservative
 Hydraulic Loading Limiting Pollutant (Specify) _____
 Other (describe) _____ Nominal application occurs in fall

3.30 Equipment type: Tank wagon Tank truck Subsurface injection Slinger spreader Dry spreader
 Other (describe) Surface Application
 Equipment Capacity: _____ Gallons (cubic feet) per hour _____ Total hours of operation per year

3.40 Public Use/Access Sites: If public use or access to land application site, describe pathogen treatment and site access restrictions. If human, animal, or organic wastes, refer to 40 CFR 503.32 for pathogen treatment methods. Attach extra sheets as necessary.

3.50 Separation distance (in feet) from the outside edge of the biosolids application area to down gradient features:
 _____ Permanent flowing stream _____ Losing Stream _____ Intermittent (wet weather) stream _____ Lake or pond
 _____ Property boundary _____ Dwellings _____ Water supply well _____ Other (describe) _____

3.60 SOILS INFORMATION: Use information from the County Soil Survey, NRCS, or professional soil scientist.
 NOTE: On-site soils classification by a professional soil scientist may be required by the department where appropriate.
 Soil Series Name _____ Depth of bedrock _____ Feet Depth to water table _____ Feet
 Soil Infiltration rate in inches/hour (in/hr) for most restrictive layer within the following soil depth ranges:
 _____ in/hr for 0-12 inch soil depth _____ in/hr for 12-24 inch soil depth _____ in/hr for 24-60 inch soil depth

3.70 Attach Nutrient Management Plan (NMP) including calculations for plant available nitrogen (PAN) and other nutrients, crop requirements, crop yields and other management factors. Include USDA/NRCS phosphorus recommendations.

3.80 Geologic Investigation: _____ Date of most recent Geologic Report by Department's Division of Geology and Land Survey.

3.81 Ground Water Monitoring Wells: (Attach Groundwater Monitoring Plan when required by department)
 NONE EXISTING PLANNED NUMBER: _____ Monitoring Wells _____ Lysimeters

3.90 Attach a current copy of the Operation and Maintenance (O&M) Plan for the land application system. Date of O&M Plan:

3.91 Attach a site map showing topography, storage basins, land application sites, property boundary, streams, wells, roads, dwellings and other pertinent features.

3.92 Attach a facility sketch showing treatment units, storage basins, pipelines, application sites and other features.

4.00 INDUSTRIAL PROCESS INFORMATION

4.10 Brief description of treatment processes prior to land application and note any changes made in last five years. (Attach extra sheets as necessary.)

 _____ Water treatment plant lime softening

4.11 Detailed description of industrial production processes. Also indicate any changes made in last five years. (attach extra sheets as necessary)

4.20 List of raw materials, chemicals, additives, products, and by-products (Attach extra sheets as necessary)

4.31 Attach following FORMS for wastewater to be land applied.
 FORM C or F is required for all applicants. Use Form F for CAFOs.
 FORM D is required for those industries listed in the Form D instructions or when required by the department.
 Use actual testing results within last 12 months. For new operations use testing results from other similar operations or from published literature.

4.32 Are there any listed hazardous wastes in the material to be land applied: YES NO (If YES, attach testing results)

4.40 A. Are any Pollutants listed in 40 CFR 268.40 believed to be present in detectable concentrations: YES NO
 B. Are any Pollutants listed in 10 CSR 20-7.031 believed to be present in detectable concentrations: YES NO
 C. Are any Pollutants listed in EPA Process Design Manual for Land Treatment of Municipal Wastewater publication EPA-625/1-81-013, Table 4-5 and Table 4-16 believed present in detectable concentrations: YES NO
 (Attach a copy of testing results for any pollutants that may be present in detectable concentrations.)

4.50 Environmental Assessment. Do any of the pollutants detected exceed the criteria for pollutant concentrations of limitations contained in the publications referenced in Section 4.40 of this form: YES NO
 If YES, attach a copy of the Environmental Assessment as required in 10 CSR 20-8.020(3)(D).

5.00 SOIL TESTING RESULTS: Complete information for each pollutant listed and each land application site. Attach results of any other soil testing performed in the last 12 months. Soil sampling and testing should conform to University publication G9110, Sampling Your Soil for Testing; Soil Test Procedures for North Central Region (North Dakota Agricultural Experiment Bulletin 499-Revised); Methods of Soil Analysis, American Society of Agronomy, Inc.; Soil Testing and Plant Analysis, Soil Science Society of America, Inc.; EPA Methods; or other methods approved by the department. Attach extra sheets as necessary.

Total area sampled is ____ acres. Each composite sample covers ____ acres. Each composite consists of ____ subsamples.
 Sample depth: 0-6 inches 0-12 inches Other (describe) _____

Pollutant	Concentration (mg/kg or ppm)			Pounds/ Acre	No. Composite Samples	Sample Period
	Minimum	Maximum	Average			
Organic Nitrogen as N	See Attachment 4					
Ammonia Nitrogen as N						
Nitrate Nitrogen as N						
Phosphorus as P (Bray 1P)						
Exchangeable Sodium %						
Organic Matter (percent)						
Cation Exchange Capacity						
pH (standard units)						

Other pollutants present in the material to be land applied: (Attach extra sheets as necessary)

6.00 LAND LIMITING CONSTITUENTS FOR LAND APPLICATION

6.10 Metals of Concern for Land Application. Complete information for each pollutant listed. Analysis results must be for "TOTAL METALS". (Do NOT use TCLP, dissolved, total recoverable or other extraction methods. Include all test results for the last 5 years and a minimum of 4 separate samples.

Pollutant (total metals)	Concentration (mg/kg dry weight)			Design LBS/Acre/Year	Type of Samples	Number Samples	Sample Location	Sample Period
	Minimum	Maximum	Average					
Aluminum	See Attachment 4							
Arsenic								
Beryllium								
Cadium								
Chromium								
Copper								
Fluoride								
Lead								
Manganese								
Mercury								
Molybdenum								
Nickel								
Selenium								
Silver								
Tin								
Zinc								

6.20 Major Pollutants of Concern for Land Application. Complete information for each pollutant listed. Include any other pollutants that are most limiting for determining land application rates. Attach extra sheets as necessary.

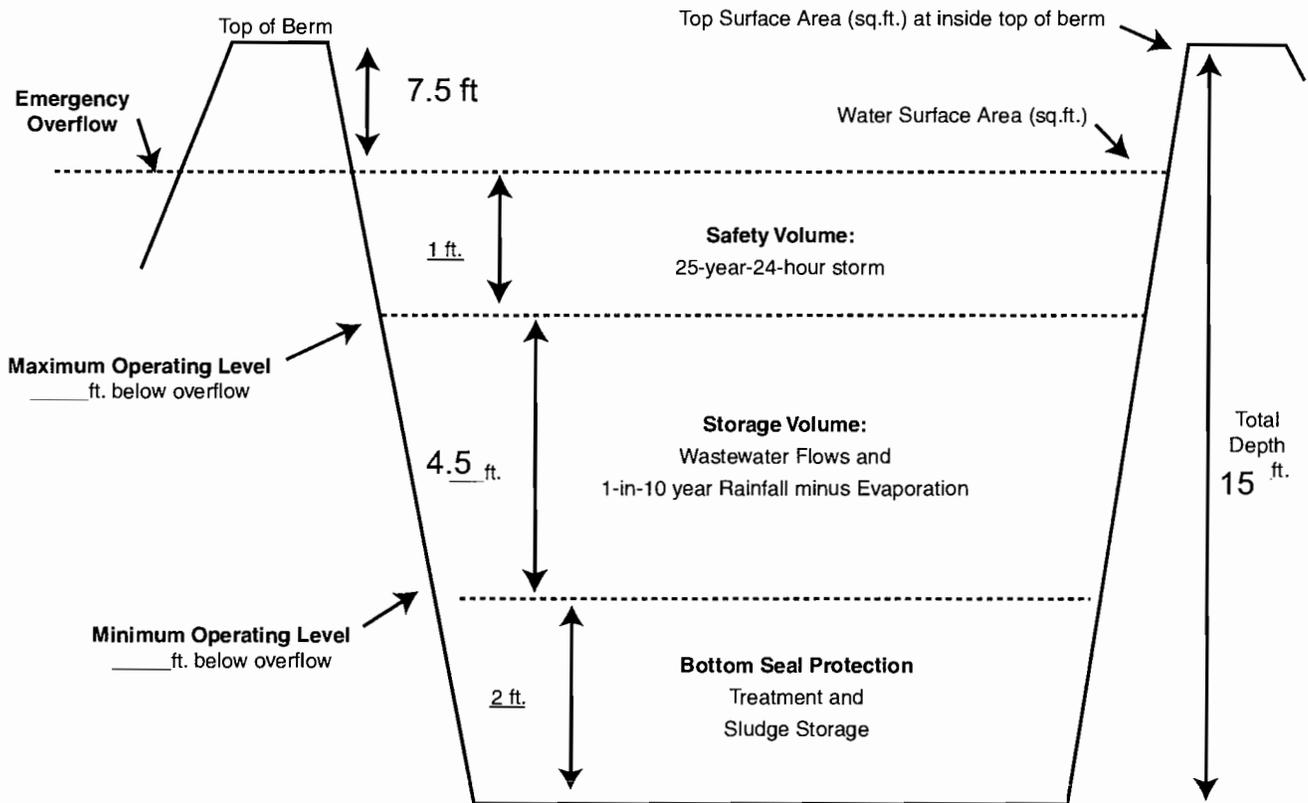
Organic Nitrogen as N	See Attachment 4							
Ammonia Nitrogen as N								
Nitrate Nitrogen as N								
Total Nitrogen as N								
Plant Available Nitrogen (PAN)								
Total Phosphorus as P								
Boron								
Chlorides								
Sodium								
COD								
TPH								
Total Suspended Solids								
Oil & Grease								
Sodium Absorption Ration (SAR)								
pH (standard units)								

ATTACHMENT A

(To be included with Form I and Form R)

Note: There is no Emergency Overflow. All water is discharged to Sanitary Sewer System.

Lagoon or Storage Basin PROFILE SKETCH



DEFINITION OF TERMS (REFER TO THE PROFILE SKETCH ABOVE).

- Freeboard is depth from top of berm to emergency spillway (minimum 1 foot);
- Safety Volume is depth for 25-year, 24-hour storm (minimum of 1 foot);
- Maximum Operating Level is at bottom of the safety volume (minimum of 2 feet below top of berm).
- Minimum Operating Level is 2 feet above bottom of lagoon for seal protection per 10 CSR 20-8.020(15)(D).
The minimum operating level may be greater than 2 feet when additional treatment volume is included.
- Storage Volume and days storage are based on the volume between Minimum and Maximum Operating Levels.
- Total Depth is from top of berm to bottom of basin including freeboard.

Attachment 4

A & L Great Lakes Laboratories, Inc.
Lime Analysis 10/14/2011

A & L Great Lakes Laboratories, Inc.
Report of Analysis 10/19/2011

A & L GREAT LAKES LABORATORIES, INC.

3505 Conestoga Dr. • Fort Wayne, IN • 46808 • 260-483-4759 • FAX 260-483-5274
 www.algreatlakes.com • lab@algreatlakes.com



QUALITY ANALYSES FOR INFORMED DECISIONS®

TO: CHILLICOTHE MUNICIPAL UTILITIE
 WATER DEPARTMENT
 1425 WATERWORKS RD
 CHILLICOTHE, MO 64601-3615

ATTN: JACKIE MOMMEN

LAB NUMBER: 27814

SAMPLE ID: #1

LIME ANALYSIS

DATE RECEIVED: 10/10/2011

DATE REPORTED: 10/14/2011

PAGE: 1 of 2

PARAMETER	AS RECEIVED BASIS	DRY BASIS	UNIT	REPORTING LIMIT	METHOD REFERENCE
Moisture (105 deg. C)	90.3	0.0	%	0.1	AOAC 950.01
Solids	9.7	100.0	%	0.1	AOAC 950.01
Calcium (Ca)	3.7	38.1	%	0.1	ASTM C602.20
Calcium (Ca)	74	762	lb/T	0.1	ASTM C602.20
Calcium Carbonate (CaCO3)	9.2	95.1	%	0.1	Calculation
Calcium Oxide (CaO)	5.2	53.3	%	0.1	Calculation
Magnesium (Mg)	0.05	0.56	%	0.01	ASTM C602.20/ICP
Magnesium (Mg)	1	11	lb/T	0.01	ASTM C602.20/ICP
Magnesium Oxide (MgO)	0.09	0.93	%	0.01	Calculation
Magnesium Carbonate	0.2	1.9	%	0.1	Calculation
Calcium Carbonate Equiv. (CCE)	9.3	96.4	%	0.1	AOAC 955.01
Passing U.S. #8 Sieve		100.0	%	0.1	AOAC 924.02
Passing U.S. #40 Sieve		100.0	%	0.1	AOAC 924.02
Passing U.S. #60 Sieve		100.0	%	0.1	AOAC 924.02

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ATTN: JACKIE MOMMEN

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SAMPLE ID: #1

DATE RECEIVED: 10/10/2011

DATE REPORTED: 10/14/2011 PAGE: 2 of 2

LIME ANALYSIS

PARAMETER	AS RECEIVED BASIS	DRY BASIS	UNIT	REPORTING LIMIT	METHOD REFERENCE
Passing U.S. #100 Sieve		100.0	%	0.1	AOAC 924.02
Missouri Lime Quality Parameters:					
Fineness Factor		100.0	%	0.1	MU G9107
Effective Neutralizing Material (ENM)	75	771	lb/T		MU G9107
Adjusted Lime Application Rate = Recommended Rate of Standard Aglime (lb ENM) / ENM					MU G9102

REPORT NO.
F11283-8002
ACCOUNT NO.
15601

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To: CHILLICOTHE MUNICIPAL UTIL.
WATER DEPARTMENT
1425 WATERWORKS RD
CHILLICOTHE, MO 64601-3615

Attn: JACKIE MOMMEN



The test results in this report meet all NELAC requirements for the parameters listed below.

Parameter	Method Reference
-----------	------------------

Ammonia as N	SM 4500-NH3 B/C
Kjeldahl nitrogen, total (TKN)	SM 4500-Norg B / NH3 C
Aluminum	EPA 6010
Phosphorus, total	EPA 6010
Potassium	EPA 6010
Arsenic	EPA 6020
Cadmium	EPA 6020
Copper	EPA 6020
Lead	EPA 6020
Mercury	EPA 6020
Molybdenum	EPA 6020
Nickel	EPA 6020
Selenium	EPA 6020
Zinc	EPA 6020
Nitrate-nitrite	Lachat 12-107-04-1-B
Residue, total	SM 2540 G

Any exceptions to NELAC requirements are noted in this report. Questions regarding this report should be directed to Keith Henley or Amy Berg - Environmental Division

REPORT NO.
F11283-8002
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15601

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WATER DEPARTMENT
1425 WATERWORKS RD
CHILLICOTHE, MO 64601-3615

Attn: JACKIE MOMMEN

Lab Number: 27814
Sample ID: #1

REPORT OF ANALYSIS

Date Sampled: Not Provided
Date Received: 10/10/2011
Date Reported: 10/19/2011 Page: 3 of 3

Parameter	Wet Basis		Dry Basis		Table 3 mg/kg	Loading Rate		Analyst	Date Analyzed	Method Reference
	Result	Unit	Result	Unit		Lbs/Wet Ton	Lbs/Dry Ton			
Arsenic	0.49	mg/kg	4.11	mg/kg	---	0.00098	0.0082	CC	10/18/11	SW846-6020
Mercury	<0.59	mg/kg	<4.9	mg/kg	---	<0.001	<0.0099	CC	10/18/11	SW846-6020
Molybdenum	<0.75	mg/kg	<6.3	mg/kg	---	<0.002	<0.013	CC	10/18/11	SW846-6020
Selenium	0.93	mg/kg	7.80	mg/kg	---	0.0019	0.016	CC	10/18/11	SW846-6020
Aluminum	889.01	mg/kg	7458	mg/kg	---	1.78	14.9	EC	10/19/11	SW846-6010B
Sample Digestion-Microwave					---			EC	10/18/11	SW846-3051

REPORT NO.
F11283-8002
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15601

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CHILLICOTHE, MO 64601-3615

Attn: JACKIE MOMMEN

Lab Number: 27814

Sample ID: #1

REPORT OF ANALYSIS

Date Sampled: Not Provided
Date Received: 10/10/2011
Date Reported: 10/19/2011

Page: 2 of 3

Parameter	Wet Basis		Dry Basis		Table 3 mg/kg	Loading Rate		Date Analyzed	Analyst	Method/Reference
	Result	Unit	Result	Unit		Lbs/Wet Ton	Lbs/Dry Ton			
Nitrogen, Total	285	mg/kg	0.24	%	---	0.57	4.8	10/13/11	CRT	SM(20th)-4500N(org)B,N
Nitrogen, Total Kjeldahl	282	mg/kg	0.24	%	---	0.56	4.7	10/13/11	CRT	SM(20th)-4500 N(org)B a
Nitrogen, Ammonia (as N)	65	mg/kg	0.055	%	---	0.13	1.1	10/13/11	CRT	SM(20th)-4500-NH3B,C
Nitrogen, Nitrate (as N)	3	mg/kg	0.0025	%	---	0.0060	0.050	10/14/11	CRT	EPA-353.2 mod
Phosphorus	517.8	mg/kg	0.43	%	---	1.04	8.7	10/19/11	EC	SW846-6010B
Phosphorus (as P2O5)	1186	mg/kg	0.99	%	---	2.37	19.9	10/19/11	EC	Calculated
Potassium	119.9	mg/kg	0.10	%	---	0.24	2.0	10/19/11	EC	SW846-6010B
Potassium (as K2O)	144	mg/kg	0.12	%	---	0.29	2.4	10/19/11	EC	Calculated
Lead	<0.86	mg/kg	<7.2	mg/kg	---	<0.002	<0.014	10/18/11	CC	SW846-6020
Zinc	21.87	mg/kg	183	mg/kg	---	0.044	0.37	10/18/11	CC	SW846-6020
Nickel	6.91	mg/kg	58.0	mg/kg	---	0.014	0.12	10/18/11	CC	SW846-6020
Copper	1.76	mg/kg	14.8	mg/kg	---	0.0035	0.030	10/18/11	CC	SW846-6020
Cadmium	<0.18	mg/kg	<1.5	mg/kg	---	<0.0004	<0.0030	10/18/11	CC	SW846-6020
Solids, Total	11.92	%	100.0	%	---	238.4	2000.0	10/12/11	MG	SM(20th)-2540G

CHILLICOTHE MUNICIPAL UTILITIES

Electric, Water, Refuse, Sanitary Sewer and Internet

920 Washington St., P.O. Box 140

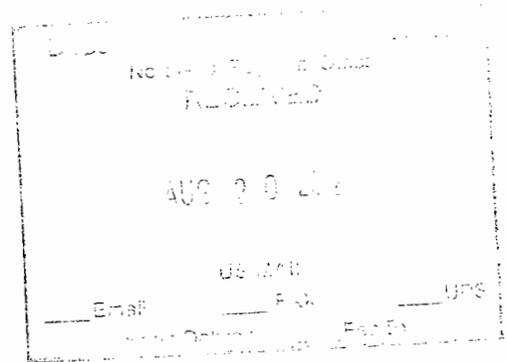
CHILLICOTHE, MISSOURI 64601

660-646-1664 - Customer Info. 660-646-1683 - Administrative

Fax 660-646-4181 EMAIL: cmuoff@cmuchillicothe.com

August 17, 2012

Missouri Department of Natural Resources
Northeast Regional Office
1709 Prospect Drive
Macon, MO 63552-2602



To Whom It May Concern:

Please find enclosed information to renew the storm water NPDES discharge permit for the Chillicothe Municipal Utilities Power Plant and Energy Center, Permit Number MO-0119873.

The information enclosed includes Form A, Form 2F, Form R and a check for \$1350 to renew our permit. Monitoring data required by Form 2F that has not yet been completed will be provided in our next sample and submitted after the results are received from the lab. The sample will include the parameters required by our current permit plus BOD, Total Organic Nitrogen, Total Phosphorous and specific items from Table 2F-4 we believe could be present from herbicides used periodically to control weeds.

Attachment 4 to Form R includes information regarding an on-site, permitted storage basin for lime sludge from our drinking water treatment plant (MO-G640203). The attachment provides information on the sludge characteristics. Neither the sludge nor the liquid from this storage basin is land applied on site. The sludge is land applied as a lime substitute at one of two nearby agricultural sites (199 acres or 154 acres) and the liquid from the basin is routed to our sanitary sewer treatment system.

In essence, the three outfalls in our NPDES permit are storm water runoff. If the agency has any questions with the enclosed information or needs any additional detail to proceed with re-issuance of the permit, please let me know. I can be contacted directly at 660-646-1661 or by email, mjacobs@cmuchillicothe.com.

Sincerely yours,

Mike Jacobs
Electric Production Superintendent

Enclosure



YOUR COMMUNITY OWNED UTILITY

List of Enclosures

Form A and Figures 1 and 2

Figure 1 - Topographic map showing each outfall location (scale 1"=1000')

Figure 2 - Schematic of facility drainage and each outfall location

Form 2F and Attachments 1, 2 and 3

Attachment 1 – Estimate of Design Flow Rate per Outfall

Attachment 2 – Description of Outfalls

Attachment 3 – Storm Water Monitoring Analytical Results (2010 - Present)

Form R and Attachment 4

Attachment 4 – A & L Great Lakes Laboratories, Inc. - Lime Analysis
A & L Great Lakes Laboratories, Inc. - Report of Analysis