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-0107735
Owner:	Curators of the University of Missouri
Address:	8 Research Park Development Building, Columbia, MO 65211
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	MU Power Plant
Facility Address:	417 South 5th Street, Columbia, MO 65211
Legal Description:	SEE PAGE TWO
UTM Coordinates:	SEE PAGE TWO
Receiving Stream:	SEE PAGE TWO
First Classified Stream and ID:	SEE PAGE TWO
USGS Basin & Sub-watershed No.:	SEE PAGE TWO

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

FACILITY DESCRIPTION

SEE PAGE TWO

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

July 15, 2011
Effective Date

July 15, 2014
Modification Date

Sara Parker Pauley
Sara Parker Pauley, Director, Department of Natural Resources

July 14, 2016
Expiration Date

John Madras
John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (continued)

Outfall #001 – Eliminated

Outfall #007 – Eliminated

Outfall #008 – Power Plant – SIC #4911/8221
Stormwater runoff / coal storage pile / biomass storage area / tire derived fuel storage area
All process water is connected to the City of Columbia sanitary sewer system

Design flow is 145,000 gallons per day.
Actual flow is dependent upon precipitation.

Legal Description:	SW ¼, NW ¼, NE ¼, Sec. 13, T48N, R13W, Boone County
UTM Coordinates:	X= 557695.439, Y= 4311074.639
Receiving Stream:	Flat Branch (U)
First Classified Stream and ID:	Hinkson Creek (P) (01007) 303(d) List
USGS Basin & Sub-watershed No.:	(10300102-0603)

Outfall #009 – Power Plant – SIC #4911/8221
Stormwater runoff / coal storage pile
All process water is connected to the City of Columbia sanitary sewer system

Design flow is 101,000 gallons per day.
Actual flow is dependent upon precipitation.

Legal Description:	NE ¼, SE ¼, NW ¼, Sec. 13, T48N, R13W, Boone County
UTM Coordinates:	X= 557662.357, Y= 4311032.416
Receiving Stream:	Flat Branch (U)
First Classified Stream and ID:	Hinkson Creek (P) (01007) 303(d) List
USGS Basin & Sub-watershed No.:	(10300102-0603)

Outfall #010 – Power Plant – SIC #4911/8221
Stormwater runoff / coal storage pile
All process water is connected to the City of Columbia sanitary sewer system

Design flow is 450,000 gallons per day.
Actual flow is dependent upon precipitation.

Legal Description:	NW ¼, SW ¼, NE ¼, Sec. 13, T48N, R13W, Boone County
UTM Coordinates:	X=557707.170, Y=4311022.180
Receiving Stream:	Flat Branch (U)
First Classified Stream and ID:	Hinkson Creek (P) (01007) 303(d) List
USGS Basin & Sub-watershed No.:	(10300102-0603)

Outfalls #008 and #009 discharge into tunnels underneath Providence Road. When significant rain events begin, the tunnels where the outfalls are located quickly begin to flood. Due to the potential safety hazards of sampling in the tunnels, the Department is allowing the facility to conduct sampling at manholes located upgradient of the outfalls, when the facility deems that sampling from the outfall locations would be unsafe. Outfall #010 discharges to a stormwater collection system that collects stormwater drainage from significant portion of property outside the power plant property parts of the campus. Therefore Outfall #010 has been established at a sampling location established by the facility upgradient of where the discharge would enter the stormwater collection system.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until **December 31, 2014,** from the date of issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfalls #008, #009, & #010 (Note 1)						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Total Suspended Solids	mg/L	50		50	once/quarter***	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter***	grab
Biochemical Oxygen Demand	mg/L	*		*	once/quarter***	grab
pH – Units	SU	**		**	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Sulfate	mg/L	*		*	once/quarter***	grab
Chloride	mg/L	*		*	once/quarter***	grab
Aluminum, Total Recoverable	µg/L	*		*	once/quarter***	grab
Antimony, Total Recoverable	mg/L	*		*	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	*		*	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Chromium III, Total Recoverable	µg/L	*		*	once/quarter***	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter***	grab
Iron, Total Recoverable	µg/L	*		*	once/quarter***	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter***	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter***	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter***	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter***	grab
Thallium, Total Recoverable	µg/L	*		*	once/quarter***	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter***	grab
Hardness, Total	mg/L	*		*	once/quarter***	grab

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

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.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective **January 1, 2015,** before the date of expiration of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfalls #008, #009, & #010 (Note 1)						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Total Suspended Solids	mg/L	50		50	once/quarter***	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter***	grab
Biochemical Oxygen Demand	mg/L	*		*	once/quarter***	grab
pH – Units	SU	**		**	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Chloride + Sulfate	mg/L	1000		1000	once/quarter***	grab
Chloride	mg/L	377.8		188.3	once/quarter***	grab
Aluminum, Total Recoverable	µg/L	750		373.8	once/quarter***	grab
Antimony, Total Recoverable	mg/L	8.6		4.3	once/quarter***	grab
Arsenic, Total Recoverable	µg/L	32.9		16.4	once/quarter***	grab
Beryllium, Total Recoverable	µg/L	8.2		4.1	once/quarter***	grab
Cadmium, Total Recoverable	µg/L	0.7		0.4	once/quarter***	grab
Chromium III, Total Recoverable	µg/L	242.6		120.9	once/quarter***	grab
Copper, Total Recoverable	µg/L	26		13	once/quarter***	grab
Iron, Total Recoverable	µg/L	1642.7		818.8	once/quarter***	grab
Lead, Total Recoverable	µg/L	12.1		6.0	once/quarter***	grab
Mercury, Total Recoverable	µg/L	0.8		0.4	once/quarter***	grab
Nickel, Total Recoverable	µg/L	149.5		74.5	once/quarter***	grab
Selenium, Total Recoverable	µg/L	8.2		4.1	once/quarter***	grab
Silver, Total Recoverable	µg/L	11.7		5.9	once/quarter***	grab
Thallium, Total Recoverable	µg/L	12.7		6.3	once/quarter***	grab
Zinc, Total Recoverable	µg/L	208.2		103.8	once/quarter***	grab
Hardness, Total	mg/L	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE APRIL 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

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.

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.
*** See table below for quarterly sampling

Sample discharge at least once for the months of:		Report is due:
January, February, March	(1st Quarter)	April 28
April, May, June	(2nd Quarter)	July 28
July, August, September	(3rd Quarter)	October 28
October, November, December	(4th Quarter)	January 28

Note 1 – A representative grab sample shall be taken 10 to 60 minutes after a stormwater discharge begins. Only one sample is required per quarter.

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. This permit does not authorize the discharge of waters other than stormwater, except for certain non-stormwater discharges authorized in the MS4 NPDES permit #MO-R040045.

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

4. 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.
   (c) That the effluent limit established in part A of the permit will be exceeded.

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

5. Water Quality Standards
   (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
   (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:

C. SPECIAL CONDITIONS (continued)

(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.

6. The permit requires development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be prepared within 60 days and implemented within 90 days of the permit issuance. The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

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

   The SWPPP must include the following:
   (a) An assessment of all stormwater discharges associated with the facility. This must include a list of potential contaminants and an annual estimate of amounts that will be used in the described activities.
   (b) A listing of 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.
   (c) A schedule for implementing the BMPs.
   (d) Provisions for preventing the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehousing activities and prevent the contamination of stormwater from these substances.
   (e) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of areas having materials exposed to stormwater. Proof of training shall be submitted on request of the Department.
   (f) The SWPPP must include a schedule for twice per month site inspections and brief written reports. At least one of the monthly inspections must be conducted after a precipitation event that causes runoff to occur onsite, including snow melt. If runoff does not occur during the month, the facility shall conduct that month's second inspection on the last business day of the month. The inspections must include observations and evaluations of BMP effectiveness, deficiencies, and corrective measures that will be taken. Deficiencies must be corrected within seven days and the actions taken to correct the deficiencies shall be included with the written report. Any corrective measure that necessitates major construction may also require a construction permit. Inspection reports must be kept on site with the SWPPP and maintained for a period of five years. These must be made available to the Department upon request.
   (g) A provision for designating an individual to be responsible for environmental matters. The provision shall also include alternates in the event that the primary responsible person is not available.
   (h) Inspection reports must be kept on site with the SWPPP and retained in accordance with the Records, Retention, and Recording section listed below. These must be made available to DNR personnel upon request.
   (i) Provisions to reduce or control the tracking of ash and residue from ash loading areas. This shall include housekeeping procedures such as dust suppression, containment, or clearing loading areas, floors, and roadways of ash.
   (j) Provisions for inspecting all residue-hauling (e.g. ash, etc) vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body, and how these vehicles will be repaired, including timelines, if found inadequate.
   (k) Provisions that prevent contamination of stormwater runoff from delivery vehicles that carry significant materials (e.g. coal, biomass, etc) to and from the facility, and how the facility will deal with leakage or spillage from vehicles or containers.

7. The purpose of the SWPPP and the BMPs listed therein 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 action means the facility took steps to eliminate the deficiency.

C. SPECIAL CONDITIONS (continued)

8. All spills must be **cleaned up** within 24 hours of discovery or as soon as possible. A written report of the incident shall be submitted with the facility's Discharge Monitoring Report. The following spills must be **reported** to the department at the earliest practicable moment, but no greater than 24 hours after the spill occurs:
   (a) Any spill, of any material, that leaves the property of the facility;
   (b) Any spill, of any material outside of secondary containment and exposed to precipitation, greater than 25 gallons or equivalent volume of solid material.

   The department may require the submittal of a written report detailing measures taken to clean up the spill within 5 days of the spill. Whether the written report is submitted with the Discharge Monitoring Report or required to be submitted within 5 days, it 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.

   Federal Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

9. As the TMDL for Hinkson Creek (01007) has been developed and approved by EPA, the permittee shall implement best management practices (BMPs) to attenuate the discharge of the TMDL regulated parameter to the associated stream. These BMPs, intended to attenuate the discharge of the TMDL regulated parameters are to be implemented within the permit area wherever stormwater drains to the associated impaired stream. BMPs shall be implemented for each of the final TMDL regulated parameters consistent with the TMDL implementation schedule. Within twelve months of the finalization of each TMDL, the permittee shall assess the SWPPP and update the SWPPP as necessary to implement each TMDL.

   The permittee shall describe a monitoring program to determine whether the storm water controls are adequate to meet the WLAs for TMDL parameters or other performance requirements specifically for storm water discharges from the facility. Such monitoring program may require the development of a Quality Assurance Project Plan (QAPP) or suitable alternative.

D. SCHEDULE OF COMPLIANCE

The facility shall attain compliance with final effluent limitations as soon as reasonably achievable or no later than **January 1, 2015.**

1. The Curators of the University of Missouri shall submit a letter to the department by **July 15, 2012** detailing how the facility plans on meeting the final effluent limitations for Chloride + Sulfate, Chloride, Total Recoverable Aluminum, Total Recoverable Antimony, Total Recoverable Arsenic, Total Recoverable Beryllium, Total Recoverable Cadmium, Total Recoverable Chromium (III), Total Recoverable Copper, Total Recoverable Iron, Total Recoverable Lead, Total Recoverable Mercury, Total Recoverable Nickel, Total Recoverable Selenium, Total Recoverable Silver, Total Recoverable Thallium, and Total Recoverable Zinc.

2. The Curators of the University of Missouri shall submit interim progress reports every 12 months from **July 15, 2011**.

3. The MU Power Plant will meet final effluent limits by **January 1, 2015**.

REPORTING OF EFFLUENT VIOLATIONS

If any of the sampling results from any of the outfalls show any violation of the permit discharge limitations, written notification shall be made to the Department of Natural Resources within five (5) days of notification of analytical results. Notification shall indicate the date(s) of sample collection, the analytical results, and permit number, and shall include a statement concerning the revisions or modifications in management practices that are being implemented to address the violation of the limitations that occurred.

After a violation has been reported, a sample of stormwater runoff resulting from the next rainfall greater than 0.1 inches shall be collected at outfall(s) for which the violation occurred. Analytical results of this sample shall be submitted in writing to the Department of Natural Resources (this section supersedes Standard Conditions Part I, Section B: Noncompliance Notification).

RECORDS, RETENTION, AND RECORDING

Monitoring reports shall be submitted within 28 days after the end of each quarter. All sampling data and inspection reports shall be maintained by the permittee for a period of five (5) years and shall be supplied to the Department of Natural Resources upon request (supersedes Standard Conditions Part I, Section A, #7 - Records Retention). A copy of all of the sampling data must be submitted with an application for reissuance of this permit.

PERMIT TRANSFER

This permit may be transferred to a new owner by submitting an “Application for Transfer of Operating Permit” signed by the seller and buyer of the facility, along with the appropriate modification fee.

PERMIT RENEWAL REQUIREMENTS

Unless this permit is terminated, the permittee shall submit an application for the renewal of this permit no later than six (6) months prior to the permit’s expiration date. Failure to apply for renewal may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.

TERMINATION

In order to terminate this permit, the permittee shall notify the department by submitting Form J, included with the State Operating Permit. The permittee shall complete Form J and mail it to the department at the address noted in the cover letter of this permit. Proper closure of any storage structure is required prior to permit termination. A closure plan shall be submitted to the department and approved prior to initiating closure activities.

DUTY OF COMPLIANCE

The permittee shall comply with all conditions of this permit. Any noncompliance with this permit constitutes a violation of Chapter 644, Missouri Clean Water Law, and 10 CSR 20-6. Noncompliance may result in enforcement action, termination of this authorization, or denial of the permittee's request for renewal. This permit authorizes only the activities described in this permit.

Missouri Department of Natural Resources
Statement of Basis
For the Purpose of Modification
of
MO-0107735
MU Power Plant

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

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.

2014 Modification

On March 11, 2014 the University of Missouri (MU) submitted a request to modify the schedule of compliance found in MO-0107735. 40 CFR 122.62(a)(4) allows modifications to a schedule of compliance for events over which the permittee has little or no control and for which there is no reasonably achievable remedy. On April 3, 2014, MU submitted a letter (Attachment – Application for Modification – Additional Information) further detailing the conditions that have caused them to be unable to meet the original schedule of compliance.

The design and installation of many best management practice (BMP) enhancements were included as part of the facility's upgrade to install a new biomass fired boiler. Start-up of the boiler was scheduled to be complete in 2013 giving the facility ample time to evaluate the effectiveness of BMP enhancements designed to improve stormwater runoff from the facility. The facility installed three enclosed fuel storage silos and handling, but reclaim augers in the silos failed catastrophically, resulting in the need to keep biomass fuels outside. In the interim, the facility implemented several BMPs as a result of the temporary delivery condition. Temporary BMPs are explained in detail in Attachment – Application for Modification – Additional Information. Attempts to repair the auger systems failed and MU proceeded with a plan to replace the auger system. A contract for this additional work was awarded in April 2014. MU believes they can have this system installed and operational by the end of 2014.

☒ - The Public Notice period for this operating permit was from May 23, 2014 to June 23, 2014. No responses received or responses to the Public Notice of this operating permit do not warrant the modification of effluent limits and/or the terms and conditions of this permit.

Date of Statement of Basis: May 2, 2014

COMPLETED BY:

AMANDA SAPPINGTON
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION
(573) 751-8728
Amanda.sappington@dnr.mo.gov

Attachment – Application for Modification - Additional Information

UNIVERSITY *of* MISSOURI

ENVIRONMENTAL HEALTH AND SAFETY

Ms. Amanda Sappington
Water Pollution Control Branch
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 6102

March 31, 2014

RE: University of Missouri (MU) Power Plant
NPDES Permit No. MO-0107735
Application for Modification – Additional Information

Dear Ms. Sappington,

MU just completed a large project to upgrade MU's Combined Heat and Power (CHP) facility including installation of a new biomass fired boiler. Numerous enhancements were made during this upgrade which will assist in meeting the new effluent limitations scheduled to take effect July 15, 2014. Start-up and commissioning activities for the new boiler and associated biomass fuel handling system began on November 29, 2012, and were expected to be complete within 180 days. However, a key portion of the biomass handling system failed which impacted the startup activities and the operation of the boiler. Had everything worked as anticipated, there would have been sufficient time to evaluate the effectiveness of the enhancements on stormwater runoff quality prior to the new effluent limitations becoming effective in July 2014.

The installation of enclosed fuel storage silos and handling system is one of the major enhancements designed to improve the quality of stormwater runoff from the plant site. The reclaim augers installed in each of the three biomass silos failed catastrophically shortly after initial start-up. These failures rendered the storage silos inoperable and resulted in the need to feed the biomass boiler with "just in time" deliveries from the biomass fuel supplier. Additional BMPs implemented as a result of the temporary delivery condition included:

- All solid fuel will ultimately be stored in fully-enclosed silos and thus no longer exposed to the elements.
- All fuel conveyors are completely enclosed and under roof, eliminating the potential for fugitive dust.
- New fuel unloading hoppers are totally under roof to reduce fugitive dust.
- A new fuel conveyor dust collection system that keeps dust contained within the conveyor enclosures was installed.
- Storm drain modifications ahead of Outfall #10 were constructed to prevent flow from the CHP site from entering it, thus eliminating Outfall #10 from the monitoring protocol.
- Replaced old cracked concrete eliminating potholes and crevices that would trap sediment that was difficult to remove through normal sweeping.
- A series of three trench catch basins were designed and constructed to slow stormwater flow and help capture sediment. The trenches contain screened filters and shut off valves.

8 Research Park Dev Bldg, Columbia, MO 65211 Phone: 573-882-7018 Fax: 573-882-7940 ehs.missouri.edu

- A catch basin was constructed in front of the fuel unloading building and fitted with a screened filter and a shut off valve to prevent spilled fuel from entering storm drains.
- New screens and fabric filters have been installed in all storm and curb drains on the site.

The supply vendor's attempts to repair and modify the reclaim auger systems have all failed. Following an independent engineering analysis, MU proceeded with a plan to replace the reclaim system with a different vendor in December 2013.

MU hired a design engineer to draft detailed specifications to seek proposals from other equipment suppliers. Proposals for replacement were received on March 19, 2014. We are in the process of finalizing our evaluation of the proposals and expect to award a in early April 2014. Preliminary information from the proposals suggests that it will take approximately 240 days from receipt of contract to complete the installation. This means that the new system should be operational by the end of calendar year 2014. So we request that the new effluent limitations' implementation be delayed until the first reporting period of 2015.

Many of the other enhancements made during the project are already having a positive impact on storm water runoff, but the full potential of the upgrades will not be achieved until the silo reclaim systems are replaced and operational. Until then, we will continue to be diligent in the execution and maintenance of our BMPs.

If you have any questions, please contact me at 573-882-7018.

Sincerely,

Ed McKane
Environmental Specialist

cc: Paul Hoemann, CF-EM
Ken Davis, CF-EM
Todd Houts, EHS

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0107735
MU POWER PLANT

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

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for a Major ☐, Minor ☐, Industrial Facility ☒; Variance ☐;
Master General Permit ☐; General Permit Covered Facility ☐; and/or permit with widespread public interest ☐.

Part I – Facility Information

Facility Type: Industrial Stormwater
Facility SIC Code(s): 4911/8221

Facility Description:
The MU Power Plant has been providing steam and electricity for the MU campus from its current location since 1923. The plant originally was equipped with four small coal-fired boilers, and two steam turbines. Today the plant is equipped with five boilers, four steam turbine generators, and two gas turbine generators with steam heat recovery providing steam and electricity to the MU campus. The MU Power Plant has four steam turbine generators ranging in size from 6 MW to 19 MW and two gas turbine generators rated at 13 MW are capable of meeting the entire campus electricity demand. The MU Power Plant uses a variety of fuels to provide energy for the campus. Fuels include coal, natural gas, chipped tires, fuel oil, and biomass. Coal, chipped tires, biomass, and fuel oil are delivered to power plant by truck. The outfalls from the facility consist of stormwater run-off from the facility's grounds. All process water is connected to the City of Columbia's sanitary sewer system

Have any changes occurred at this facility or in the receiving water body that affects effluent limit derivation?
☒, - No.

Application Date: 07/24/2009
Expiration Date: 11/11/2009
Last Inspection: 07/07/2010 In Compliance ☒

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (GPD)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
#008	145,000	BMPs*	Industrial Stormwater	~ 2.6
#009	101,000	BMPs*	Industrial Stormwater	~ 2.6
#010	450,000	BMPs*	Industrial Stormwater	~ 2.6

* – Best Management Practices

Outfall #001 – Eliminated – This outfall is eliminated as it has no contaminants exposed to stormwater.

Outfall #007 – Eliminated – This outfall is eliminated as it has no contaminants exposed to stormwater.

Outfall #008 – Power Plant – SIC #4911/8221
Stormwater runoff / coal storage pile / biomass storage area / tire derived fuel storage area
Design flow is 145,000 gallons per day.
Actual flow is dependent upon precipitation.

Legal Description:	SW ¼, NW ¼, NE ¼, Sec. 13, T48N, R13W, Boone County
UTM Coordinates:	X= 557695.439, Y= 4311074.639

Outfall #009 – Power Plant – SIC #4911/8221
Stormwater runoff / coal storage pile
Design flow is 101,000 gallons per day.
Actual flow is dependent upon precipitation.

Legal Description:	NE ¼, SE ¼, NW ¼, Sec. 13, T48N, R13W, Boone County
UTM Coordinates:	X= 557662.357, Y= 4311032.416

Outfall #010 – Power Plant – SIC #4911/8221
Stormwater runoff / coal storage pile
Design flow is 450,000 gallons per day.
Actual flow is dependent upon precipitation.

Legal Description:	NW ¼, SW ¼, NE ¼, Sec. 13, T48N, R13W, Boone County
UTM Coordinates:	X=557707.170, Y=4311022.180

Outfalls #008, #009, & #010

Receiving Stream:	Flat Branch (U)
First Classified Stream and ID:	Hinkson Creek (P) (01007) 303(d) List
USGS Basin & Sub-watershed No.:	(10300102-0603)

Receiving Water Body's Water Quality & Facility Performance History:
Hinkson Creek (01007) is listed on the 2008 Missouri 303(d) List for unknown pollutants. A TMDL for Hinkson Creek was established Jan. 28, 2011. No violations have been noted on the submitted Discharge Monitoring Reports from the facility.

Comments:
Outfalls #001 and #007 were eliminated as these outfalls do not have contaminants exposed to stormwater. As Outfall #009 had two inlet sampling locations, it has been split into Outfall #009 and Outfall #010. Outfalls #008 and #009 discharge into tunnels underneath Providence Road. When significant rain events begin, the tunnels where the outfalls are located quickly begin to flood. University staff discussed that it is unsafe to reach the outfalls while water is rushing through the tunnels. Due to the potential safety hazards of sampling in the tunnels, the Department is allowing for the facility to conduct sampling at manholes located upgradient of the outfalls, where the samples are representative of the discharge. This does not prevent the facility from sampling the outfall locations when the facility deems it safe to do so, as the facility discussed that it is their preference to obtain grab samples from the outfalls whenever possible. Outfall #010 discharges to a stormwater collection system that collects stormwater drainage from significant portion of property outside the power plant property parts of the campus. Therefore Outfall #010 has been established at a sampling location established by the facility upgradient of where the discharge would enter the stormwater collection system.

Effluent limitations have been established for several pollutants found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). According to the EPA, runoff from coal piles contain the same contaminants, but that the amount of contaminants generated depends on the coal characteristics and residence time of the water within the coal pile. The permit writer established the effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

The effluent limitations for these pollutants may be removed if site specific data shows no reasonable potential, but monitoring for these pollutants will remain in the permit as the source of coal and the amount of contaminants generated by the coal can change, which will cause the stormwater quality to change.

To address the TMDL implemented for Hinkson Creek (01007) a special condition was added to the permit regarding how the facility will implement BMPs to attenuate the discharge of the TMDL regulated parameter to the associated stream consistent with the TMDL implementation schedule. The permittee shall also describe a monitoring program to determine whether the storm water controls are adequate to meet the WLAs for TMDL parameters or other performance requirements specifically for storm water discharges from the facility. Such monitoring program may require the development of a Quality Assurance Project Plan (QAPP) or suitable alternative.

Settleable Solids was removed from the permit as the data collected shows no significant levels of settleable solids in the discharges.

Part II – Operator Certification Requirements

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

Part III – Receiving Stream Information

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

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

10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 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*	8-DIGIT HUC	EDU**
Flat Branch	U	NA	General Criteria	10300102	Ozark/Moreau/Loutre
Hinkson Creek	P	01007	LWW, AQL, SCR, WBC-A***		

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

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

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

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

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

☒ - All limits in this operating permit are at least as protective as those previously established; therefore, backsliding does not apply.

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.

☒ - Renewal no degradation proposed and no further review necessary.

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

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.

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.

Not Applicable ☒; A RPA was not conducted for this 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.

Applicable ☒; The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(10)]. The facility is to meet Final Effluent Limitations for Chloride + Sulfate, Chloride, Total Recoverable Aluminum, Total Recoverable Antimony, Total Recoverable Arsenic, Total Recoverable Beryllium, Total Recoverable Cadmium, Total Recoverable Chromium (III), Total Recoverable Copper, Total Recoverable Iron, Total Recoverable Lead, Total Recoverable Mercury, Total Recoverable Nickel, Total Recoverable Selenium, Total Recoverable Silver, Total Recoverable Thallium, and Total Recoverable Zinc.

STORMWATER 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 stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (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 Stormwater Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of stormwater discharges.

Applicable ☒; A SWPPP shall be developed and implemented. The SWPPP shall incorporate required practices identified by the Department with jurisdiction, incorporate best management practices specific to site conditions, and provide for maintenance and adherence to the plan.

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

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

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

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

$$C = \frac{(Cs \times Qs) + (Ce \times Qe)}{(Qe + Qs)}$$ (EPA/505/2-90-001, Section 4.5.5)

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

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

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

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

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

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

Applicable ☒; Hinkson Creek (01007) is listed on the 2008 Missouri 303(d) List for unknown pollutants.

☒ –This facility has the potential to contribute to the impairment of Hinkson Creek (01007). The permittee shall implement best management practices (BMPs) to attenuate the discharge of the TMDL regulated parameter to the associated stream. These BMPs, intended to attenuate the discharge of the TMDL regulated parameters are to be implemented within the permit area wherever stormwater drains to the associated impaired stream. BMPs shall be implemented for each of the final TMDL regulated parameters consistent with the TMDL implementation schedule. Within twelve months of the finalization of each TMDL, the permittee shall assess the SWPPP and update the SWPPP as necessary to implement each TMDL.

The permittee shall describe a monitoring program to determine whether the storm water controls are adequate to meet the WLAs for TMDL parameters or other performance requirements specifically for storm water discharges from the facility. Such monitoring program may require the development of a Quality Assurance Project Plan (QAPP) or suitable alternative.

Part V – Effluent Limits Determination

Outfalls #008, #009, & #010

INTERIM EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	1	*		*	NO	S
Total Suspended Solids	mg/L	1	50		50	YES	*
Chemical Oxygen Demand	mg/L	9	*		*	YES	**
Biochemical Oxygen Demand	mg/L	9	*		*	YES	**
pH	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6.0-9.0
Oil & Grease	mg/L	1/3	15		10	YES	20/15
Chloride + Sulfate	mg/L	2/9	*		*	YES	**
Chloride	mg/L	2/9	*		*	YES	**
Aluminum, Total Recoverable	µg/L	2/9	*		*	YES	**
Antimony, Total Recoverable	mg/L	2/9	*		*	YES	**
Arsenic, Total Recoverable	µg/L	2/9	*		*	YES	**
Beryllium, Total Recoverable	µg/L	2/9	*		*	YES	**
Cadmium, Total Recoverable	µg/L	2/9	*		*	YES	**
Chromium (III), Total Recoverable	µg/L	2/9	*		*	YES	**
Copper, Total Recoverable	µg/L	2/9	*		*	YES	**
Iron, Total Recoverable	µg/L	2/9	*		*	YES	**
Lead, Total Recoverable	µg/L	2/9	*		*	YES	**
Mercury, Total Recoverable	µg/L	2/9	*		*	YES	**
Nickel, Total Recoverable	µg/L	2/9	*		*	YES	**
Selenium, Total Recoverable	µg/L	2/9	*		*	YES	**
Silver, Total Recoverable	µg/L	2/9	*		*	YES	**
Thallium, Total Recoverable	µg/L	2/9	*		*	YES	**
Zinc, Total Recoverable	µg/L	2/9	*		*	YES	**
Hardness, Total	mg/L	2/9	*		*	YES	**
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

* - Monitoring requirement only.
** - Parameter not previously established in previous state operating permit.
S – Same as previous operating permit

Basis for Limitations Codes:

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

FINAL EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	1	*		*	NO	S
Total Suspended Solids	mg/L	1	50		50	NO	*
Chemical Oxygen Demand	mg/L	9	*		*	NO	S
Biochemical Oxygen Demand	mg/L	9	*		*	NO	S
pH	SU	1	6.5 – 9.0		6.5 – 9.0	NO	S
Oil & Grease	mg/L	1/3	15		10	NO	S
Chloride + Sulfate	mg/L	2/9	1000		1000	YES	*
Chloride	mg/L	2/9	377.8		188.3	YES	*
Aluminum, Total Recoverable	µg/L	2/9	750		373.8	YES	*
Antimony, Total Recoverable	mg/L	2/9	8.6		4.3	YES	*
Arsenic, Total Recoverable	µg/L	2/9	32.9		16.4	YES	*
Beryllium, Total Recoverable	µg/L	2/9	8.2		4.1	YES	*
Cadmium, Total Recoverable	µg/L	2/9	0.7		0.4	YES	*
Chromium (III), Total Recoverable	µg/L	2/9	242.6		120.9	YES	*
Copper, Total Recoverable	µg/L	2/9	26		13	YES	*
Iron, Total Recoverable	µg/L	2/9	1642.7		818.8	YES	*
Lead, Total Recoverable	µg/L	2/9	12.1		6	YES	*
Mercury, Total Recoverable	µg/L	2/9	0.8		0.4	YES	*
Nickel, Total Recoverable	µg/L	2/9	149.5		74.5	YES	*
Selenium, Total Recoverable	µg/L	2/9	8.2		4.1	YES	*
Silver, Total Recoverable	µg/L	2/9	11.7		5.9	YES	*
Thallium, Total Recoverable	µg/L	2/9	12.7		6.3	YES	*
Zinc, Total Recoverable	µg/L	2/9	208.2		103.8	YES	*
Hardness, Total	mg/L	2/9	*		*	NO	*
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

* - Monitoring requirement only.
** - Parameter not previously established in previous state operating permit.
S – Same as previous operating permit

Basis for Limitations Codes:

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

OUTFALLS #008, #009, & #010 – DERIVATION AND DISCUSSION OF LIMITS:

- **Chemical Oxygen Demand (BOD_5).** Monitoring requirement only as this is a pollutant typically found in coal pile runoff. Monitoring is being required to determine if limits are applicable.

- **Biochemical Oxygen Demand (BOD_5).** Monitoring requirement only as the facility stores biomass outside and exposed to precipitation. Monitoring is being required to determine if limits are applicable.

- **Total Hardness**. Monitoring only requirement due to the fact that Metals toxicity varies by hardness.

TECHNOLOGY-BASED EFFLUENT LIMITS (TBEL)

TBELs are compared to WQBEL below.

BEST PROFESSIONAL JUDGMENT TECHNOLOGY-BASED EFFLUENT LIMITS:

Coal pile runoff is the rainfall runoff from or through any coal storage pile. The MU Power Plant generates power for self use and is not primarily engaged in the sale or distribution of electricity. Because of this fact, 40 CFR Part 423 is not applicable as an Effluent Limit Guideline (ELG). Additionally, there are no applicable ELGs for this type of treatment technology.

Because there are no available ELGs, staff must consider the use of Best Professional Judgment (BPJ) for the development of effluent limitations, as per 40 CFR Part 125.3. In order to determined appropriate effluent limitations, staff took into consideration (1) what has been used for past effluent limit determination from the coal pile runoff; and (2) is there any similar ELG that can be used or should new limitations (with the potential for new pollutants) be developed.

Federal ELG, 40 CFR 423.12 (b) (9) for coal pile runoff, is based on studies of stormwater runoff from coal piles that are exposed to precipitation, which is the case for the outfalls serving the facility. As runoff from coal piles contain the same contaminants, but that the amount of contaminants generated depends on the coal characteristics and residence time of the water within the coal pile, the ELG found in 40 CFR 423.12 (b) (1) and (9) is being applied to the outfalls as a Best Professional Judgment.

Staff drafting this permit have determined the demonstration needed to develop later Best Professional Judgment (BPJ) Technology-based Effluent Limits (TBEL) for potential Pollutants of Concern (POC) was not necessary. This is due to the fact that developed Water Quality-based Effluent Limits (WQBEL) for potential POC's for this facility are believed to be more protective than Technology-based Effluent Limits (TBEL). Facilities that discharge to an unclassified tributary are not allowed to take mixing considerations into account in accordance with Missouri's Water Quality Standards. As documented in the operating permit and fact sheet, this facility discharges to an unclassified tributary; therefore, all WQBEL in the operating permit were calculated without the utilization of mixing considerations. In operating permits that contain WQBEL and discharge to unclassified streams, the WQBEL are typically more stringent than TBEL.

- **pH**. In accordance with 40 CFR 423.12(b)(1), pH shall be maintained in the range of 6.0 – 9.0.

- **Total Suspended Solids (TSS).** 50 mg/L as a Daily Maximum and 50 mg/L as a Monthly Average. This limit is applied to the facility based on the effluent guidelines set forth in 40 CFR 423.12 (b) (9) and best professional judgment.

WATER QUALITY-BASED EFFLUENT LIMITS

TBELs are compared to WQBEL below.

- **Flow**. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.

- **pH**. Effluent limitation range is 6.5 to 9.0 Standard pH Units (SU), as per the applicable section of 10 CSR 20-7.015. pH is not to be averaged.

- **Oil & Grease**. Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

- **Chloride + Sulfate**. The permit writer has established effluent limits as sulfate is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

WATER QUALITY-BASED EFFLUENT LIMITS (CONTINUED)

- **Chloride**. The permit writer has established effluent limits as chloride is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

Metals

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in EPA/505/2-90-001 and "The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion" (EPA 823-B-96-007). General warm-water fishery criteria apply and hardness of 193 mg/L.

Due to the absence of contemporaneous effluent and instream data for total recoverable metals, dissolved metals, hardness, and total suspended solids with which to calculate metals translators, partitioning between the dissolved and absorbed phases was assumed to be minimal (Section 5.7.3, EPA/505/2-90-001). Freshwater criteria conversion factors for dissolved metals were used as the metals translator as recommended in guidance (Section 1.3, 1.5.3, and Table 1, EPA 823-B-96-007). If concurrent site-specific data for total recoverable metals, dissolved metals, hardness, and total suspended solids are provided to the Department, partitioning evaluations may be considered and site-specific translators developed.

METAL	CONVERSION FACTORS
	ACUTE
Arsenic	1.0
Cadmium	0.916
Chromium III	0.316
Copper	0.960
Lead	0.695
Mercury	0.85
Nickel	0.998
Silver	0.85
Zinc	0.980

Conversion factors for Cadmium, Chromium, Copper, Lead, Nickel, Silver, and Zinc are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 193 mg/L.

- **Aluminum, Total Recoverable**. The permit writer has established effluent limits as aluminum is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Antimony, Total Recoverable**. The permit writer has established effluent limits as antimony is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Arsenic, Total Recoverable**. The permit writer has established effluent limits as arsenic is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Beryllium, Total Recoverable**. The permit writer has established effluent limits as Beryllium is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Cadmium, Total Recoverable**. The permit writer has established effluent limits as cadmium is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.
- **Chromium (III), Total Recoverable**. The permit writer has established effluent limits as Chromium (III) is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Copper, Total Recoverable**. The permit writer has established effluent limits as copper is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Iron, Total Recoverable**. The permit writer has established effluent limits as iron is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Lead, Total Recoverable**. The permit writer has established effluent limits as lead is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Mercury, Total Recoverable**. The permit writer has established effluent limits as mercury is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Nickel, Total Recoverable**. The permit writer has established effluent limits as nickel is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Selenium, Total Recoverable**. The permit writer has established effluent limits as selenium is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Silver, Total Recoverable**. The permit writer has established effluent limits as silver is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Thallium, Total Recoverable**. The permit writer has established effluent limits as Thallium is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

- **Zinc, Total Recoverable**. The permit writer has established effluent limits as Zinc is a pollutant found in coal pile runoff based on data previously collected by EPA during the 1974 and 1982 rulemaking efforts and the 1996 Preliminary Data Summary, data provided by UWAG and EPRI, and currently available pollutant data from TRI, PCS, and literature (EPA 821-R-06-015). The permit writer established effluent limits based on determining Reasonable Potential using factors other than Facility-specific Effluent Monitoring Data as listed in Section 3.1.3 of the EPA Technical Support Document for Water Quality-based Toxics Control.

TECHNOLOGY-BASED EFFLUENT LIMIT VERSUS WATER QUALITY-BASED EFFLUENT LIMIT

Limitations in bold signify they are more protective and will be established as a permit limit.

Pollutant	TBEL		WQBEL	
	Daily Maximum	Monthly Average	Daily Maximum	Monthly Average
TSS	**50 mg/L**	**50 mg/L**	N/A	N/A
pH	6.0 – 9.0	6.0 – 9.0	**6.5 – 9.0**	**6.5 – 9.0**
Oil & Grease	NA	NA	**15**	**10**
Chloride + Sulfate	NA	NA	**1000**	**1000**
Chloride	NA	NA	**377.8**	**188.3**
Aluminum, TR	NA	NA	**750**	**373.8**
Antimony, TR	NA	NA	**8.6**	**4.3**
Arsenic, TR	NA	NA	**32.9**	**16.4**
Beryllium, TR	NA	NA	**8.2**	**4.1**
Cadmium, TR	NA	NA	**0.7**	**0.4**
Chromium (III), TR	NA	NA	**242.6**	**120.9**
Copper, TR	NA	NA	**26**	**13**
Iron, TR	NA	NA	**1642.7**	**818.8**
Lead, TR	NA	NA	**12.1**	**6**
Mercury, TR	NA	NA	**0.8**	**0.4**
Nickel, TR	NA	NA	**149.5**	**74.5**
Selenium, TR	NA	NA	**8.2**	**4.1**
Silver, TR	NA	NA	**11.7**	**5.9**
Thallium, TR	NA	NA	**12.7**	**6.3**
Zinc, TR	NA	NA	**208.2**	**103.8**

Minimum Sampling and Reporting Frequency Requirements. Sampling frequency is retained from the previous permit.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/quarter	once/quarter
Total Suspended Solids	once/quarter	once/quarter
Chemical Oxygen Demand	once/quarter	once/quarter
Biochemical Oxygen Demand	once/quarter	once/quarter
pH	once/quarter	once/quarter
Oil & Grease	once/quarter	once/quarter
Sulfate	once/quarter	once/quarter
Chloride	once/quarter	once/quarter
Aluminum, Total Recoverable	once/quarter	once/quarter
Antimony, Total Recoverable	once/quarter	once/quarter
Arsenic, Total Recoverable	once/quarter	once/quarter
Beryllium, Total Recoverable	once/quarter	once/quarter
Cadmium, Total Recoverable	once/quarter	once/quarter
Chromium (III), Total Recoverable	once/quarter	once/quarter
Copper, Total Recoverable	once/quarter	once/quarter
Iron, Total Recoverable	once/quarter	once/quarter
Lead, Total Recoverable	once/quarter	once/quarter
Mercury, Total Recoverable	once/quarter	once/quarter
Nickel, Total Recoverable	once/quarter	once/quarter
Selenium, Total Recoverable	once/quarter	once/quarter
Silver, Total Recoverable	once/quarter	once/quarter
Thallium, Total Recoverable	once/quarter	once/quarter
Zinc, Total Recoverable	once/quarter	once/quarter
Hardness, Total	once/quarter	once/quarter

Part VI – Administrative Requirements

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

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

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

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

☒ - The Public Notice period for this operating permit is tentatively schedule to begin on January 28, 2011 or is in process.

☒ - The Public Notice period for this operating permit was from January 28, 2011 to February 28, 2011. No responses received or responses to the Public Notice of this operating permit do not warrant the modification of effluent limits and/or the terms and conditions of this permit.

DATE OF FACT SHEET: DECEMBER 9, 2010
DATE OF FACT SHEET REVISION: MAY 12, 2011

Submitted by

Brant Farris, Environmental Specialist
Northeast Regional Office
(660) 385-8000
brant.farris@dnr.mo.gov

Reviewed by

Joe Bowdish, Environmental Specialist
Northeast Regional Office
(660) 385-8000
joe.bowdish@dnr.mo.gov

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

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

Part I – General Conditions
Section A – Sampling, Monitoring, and Recording

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

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

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

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

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

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

Section B – Reporting Requirements

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

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

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

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

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

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

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

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

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

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

Section C – Bypass/Upset Requirements

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

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

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

Section D – Administrative Requirements

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

WATER PROTECTION PROGRAM

FOR AGENCY USE ONLY	
CHECK NUMBER 12040.09	
DATE RECEIVED 3/11/11	FEE SUBMITTED $275.00 SP

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

1. This application is for:

- ☐ An operating permit and antidegradation review public notice
- ☐ A construction permit following an appropriate operating permit and antidegradation review public notice
- ☐ A construction permit and concurrent operating permit and antidegradation review public notice
- ☐ A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)
- ☐ An operating permit for a new or unpermitted facility — Construction Permit # _____
- ☐ An operating permit renewal: permit # MO- _____ — Expiration Date _____
- ☑ An operating permit modification: permit # MO- 0107735 — Reason: 40 CFR 122.62(a)(4)

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

2. FACILITY

NAME	TELEPHONE WITH AREA CODE
University of Missouri	(573) 882-7018
	FAX (573) 882-7940

ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
417 South 5th Street	Columbia	MO	65211

3. OWNER

NAME	E-MAIL ADDRESS	TELEPHONE WITH AREA CODE
Curators of the University of Missouri	houtst@missouri.ed	(573) 882-7018
		FAX (573) 882-7940

ADDRESS (MAILING)	CITY	STATE	ZIP CODE
8 Research Park Development Building	Columbia	MO	65211

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

4. CONTINUING AUTHORITY

NAME	TELEPHONE WITH AREA CODE
Curators of the University of Missouri	(573) 882-7018
	FAX (573) 882-7940

ADDRESS (MAILING)	CITY	STATE	ZIP CODE
8 Research Park Development Building	Columbia	MO	65211

5. OPERATOR

NAME	CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE
Curators of the University of Missouri	NA	(573) 882-7018
		FAX (573) 882-7940

ADDRESS (MAILING)	CITY	STATE	ZIP CODE
8 Research Park Development Building	Columbia	MO	65211

6. FACILITY CONTACT

NAME	TITLE	TELEPHONE WITH AREA CODE
Todd Houts	Director, EHS	(573) 882-7018
		FAX (573) 882-7940

7. ADDITIONAL FACILITY INFORMATION

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

001 SW ¼ NE ¼ Sec 13 T 48N R 13W Boon County
UTM Coordinates Easting (X): _____ Northing (Y): _____
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

002 SW ¼ NE ¼ Sec 13 T 48N R 13W Boon County
UTM Coordinates Easting (X): _____ Northing (Y): _____

003 _____ ¼ _____ ¼ Sec _____ T _____ R _____ _____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

004 _____ ¼ _____ ¼ Sec _____ T _____ R _____ _____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

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

001 – SIC 8221 and NAICS 611310 002 – SIC 8221 and NAICS 611310
003 – SIC _____ and NAICS _____ 004 – SIC _____ and NAICS _____

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

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

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

NAME			
Lambda Chi Fraternity, C/O CPM			
ADDRESS	**CITY**	**STATE**	**ZIP CODE**
111 East Stewart Road	Columbia	MO	65211

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE WITH AREA CODE
Paul Toler, Director, Business Services	(573) 882-7255
SIGNATURE	**DATE SIGNED**
	3/5/14

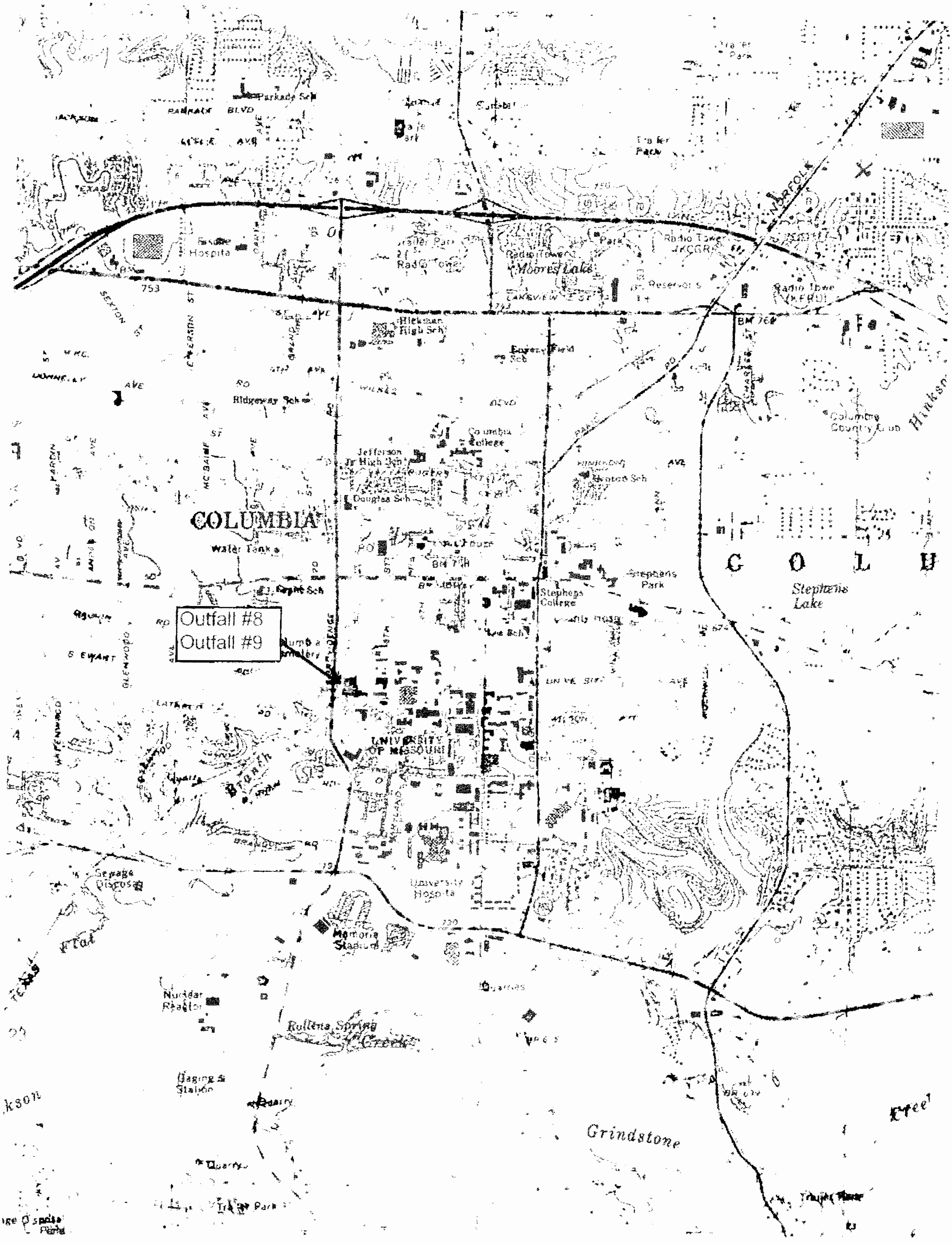
MO 780-1479 (01-09)

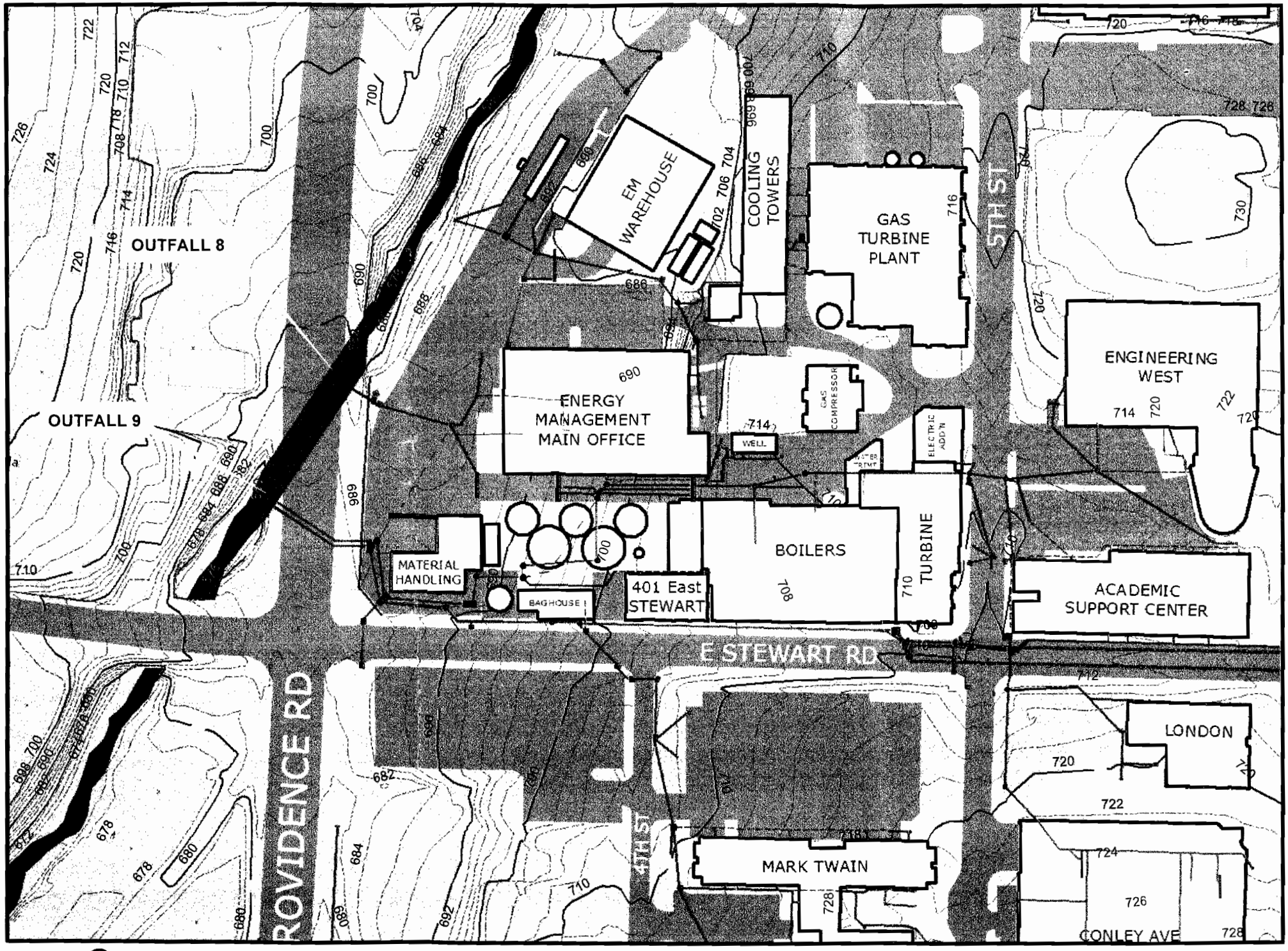
BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.

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

HAVE YOU INCLUDED:

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


Outfall #8
Outfall #9
COLUMBIA
UNIVERSITY OF MISSOURI
Stephens College
Stephens Park
Stephens Lake
Columbia College
Columbia Country Club
Hickman High Sch
Jefferson Jr High Sch
Douglas Sch
Water Tanks
Parkade Sch
Moores Lake
University Hospital
Memorial Stadium
Nuclear Reactor
Sewage Disposal
Gaging Station
Grindstone
753
730


OUTFALL 8
OUTFALL 9
EM WAREHOUSE
COOLING TOWERS
GAS TURBINE PLANT
5TH ST
ENGINEERING WEST
ENERGY MANAGEMENT MAIN OFFICE
GAS COMPRESSOR
WELL
ELECTRIC ADD'N
MATERIAL HANDLING
BAGHOUSE
401 East STEWART
BOILERS
TURBINE
ACADEMIC SUPPORT CENTER
E STEWART RD
PROVIDENCE RD
LONDON
MARK TWAIN
CONLEY AVE
03.03.14
0 40 80 160 Feet

MU SITE MAP

UNIVERSITY *of* MISSOURI

ENVIRONMENTAL HEALTH AND SAFETY

March 03, 2014

Ms. Amanda Sappington
Water Pollution Control Branch
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

RE: Application for Modification of Permit # MO – 0107735 for the MU Power Plant

Ms. Sappington,

Per our conversation please find enclosed a Form A requesting a modification to the above referenced permit. As you recall from previous conversations, due to conditions beyond our control we have been forced to reconstruct a portion of the biomass handling system. As a result, it has become necessary to continue to temporarily stage the biomass fuel outside. We expect to have replacement biomass handling equipment operational by the end of the year. We respectfully request that the period for reduced monitoring be extended until this issue is resolved.

For payment of any fees associated with this application please contact Ann McGinity at 573-882-7018.

If you have any questions please contact Ed McKane at 573-884-1926 or mckanee@missouri.edu.

Sincerely,

Todd Houts, Director EHS

Cc. Ken Davis, CF-EM
Greg Coffin, CF-EM
Marty Kasper, CF-EM
Ed McKane, EHS
Jon White, EHS