

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-0099236

Owner: BASF Corporation – Agricultural Products
Address: 26 Davis Drive, Research Triangle Park, NC 27709

Continuing Authority: BASF Corporation – Northeast Power Plant
Address: 315 Highway JJ, Palmyra, MO 63461

Facility Name: BASF Corporation – Northeast Power Plant
Facility Address: 3150 Highway JJ, Palmyra, MO 63461

Legal Description: NW ¼, NE ¼, Sec. 10, T58N, R5W, Marion County
UTM Coordinates: X = 633618, Y = 4411502

Receiving Stream: Mississippi River (P) (1)
First Classified Stream and ID: Mississippi River (P) (1)
USGS Basin & Sub-watershed No.: (07110004-0304)

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

FACILITY DESCRIPTION

Outfall #001 –SIC #4961
Non-contact cooling water, coal pile stormwater runoff, settling basin with pH stabilization using CO₂ dosing unit
Design Flow: 0.31 MGD

This permit authorizes only discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Sections 640.013, 621.250, and 644.051.6 of the Law.

October 1, 2013
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

September 30, 2018
Expiration Date

John Madras, Director, Water Protection Program

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)					PAGE NUMBER 2 of 5	
					PERMIT NUMBER MO-0099236	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Chemical Oxygen Demand	mg/L	*		*	once/quarter***	grab
Total Suspended Solids	lbs/day	123		76	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Sulfate as SO ₄	mg/L	*		*	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2014</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<u>In-stream Monitoring (Note 1)</u>						
pH	SU	*		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2014</u> . 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 <u>Part I</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
- *** See table below for quarterly sampling.

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

Note 1 – The facility shall conduct in-stream sampling at a location immediately upstream of the outfall and at a location ¼ mile downstream of the outfall when the pH of the discharge from Outfall #001 is less than 6.5 SU. In-stream sampling must occur on the same day, during a discharge event from Outfall #001. See RECEIVING WATER MONITORING CONDITION.

C. SPECIAL CONDITIONS

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

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

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

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

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

4. Water Quality Standards

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

C. **SPECIAL CONDITIONS** (continued)

5. Report as no-discharge when a discharge does not occur during the report period.
6. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 et. seq.) and the use of such pesticides shall be in a manner consistent with its label.
7. The permittee shall develop and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be prepared within 30 days and implemented within 90 days of permit issuance. The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The SWPPP must be reviewed and updated, if needed, every five (5) years or as site conditions change. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

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

The SWPPP must include the following:

- (a) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter storm water. Minimum BMPs are listed in SPECIAL CONDITIONS #13 below.
 - (b) The SWPPP must include a schedule for twice per month site inspections and brief written reports. The inspections must include observation and evaluation of BMP effectiveness. Deficiencies must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report, including photographs. Any corrective measure that necessitates major construction may also need a construction permit. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to DNR personnel upon request.
 - (c) A provision for designating an individual to be responsible for environmental matters.
 - (d) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.
8. Permittee shall adhere to the following minimum Best Management Practices:
 - (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
 - (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
 - (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
 - (d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
 - (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits.
 9. The purpose of the SWPPP and the BMPs listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.
 10. Release of a hazardous substance must be reported to the Department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the SWPPP and made available to the Department upon request
 11. Receiving Water Monitoring Conditions
 - a. In-stream sampling should be conducted at the locations specified on page 2 of this permit. In the event a safe, accessible location is not present at this location, a suitable location can be negotiated with the Department. Samples should be taken at least four feet from the bank or from the middle of the stream (whichever is less) and 6-inches below the surface. The upstream receiving water sample should be collected at a point upstream from any influence of the effluent, where the water is visibly flowing downstream.

C. SPECIAL CONDITIONS (continued)

- b. Always use the correct sampling technique and handling procedure specified for the parameter of interest. Please refer to the latest edition of Standard Methods for Examination of Water and Wastewater for further discussion of proper sampling techniques. All analyses must be conducted in accordance with an approved EPA method. Meters shall be calibrated immediately (within 1 hour) prior to the sampling event.
- c. To obtain accurate measurements, pH analyses should be performed on-site in the receiving stream where possible. However, due to high flow conditions, access, etc., it may be necessary to collect a sample in a bucket or other container. When this is necessary, care must be taken not to aerate the sample upon collection. If for any reason samples must be collected from an alternate site from the one listed in the permit, the permittee shall report the location with the sample results.

12. Benchmark

The following Benchmark Limitation is considered necessary to protect existing water quality and should not be exceeded during discharges resulting from a precipitation event exceeding 0.1 inches during a 24 hour period. The BMPs at the facility should be designed to meet this limit during rainfall event up to the 10 year, 24 hour rain event. The Benchmark does not constitute numeric effluent limitations. **A benchmark exceedance alone, therefore, is not a permit violation.** If a sample exceeds a benchmark concentration a review of the facilities SWPPP and BMPs shall take place to determine whether any improvement or additional controls are needed to reduce that pollutant in the storm water discharge. The facility may demonstrate via a Corrective Action Report that the benchmark limitation cannot be achieved through the application of BMPs representing the available technology and the benchmark is not feasible because no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice. Upon concurrence with a Corrective Action report by the Department, the facility may return to normal quarterly reporting. This evaluation must be kept on file with the SWPPP. Failure to evaluate and improve BMPs to address a Benchmark Limitation exceedance is a permit violation.

The following Benchmarks have been set based on site specific historical performance. Any exceedances of a Benchmark shall result in a review of the SWPPP and BMPs to determine whether any improvement or additional controls are needed to reduce that pollutant in the stormwater discharge.

Benchmark Table for Outfall #001

Outfall #	Parameter	Daily Maximum, mg/L
001	Chemical Oxygen Demand	62

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0099236
BASF CORPORATION – NORTHEAST POWER PLANT

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

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

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

This Factsheet is for a Minor Industrial Facility.

Part I – Facility Information

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

Facility Description:

Ash created during steam production is stored onsite in a silo and is not exposed to stormwater. Ash is removed from the silo and returned to the coal mine where the coal had originated.

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

- No.

Application Date: 01/29/13
Expiration Date: 08/14/13

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.48	Industrial/BMP	stormwater	~0.1

Receiving Water Body's Water Quality & Facility Performance History:

The U.S. Environmental Protection Agency, or EPA, approved (Nov. 3, 2006) the TMDL document for the Mississippi River, WBIDs 0001, 1707 and 3152, across 16 counties, Clark to Pemiscot county. **303(d)-listed pollutants:** Chlordane & Polychlorinated biphenyls or PCBs. <http://dnr.mo.gov/env/wpp/tmdl/0001-1707-3152-mississippi-r-record.htm>

However, the facility does not appear to have contributed to the water body's impairment.

Comments:

A review of the facility's 5-year DMR showed no exceedances of effluent limits.

Part II – Operator Certification Requirements

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

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

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

As per Missouri’s Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the 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)]:

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

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC**
Mississippi River	P	1	LWW, AQL, IND, WBC-A, SCR	07110004-0304

* - 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).

** Hydrologic Unit Code

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Mississippi River	56,882	60,981	67,374

DATA OBTAINED FROM USGS 07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO 1983-2013.

MIXING CONSIDERATIONS TABLE:

MIXING ZONE (CFS) [10 CSR 20-7.031(4)(A)4.B.(II)(a)]		ZONE OF INITIAL DILUTION (CFS) [10 CSR 20-7.031(4)(A)4.B.(II)(b)]	
1Q10	7Q10	1Q10	7Q10
14,221	15,245	1,422	1,525

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.

BIOSOLIDS & SEWAGE SLUDGE:

Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: <http://dnr.mo.gov/env/wpp/pub/index.html>, items WQ422 through WQ449.

Not applicable;
This condition is not applicable to the permittee for this facility.

COMPLIANCE AND ENFORCEMENT:

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

Not Applicable;
The permittee/facility is not currently under Water Protection Program enforcement action.

PRETREATMENT PROGRAM:

The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)].

Pretreatment programs are required at any POTW (or combination of POTW operated by the same authority) and/or municipality with a total design flow greater than 5.0 MGD and receiving industrial wastes that interfere with or pass through the treatment works or are otherwise subject to the pretreatment standards. Pretreatment programs can also be required at POTWs/municipals with a design flow less than 5.0 MGD if needed to prevent interference with operations or pass through.

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

REASONABLE POTENTIAL ANALYSIS (RPA):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any give pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

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

REMOVAL EFFICIENCY:

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

Not Applicable;
Influent monitoring is not being required to determine percent removal.

SANITARY SEWER OVERFLOWS (SSO) AND INFLOW AND INFILTRATION (I&I):

Sanitary Sewer Overflows (SSOs) are defined as an untreated or partially treated sewage release are considered bypassing under state regulation [10 CSR 20-2.010(11)] and should not be confused with the federal definition of bypass. SSO's have a variety of causes including blockages, line breaks, and sewer defects that allow excess storm water and ground water to (1) enter and overload the collection system, and (2) overload the treatment facility. Additionally, SSO's can be also be caused by lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations.

Additionally, Missouri RSMo §644.026.1 mandates that the Department require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities.

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

SCHEDULE OF COMPLIANCE (SOC):

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

Not Applicable;
This permit does not contain a SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when:

(1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

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

Additionally in accordance with the Storm Water Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of storm water discharges.

Applicable;

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

VARIANCE:

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

Not Applicable;

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

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

Not Applicable;

Wasteload allocations were not calculated.

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.

40 CFR 122.41(M) - BYPASSES:

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

Not Applicable;
 This facility does not bypass.

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

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

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

Applicable;
 The U.S. Environmental Protection Agency, or EPA, approved (Nov. 3, 2006) the TMDL document for the Mississippi River, WBIDs 0001, 1707 and 3152, across 16 counties, Clark to Pemiscot county. **303(d)-listed pollutants:** Chlordane & Polychlorinated biphenyls or PCBs. <http://dnr.mo.gov/env/wpp/tmdl/0001-1707-3152-mississippi-r-record.htm>
 The facility does not appear to have contributed to the water body’s impairment.

Part V – Effluent Limits Determination

Outfall #001 – Main Facility Outfall

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	1	*		*	NO	*
CHEMICAL OXYGEN DEMAND	MG/L	9	*		*	NO	*
TOTAL SUSPENDED SOLIDS	LBS/DAY	1	123		76	YES	120.8/71.6
PH	SU	3	6.5-9.0		6.5-9.0	YES	6.0-9.0
OIL & GREASE	MG/L	3	15		10	YES	*/3.6/1.8 LBS/DAY
SULFATE AS SO ₄	MG/L	2	*		*	NO	*
PH (IN-STREAM)	SU	8	*		*	NO	*

* - Monitoring requirement only.

Basis for Limitations Codes:

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

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Total Suspended Solids.** Effluent limitations were calculated based on the average and maximum daily flow rates calculated from rainfall data times the total suspended solids concentration given in 40 CFR 423 for coal pile runoff to give monthly average and daily maximum suspended solids loads. The mass loads from the boiler blowdown and miscellaneous sources will be combined with the coal pile stormwater runoff to give total monthly average and daily maximum suspended solids loads for the outfall.

Source	Concentration mg/L	Avg Flow GPM	Average TSS lb/day	Concentration mg/L	Max Flow GPM	Maximum TSS lb/day
Low Volume Waste Sources	30	10	3.6	100	15	18.0
Coal Pile Runoff	50	120	72	50	175	105
Total		130	75.6		190	123
Low Volume Waste Sources - 10 GPM average 15 GPM maximum						
Coal Pile Runoff Avg. flow - 10 year		2.4	inches			
Coal Pile Max. Flow - 10 year		3.6	inches - max			
Coal Pile Area = 2.5 acres =		108,900	square feet			

- **Chemical Oxygen Demand.** The facility’s DMR showed COD concentrations ranging from 8 mg/L to 65 mg/L. A benchmark limit of 62 mg/L has been established by calculating the 99th percentile of the facility’s DMR concentrations for COD. Exceedance of the benchmark limit is not a violation but rather a means for the facility to re-evaluate the effectiveness of their BMPs. The previous permit had monitoring only requirement for this parameter.
- **pH.** pH shall be maintained in the range from 6.5-9.0 standard units in accordance with 10 CSR 20-7.015(8)A(2) and 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.
- **Sulfate.** The facility’s DMR showed sulfate concentrations ranging from 12 mg/L to 60 mg/L. It is the permit writer’s BPJ to continue monitoring for SO₄.

Part VI – Finding of Affordability

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

Not Applicable;

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

Part VII – Administrative Requirements

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

PERMIT SYNCHRONIZATION:

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the Department to explore a watershed based permitting effort at some point in the future.

PUBLIC NOTICE:

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

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

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

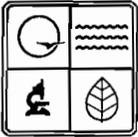
- The Public Notice period for this operating permit was from 07/26/13 to 08/26/13. One comment was received from the permittee. TSS limits were incorrectly expressed as mg/L in the public notice draft. The error is corrected in the final permit.

DATE OF FACT SHEET: SEPTEMBER 6, 2013

COMPLETED BY:

AMANDA SAPPINGTON
INDUSTRIAL PERMITS UNIT
WATER PROTECTION PROGRAM
Amanda.sappington@dnr.mo.gov

AP14516
 Check # 01821653 Returned due to No Fee due @ time of Renewal



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
 (SEE MAP FOR APPROPRIATE REGIONAL OFFICE)
**FORM A — APPLICATION FOR CONSTRUCTION OR
 OPERATING PERMIT UNDER MISSOURI CLEAN WATER LAW**

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED
1/29/13	

NOTE PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1.00 This application is for:

a construction permit

an operating permit for a new or unpermitted facility

(See instructions for appropriate fee to be submitted with application.)

an operating permit modification
 Reason: _____

an operating permit renewal: permit # MO-0099236
 Expiration date: 08/14/2013

a site specific storm water permit

2.00 FACILITY

NAME BASF Corporation - Northeast Power Plant		PHONE 573-769-8500	
		FAX 573-769-5609	
ADDRESS (PHYSICAL) 3150 Highway JJ	CITY Palmyra	STATE MO	ZIP 63461

2.10 Is this a new facility constructed under a Missouri Construction Permit? YES NO

If yes, please provide Missouri Construction Permit Number: _____

3.00 OWNER

NAME BASF Corporation - Agricultural Products		EMAIL ADDRESS	PHONE 919-547-2182
			FAX 919-547-2426
ADDRESS (MAILING) 26 Davis Drive	CITY Research Triangle Park	STATE NC	ZIP 27709

3.10 Request review of draft permit prior to Public Notice? YES NO Please send draft to facility address

4.00 CONTINUING AUTHORITY

NAME BASF Corporation - Northeast Power Plant		PHONE 573-769-8500
		FAX 573-769-5609
ADDRESS (MAILING) 315 Highway JJ	CITY Palmyra	STATE MO ZIP 63461

5.00 OPERATOR

NAME Same	CERTIFICATE NUMBER	PHONE
		FAX
ADDRESS (PHYSICAL)	CITY	STATE ZIP

6.00 FACILITY CONTACT

NAME Minh Hoac minh.hoac@basf.com	TITLE EHS Team Member	PHONE 573-769-8839
		FAX 573-769-5628

7.00 ADDITIONAL FACILITY INFORMATION

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

001	NE 1/4	NE 1/4	Sec 10	T 58N	R SW	Marion	County
002	1/4	1/4	Sec	T	R		County
003	1/4	1/4	Sec	T	R		County
004	1/4	1/4	Sec	T	R		County

7.20 Primary Standard Industrial Classification (SIC) Code: 4961



The Chemical Company

Federal Express: 7945-7384-0096

January 28, 2013

Mr. Chris Wieberg
Missouri Department of Natural Resources
Water Pollution Control Program
Permit Section
1101 Riverside Drive
Jefferson City, MO 65102

RE: Permit Renewal Application for Northeast Power (NEP), Palmyra, MO
Missouri State Operating Permit (MSOP) MO0099236

Dear Mr. Wieberg:

The purpose of this submittal is to apply for renewal of the NPDES Wastewater Discharge Permit Number MO0099236 for the Northeast Power (NEP) Steam Generating unit operated by BASF in Palmyra, MO.

Enclosed please find one completed copy of MDNR "Form A – Application for Construction or Operating Permit" and one completed copy of "Form C – Application for Discharge Permit – Manufacturing, Commercial, Mining and Silviculture Operations" for the Northeast Power Plant unit. A check for the \$1,500 application fee is also enclosed.

This application is similar to the information provided to the Water Pollution Control Branch with the last permit renewal application in 2007. There have been no significant changes in the design or operation of the operating facility or wastewater treatment facilities servicing this facility since the permit was renewed in 2007.

BASF would like to propose the effluent limitations for the new permit would remain the same as the current permit except eliminating the sulfate and COD monitoring requirements if applicable. We don't believe there's a reasonable potential to exceed the applicable water quality standard for sulfate and/or COD.

If you have any questions, please contact me at 1-573-769-8839 or by email at minh.hoac@basf.com. Your assistance in the development of an appropriate permit for this facility is appreciated.

Sincerely,
BASF Corporation

Minh V. Hoac
Senior EHS Specialist, Central Hub

Enclosures
NEP Renewal Application

JAN 29 2013

WATER POLLUTION PROGRAM

8.00 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. YES NO
- B. Is your facility considered a "Primary Industry" under U.S. EPA guidelines?
 If yes, complete Forms C and D. YES NO
- C. Is application for storm water discharges only?
 If yes, complete U.S. EPA Form 2F. YES NO
- D. Attach a map showing all outfalls and the receiving stream at 1" = 2000' scale.
- E. Is wastewater land applied? YES NO
- F. Is sludge, biosolids, ash or residuals generated, treated, stored or land applied?
 If yes, complete Form R. YES NO

9.00 DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instructions. (PLEASE SHOW LOCATION ON MAP. SEE 8.00 D ABOVE.)

NAME N/A			
ADDRESS	CITY	STATE	ZIP

10.00 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) Dr. Michael McFarlane, Site Manager	PHONE NO. (AREA CODE & NO.) 573-769-8500
SIGNATURE 	DATE SIGNED 1/28/13

MO 780-1479 (9-05)

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

HAVE YOU INCLUDED:

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



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
(SEE MAP FOR APPROPRIATE REGIONAL OFFICE)
**FORM C - APPLICATION FOR DISCHARGE PERMIT - MANUFACTURING,
COMMERCIAL, MINING AND SILVICULTURE OPERATIONS**

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

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

1.00 NAME OF FACILITY BASF Corporation - Northeast Power Plant

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER MO-0099236

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

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

A. FIRST NA B. SECOND _____
C. THIRD _____ D. FOURTH _____

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.
OUTFALL NUMBER (LIST) NE ¼ NE ¼ SEC 10 T 58B R SW Marion County

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

OUTFALL NUMBER (LIST)	RECEIVING WATER
<u>001</u>	<u>Mississippi River</u>

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS:

Coal Fired Boiler Steam Generating Facility

2.40 CONTINUED

C. EXCEPT FOR STORM RUNOFF, LEAKS, OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL?
 YES (COMPLETE THE FOLLOWING TABLE) NO (GO TO SECTION 2.50)

1. OUTFALL NUMBER <i>(list)</i>	2. OPERATION(S) CONTRIBUTING FLOW <i>(list)</i>	3. FREQUENCY		4. FLOW				C. DURATION <i>(in days)</i>
		A. DAYS PER WEEK <i>(specify average)</i>	B. MONTHS PER YEAR <i>(specify average)</i>	A. FLOW RATE <i>(in mgd)</i>		B. TOTAL VOLUME <i>(specify with units)</i>		
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	4. LONG TERM DAILY	3. MAXIMUM AVERAGE	

2.50 MAXIMUM PRODUCTION

A. DOES AN EFFLUENT GUIDELINE LIMITATION PROMULGATED BY EPA UNDER SECTION 304 OF THE CLEAN WATER ACT APPLY TO YOUR FACILITY?
 YES (COMPLETE B.) NO (GO TO SECTION 2.60)

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINE EXPRESSED IN TERMS OF PRODUCTION (OR OTHER MEASURE OF OPERATION)?
 YES (COMPLETE C.) NO (GO TO SECTION 2.60)

C. IF YOU ANSWERED "YES" TO B. LIST THE QUANTITY THAT REPRESENTS AN ACTUAL MEASUREMENT OF YOUR MAXIMUM LEVEL OF PRODUCTION, EXPRESSED IN THE TERMS AND UNITS USED IN THE APPLICABLE EFFLUENT GUIDELINE AND INDICATE THE AFFECTED OUTFALLS.

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS <i>(list outfall numbers)</i>
A. QUANTITY PER DAY	B. UNITS OF MEASURE	C. OPERATION, PRODUCT, MATERIAL, ETC. <i>(specify)</i>	

2.60 IMPROVEMENTS

A. ARE YOU NOW REQUIRED BY ANY FEDERAL, STATE OR LOCAL AUTHORITY TO MEET ANY IMPLEMENTATION SCHEDULE FOR THE CONSTRUCTION, UPGRADING OR OPERATION OF WASTEWATER TREATMENT EQUIPMENT OR PRACTICES OR ANY OTHER ENVIRONMENTAL PROGRAMS THAT MAY AFFECT THE DISCHARGES DESCRIBED IN THIS APPLICATION? THIS INCLUDES, BUT IS NOT LIMITED TO, PERMIT CONDITIONS, ADMINISTRATIVE OR ENFORCEMENT ORDERS, ENFORCEMENT COMPLIANCE SCHEDULE LETTERS, STIPULATIONS, COURT ORDERS AND GRANT OR LOAN CONDITIONS.
 YES (COMPLETE THE FOLLOWING TABLE) NO (GO TO 3.00)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
				A. REQUIRED	B. PROJECTED

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

3.10 BIOLOGICAL TOXICITY TESTING DATA

DO YOU HAVE ANY KNOWLEDGE OR REASON TO BELIEVE THAT ANY BIOLOGICAL TEST FOR ACUTE OR CHRONIC TOXICITY HAS BEEN MADE ON ANY OF YOUR DISCHARGES OR ON A RECEIVING WATER IN RELATION TO YOUR DISCHARGE WITHIN THE LAST THREE YEARS?

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

3.20 CONTRACT ANALYSIS INFORMATION

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

YES (LIST THE NAME, ADDRESS AND TELEPHONE NUMBER OF AND POLLUTANTS ANALYZED BY EACH SUCH LABORATORY OR FIRM BELOW.) NO (GO TO 3.30)

A. NAME	B. ADDRESS	C. TELEPHONE (area code and number)	D. POLLUTANTS ANALYZED (list)
PDC Laboratories, Inc.	P.O. Box 9071, Peoria, IL 61612-9071	800-752-6651	TOC, NH3-N, Bromide, Total Residual Chlorine, Fecal Coliform, Fluoride, Nitrate-Nitrite N, Total Organic N, Phosphorous, Sulfate, Sulfide, Sulfite, Surfactants, Al, Ba, Bo, Co, Fe, Mg, Mo, Mn, Sn, Ti

3.30 CERTIFICATION

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT) Dr. Michael McFarlane, Site Manager	TELEPHONE NUMBER (AREA CODE AND NUMBER) 573-769-8500
SIGNATURE (SEE INSTRUCTIONS) 	DATE SIGNED 1/28/13

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

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO.
MO-0099236

INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

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

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify if blank)				4. INTAKE (optional)		B. NO. OF ANALYSES	
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION		(2) MASS
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS						
A. Biochemical Oxygen Demand (BOD)	1.0	--	--	--	--	--	1	mg/l	1b			
B. Chemical Oxygen Demand (COD)	65	23.05	--	--	21	7.61	67	mg/l	1b			
C. Total Organic Carbon (TOC)	4.6	--	--	--	--	--	1	mg/l	1b			
D. Total Suspended Solids (TSS)	100.0	58.83	--	--	10.01	4.48	67	mg/l	1b			
E. Ammonia (as N)	<1						1	mg/l	1b			
F. Flow	VALUE 130,300		VALUE		VALUE 47,115		1804	GPD		VALUE		
G. Temperature (winter)	VALUE		VALUE		VALUE			10 °C est.		VALUE		
H. Temperature (summer)	VALUE		VALUE		VALUE			25 °C est.		VALUE		
I. pH	MINIMUM 7.1	MAXIMUM 9.12	MINIMUM	MAXIMUM			67	STANDARD UNITS				

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

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)		B. NO. OF ANALYSES	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION		(2) MASS
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS						
A. Bromide (24959-67-9)	X		< 0.50						1	mg/l	1b			
B. Chlorine Total Residual	X		<0.1						1	mg/l	1b			
C. Color	X		55	--					1	%				
D. Fecal Coliform	X		<10						1	cfu/100ml				
E. Fluoride (16984-48-8)		X							1	mg/l	1b			
F. Nitrate-Nitrite (as N)	X		<0.5						1	mg/l	1b			

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X" (if applicable)		3. EFFLUENT				4. UNITS			5. INTAKE (optional)			
	A. PRE-TEST	B. BE-TEST	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE	D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS					(1) CONCENTRATION	(2) MASS	
G. Nitrogen Total Organic (as N)	X		<1				1	mg/l	lb				
H. Oil and Grease	X		2.7	0.62		0.05	67	mg/l	lb				
I. Phosphorus (as P) Total (7723-14-0)	X		0.056				1	mg/l	lb				
J. RADIOACTIVITY													
(1) Alpha Total		X											
(2) Beta Total		X											
(3) Radium Total		X											
(4) Radium 226 Total		X											
K. Sulfate (as SO ₄) (14808-79-8)	X		380	127.5			67			52.01			
L. Sulfide (as S)	X		<2										
M. Sulfite (as SO ₃) (14265-45-3)	X		ND										
N. Surfactants	X		<1										
O. Aluminum Total (7429-90-5)	X		0.028										
P. Barium Total (7440-39-3)	X		0.013										
Q. Boron Total (7440-42-8)	X		<0.05										
R. Cobalt Total (7440-48-4)	X		<0.002										
S. Iron total (7439-89-6)	X		0.43										
T. Magnesium Total (7439-95-4)	X		14										
U. Molybdenum Total (7439-98-7)	X		0.022										
V. Manganese Total (7439-96-5)	X		<0.012										
W. Tin Total (7440-31-5)	X		<0.025										
X. Titanium Total (7440-32-6)	X		<0.025										



PDC Laboratories, Inc.

3278 N Highway 67 • Florissant, MO 63033
(314) 432-0550 • (800) 333-FAST • FAX (314) 432-4977



BASF Corporation - Palmyra
3150 Highway JJ
Palmyra, MO 63461
Attn: Julie Underhill

Date Received: 01/08/13 12:15
Report Date: 01/15/13
Customer #: 234955

Laboratory Results

Sample No: 3010773-01
Sample Description: NEP Outfall

Collect Date: 01/08/13 09:05
Matrix: Waste Water

Parameters	Result	Qual	Analysis Date	Analyst	Method
Anions - STL					
Bromide	< 0.50 mg/L		01/08/13 13:17	BP	EPA 300.0 R2.1*
Nitrate-N	1.1 mg/L		01/08/13 13:17	BP	EPA 300.0 R2.1 04KS
Nitrite-N	< 0.50 mg/L		01/08/13 13:17	BP	EPA 300.0 R2.1 04KS
General Chemistry - PIA					
Sulfide	< 2.0 mg/L		01/14/13 11:18	PLI	SM 4500S E 18Ed* WI,AR
Total Organic Carbon (TOC)	4.6 mg/L		01/09/13 15:23	Igsmp	5310C KS,IL,IA,WI,AR
General Chemistry - STL					
Nitrite / Nitrate	1.1 mg/L		01/08/13 13:17	BP	
Chlorine- total residual	< 0.10 mg/L	H, U	01/08/13 12:45	ACV	SM 4500Cl G 18Ed*
Color	55 Color Units		01/08/13 14:00	ACV	SM 2120B 18Ed*
Surfactants - MBAS	< 0.10 mg/L		01/08/13 13:00	ACV	SM 5540C 18Ed*
Microbiology - STL					
Fecal coliform bacteria	< 10 CFU/100 ml		01/08/13 11:50	ACV	SM 9222 D 04KS
Nutrients - PIA					
Total Kjeldahl Nitrogen (TKN)	< 1.0 mg/L		01/11/13 08:27	Igtas	SM 4500-N B & NH3-H 18Ed MOD IL,IA,WI,AR
Nutrients - STL					
Phosphorus - total as P	0.056 mg/L		01/11/13 17:19	ACV	SM 4500P B E 18ed 04KS
Total Metals - STL					
Aluminum	0.028 mg/L		01/10/13 19:42	WPS	EPA 200.7 R4.4*
Barium	0.013 mg/L		01/10/13 19:42	WPS	EPA 200.7 R4.4 04KS
Boron	< 0.050 mg/L		01/11/13 10:38	WPS	EPA 200.7 R4.4*
Cobalt	< 0.0020 mg/L		01/10/13 19:42	WPS	EPA 200.7 R4.4 04KS
Iron	0.43 mg/L		01/10/13 19:42	WPS	EPA 200.7 R4.4 04KS
Magnesium	14 mg/L		01/10/13 19:42	WPS	EPA 200.7 R4.4 04KS
Manganese	0.022 mg/L		01/10/13 19:42	WPS	EPA 200.7 R4.4 04KS
Molybdenum	< 0.012 mg/L		01/10/13 19:42	WPS	EPA 200.7 R4.4 04KS
Tin	< 0.025 mg/L		01/10/13 19:42	WPS	EPA 200.7 R4.4*
Titanium	< 0.025 mg/L		01/15/13 07:29	WPS	EPA 200.7 R4.4*



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BASF Corporation - Palmyra
3150 Highway JJ
Palmyra, MO 63461
Attn: Julie Underhill

Date Received: 01/08/13 12:15
Report Date: 01/15/13
Customer #: 234955

Laboratory Results

General Chemistry - Quality Control

Analyte	Result	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B300338 - 04-No Prep WC								
Blank (B300338-BLK1)			Prepared & Analyzed: 01/08/13					
Chlorine- total residual	U	< 0.10	mg/L					
Duplicate (B300338-DUP1)			Source: 3010773-01 Prepared & Analyzed: 01/08/13					
Chlorine- total residual	U	< 0.10	mg/L	ND				20
Batch B300340 - 04-No Prep WC								
Blank (B300340-BLK1)			Prepared & Analyzed: 01/08/13					
Surfactants - MBAS		< 0.10	mg/L					
LCS (B300340-BS1)			Prepared & Analyzed: 01/08/13					
Surfactants - MBAS		9.86	mg/L	10.00	99	80-120		
Duplicate (B300340-DUP1)			Source: 3010773-01 Prepared & Analyzed: 01/08/13					
Surfactants - MBAS		0.101	mg/L	0.0920			9	20
Batch B300341 - 04-No Prep WC								
Duplicate (B300341-DUP1)			Source: 3010773-01 Prepared & Analyzed: 01/08/13					
Color		55.0	Color Units	55.0			0	200
Batch B300438 - No Prep								
Matrix Spike (B300438-MS1)			Source: 3010662-01 Prepared & Analyzed: 01/09/13					
Total Organic Carbon (TOC)	Q3	2.87	mg/L	5.000	ND	57	80-120	
Matrix Spike (B300438-MS2)			Source: 3010597-02 Prepared & Analyzed: 01/09/13					
Total Organic Carbon (TOC)		9.67	mg/L	5.000	4.51	103	80-120	
Matrix Spike (B300438-MS3)			Source: 3010862-02 Prepared & Analyzed: 01/10/13					
Total Organic Carbon (TOC)		7.99	mg/L	5.000	2.80	104	80-120	
Matrix Spike Dup (B300438-MSD1)			Source: 3010662-01 Prepared & Analyzed: 01/09/13					
Total Organic Carbon (TOC)	Q3	2.83	mg/L	5.000	ND	57	80-120	2 20
Matrix Spike Dup (B300438-MSD2)			Source: 3010597-02 Prepared & Analyzed: 01/09/13					
Total Organic Carbon (TOC)		9.36	mg/L	5.000	4.51	97	80-120	3 20
Matrix Spike Dup (B300438-MSD3)			Source: 3010862-02 Prepared & Analyzed: 01/10/13					
Total Organic Carbon (TOC)		7.72	mg/L	5.000	2.80	99	80-120	3 20

Nutrients - Quality Control

Analyte	Result	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B300441 - No Prep

3010773



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Palmyra, MO 63461
Attn: Julie Underhill

Date Received: 01/08/13 12:15
Report Date: 01/15/13
Customer #: 234955

Laboratory Results

Nutrients - Quality Control

Analyte	Result	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B300441 - No Prep								
Blank (B300441-BLK1)			Prepared: 01/10/13 Analyzed: 01/11/13					
Total Kjeldahl Nitrogen (TKN)	< 1.0	mg/L						
LCS (B300441-BS1)			Prepared: 01/10/13 Analyzed: 01/11/13					
Total Kjeldahl Nitrogen (TKN)	51.0	mg/L	50.00		102	80-120		
Matrix Spike (B300441-MS1)			Source: 3010114-01 Prepared: 01/10/13 Analyzed: 01/11/13					
Total Kjeldahl Nitrogen (TKN)	53.5	mg/L	50.00	3.04	101	80-120		
Matrix Spike (B300441-MS2)			Source: 3010416-01 Prepared: 01/10/13 Analyzed: 01/11/13					
Total Kjeldahl Nitrogen (TKN)	53.0	mg/L	50.00	1.94	102	80-120		
Matrix Spike Dup (B300441-MSD1)			Source: 3010114-01 Prepared: 01/10/13 Analyzed: 01/11/13					
Total Kjeldahl Nitrogen (TKN)	54.0	mg/L	50.00	3.04	102	80-120	0.9	20
Matrix Spike Dup (B300441-MSD2)			Source: 3010416-01 Prepared: 01/10/13 Analyzed: 01/11/13					
Total Kjeldahl Nitrogen (TKN)	53.0	mg/L	50.00	1.94	102	80-120	0	20

Batch B300679 - 04-No Prep WC

Blank (B300679-BLK1)			Prepared & Analyzed: 01/11/13					
Phosphorus - total as P	< 0.050	mg/L						
LCS (B300679-BS1)			Prepared & Analyzed: 01/11/13					
Phosphorus - total as P	0.503	mg/L	0.6000		84	80-120		
Matrix Spike (B300679-MS1)			Source: 3010773-01 Prepared & Analyzed: 01/11/13					
Phosphorus - total as P	0.542	mg/L	0.6000	0.0560	81	80-120		
Matrix Spike Dup (B300679-MSD1)			Source: 3010773-01 Prepared & Analyzed: 01/11/13					
Phosphorus - total as P	Q2 0.523	mg/L	0.6000	0.0560	78	80-120	4	20

Microbiology - Quality Control

Analyte	Result	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B300562 - 04-Bacti prep								
Blank (B300562-BLK1)			Prepared & Analyzed: 01/08/13					
Fecal coliform bacteria	< 10	CFU/100 ml						
Blank (B300562-BLK2)			Prepared & Analyzed: 01/08/13					
Fecal coliform bacteria	< 10	CFU/100 ml						



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Palmyra, MO 63461
Attn: Julie Underhill

Date Received: 01/08/13 12:15
Report Date: 01/15/13
Customer #: 234955

Laboratory Results

Total Metals - Quality Control

Table with columns: Analyte, Result, Units, Spike Level, Source Result, %REC, Limits, RPD, RPD Limit. Includes sections for Blank (B300412-BLK1), LCS (B300412-BS1), LCS (B300412-BS2), and Matrix Spike (B300412-MS1).



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Date Received: 01/08/13 12:15
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Customer #: 234955

Laboratory Results

Total Metals - Quality Control

Analyte	Result	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B300412 - 04 EPA 200.2 R2.8

Matrix Spike (B300412-MS1)		Source: 3010669-01		Prepared: 01/09/13 Analyzed: 01/10/13					
Molybdenum		0.131	mg/L	0.1000	0.0260	105	70-130		
Tin		0.0967	mg/L	0.1000	0.00445	92	70-130		
Matrix Spike Dup (B300412-MSD1)		Source: 3010669-01		Prepared: 01/09/13 Analyzed: 01/10/13					
Aluminum	Q4	22.4	mg/L	0.1000	23.2	NR	70-130	4	20
Barium		0.623	mg/L	0.1000	0.530	92	70-130	0.9	20
Cobalt		0.101	mg/L	0.1000	0.00190	99	70-130	3	20
Iron	Q4	1.65	mg/L	0.1000	1.59	66	70-130	0.6	20
Magnesium	Q4	24.6	mg/L	0.1000	25.4	NR	70-130	4	20
Manganese		0.932	mg/L	0.1000	0.835	97	70-130	0.4	20
Molybdenum		0.125	mg/L	0.1000	0.0260	99	70-130	5	20
Tin		0.103	mg/L	0.1000	0.00445	98	70-130	6	20

Anions - Quality Control

Analyte	Result	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B300327 - 04-IC No Prep

Matrix Spike (B300327-MS1)		Source: 3010630-02		Prepared & Analyzed: 01/08/13					
Nitrite-N		1.29	mg/L	1.522	ND	85	80-120		
Nitrate-N	Q3	2.1	mg/L	0.4524	1.8	74	80-120		
Bromide		1.9	mg/L	2.002	ND	94	80-120		
Matrix Spike Dup (B300327-MSD1)		Source: 3010630-02		Prepared & Analyzed: 01/08/13					
Nitrite-N		1.29	mg/L	1.522	ND	85	80-120	0.2	20
Nitrate-N	Q3	2.1	mg/L	0.4524	1.8	67	80-120	2	20
Bromide		1.9	mg/L	2.002	ND	95	80-120	0.4	20



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Laboratory Results

Notes

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- STL PDC Laboratories - St. Louis, MO
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Drinking Water Certifications: Kansas (E-10389)

- U Parameter was analyzed for, but not detected above the reporting limit.
- Q4 The matrix spike recovery result is unusable since the analyte concentration in the sample is greater than four times the spike level. The associated blank spike was acceptable.
- Q3 MS/MSD both failed %R
- Q2 MSD failed %R
- H Test performed after the expiration of the appropriate regulatory/advisory maximum allowable hold time.

Certified by: Roxann Shull, Client Services Supervisor

BA&F Corporation
100 Park Ave
Florham Park, NJ 07932-0685

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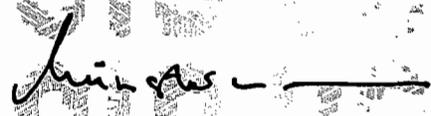
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