

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, 92<sup>nd</sup> Congress) as amended,

Permit No. MO-0004847

Owner: Thermal North America  
Address: 53 State Street, 14<sup>th</sup> Floor, Boston, MA 02110

Continuing Authority: Veolia Energy Kansas City, Inc.  
Address: 115 Grand Blvd., Kansas City, MO 64106

Facility Name: Veolia Energy Kansas City, Inc.  
Facility Address: 115 Grand Blvd., Kansas City, MO 64106

Legal Description: SW ¼, Sec. 32, T50N, R33W, Jackson County  
UTM Coordinates: #001: X= 363403, Y= 4330696 #002: X= 363352, Y= 4330693

Receiving Stream: Missouri River (P)  
First Classified Stream and ID: Missouri River (P) WBID # 0356, 303(d) list  
USGS Basin & Sub-watershed No.: 10300101-0301 (Buckeye Creek-Missouri River)

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 - Steam and air conditioning supply; SIC #4961  
Non-contact once-through 100% water for cooling. This facility does not require a certified wastewater operator.  
Design flow is 82.0 million gallons per day (MGD). Average flow is 7.60 MGD.

PERMITTED FEATURE #002 – Intake structure for non-contact once-through cooling water. Intake flow averages 7.6 MGD; maximum 29.3 MGD

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

June 1, 2015                      September 28, 2016  
Effective Date                      Modification Date

Sara Parker Pauley, Director, Department of Natural Resources

June 30, 2019  
Expiration Date

John Madras, Director, Water Protection Program

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

OUTFALL #001	TABLE A-1 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					
	The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on <b>June 1, 2015</b> , and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:					
EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	once/day	24 hr. estimate
Temperature Cap (T <sub>cap</sub> ) [note 1,3]	°F	90		90	once/day	grab
Change in Temperature (ΔT) [note 2,3]	°F	5		5	once/day	grab
Total Suspended Solids	mg/L	*		*	once/month	grab
Net Total Suspended Solids [note 5]	mg/L	100		30	once/month	grab
Copper, Total Recoverable [note 4]	μg/L	*		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>JULY 28, 2015</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

PF #002	TABLE A-2 FINAL INFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					
	The final influent limitations shall become effective on <b>October 1, 2016</b> , and remain in effect until expiration of the permit. The permittee shall sample within four hours of collection of effluent sampling for the following parameters as described below:					
INFLUENT PARAMETERS	UNITS	INFLUENT MONITORING			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Total Suspended Solids	mg/L	*		*	once/month	grab
Copper, Total Recoverable [note 4]	μg/L	*		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>NOVEMBER 28, 2016</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

\* Monitoring requirement only.

Note 1:  $T_{cap} = [((Q_s/4)T_s + Q_e T_e) / ((Q_s/4) + Q_e)]$  (maximum temperature at the end of the mixing zone)

Where,

$Q_s/4$  = the receiving stream flow in CFS divided by 4 or the flow represented in the cross-sectional area of the receiving stream divided by 4 in accordance with [10 CSR 20-7.031(4)(D)6.]

$Q_e$  = effluent flow in CFS

$T_s$  = Receiving stream's ambient temperature. Daily monitoring requirement (°F); the ambient stream temperature can be used or, for many facilities, the intake temperature can be used to determine stream's temperature. This requirement is used to calculate the change in temperature ( $\Delta T$ ) and the maximum temperature ( $T_{cap}$ ). A facility's intake temperature can be used for this parameter if the facility believes that it is representative of the receiving stream's actual temperature.

$T_e$  = Temperature of the effluent. Daily monitoring requirement (°F); effluent temperature is the measured temperature of the discharge and is used to determine the change in temperature ( $\Delta T$ ) and the maximum temperature ( $T_{cap}$ ).

Note 2:  $\Delta T = [((Q_s/4)T_s + Q_e T_e) / ((Q_s/4) + Q_e)] - T_s$  (maximum change in temperature)

Where,

$Q_s/4$  = the receiving stream flow in CFS divided by 4 or the flow represented in the cross-sectional area of the receiving stream divided by 4 in accordance with [10 CSR 20-7.031(4)(D)6.]

$Q_e$  = effluent flow in CFS

$T_s$  = Receiving stream's ambient temperature. Daily monitoring requirement (°F); the ambient stream temperature can be used or, for many facilities, the intake temperature can be used to determine stream's temperature. This requirement is used to calculate the change in temperature ( $\Delta T$ ) and the maximum temperature ( $T_{cap}$ ).

$T_e$  = Temperature of the effluent. Daily monitoring requirement (°F); effluent temperature is the measured temperature of the discharge and is used to determine the change in temperature ( $\Delta T$ ) and the maximum temperature ( $T_{cap}$ ).

Note 3: The facility will not be required to report values obtained for stream flow or stream temperature, only the final value after calculations of  $\Delta T$  and  $T_{cap}$ . The facility will keep records regarding where, when, and how these values were obtained for a minimum of five years and will be made available to the department upon request.

Note 4: The facility must use 40 CFR 136 approved analytical methods to analyze for total recoverable copper. The laboratory reporting limit for the test must be at or below 10  $\mu\text{g/L}$  for the purposes of compliance with this permit.

Note 5: Net total suspended solids shall be calculated using the intake total suspended solids measurement minus the effluent total suspended solids measurement. The net TSS monthly average shall be calculated by averaging the daily maximum net values calculated using the equation above.

## B. STANDARD CONDITIONS

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

## C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (i.) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (ii.) 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. 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.
4. Report no-discharge when a discharge does not occur during the report period.
5. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
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.

### C. SPECIAL CONDITIONS (CONTINUED)

#### 7. Changes in Discharges of Toxic Pollutant

In addition to the reporting requirements under §122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

- (a) That an activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
  - (1) One hundred micrograms per liter (100 µg/L);
  - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
  - (3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
  - (4) One milligram per liter (1 mg/L) for antimony;
  - (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
  - (6) The notification level established by the department in accordance with 40 CFR 122.44(f).
- (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - (1) Five hundred micrograms per liter (500 µg/l);
  - (2) One milligram per liter (1 mg/l) for antimony;
  - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with §122.21(g)(7).
  - (4) The level established by the Director in accordance with §122.44(f).

#### 8. Reporting of Non-Detects

- (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
- (b) The permittee shall not report a sample result as “Non-Detect” without also reporting the detection limit of the test. Reporting as “Non-Detect” without also including the detection limit will be considered failure to report, which is a violation of this permit.
- (c) The permittee shall report the “Non-Detect” result using the less than sign and the minimum detection limit (e.g. <10).
- (d) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for that parameter.
- (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
- (f) When calculating monthly averages, one-half of the minimum detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the “<MDL” shall be reported as indicated in item (C).

#### 9. Permittee shall adhere to the following minimum Best Management Practices (BMPs):

- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of stormwater from these substances.
- (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
- (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
- (d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
- (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits.
- (f) Ensure that adequate provisions are provided to prevent surface water intrusion into the storage basin, to divert stormwater runoff around the storage basin, and to protect embankments from erosion.

10. The purpose of the SWPPP and 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.

C. SPECIAL CONDITIONS (CONTINUED)

11. To protect the general criteria found at 10 CSR 20-7.031(4), before releasing water accumulated in secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen. If the presence of odor or sheen is indicated, the water shall be treated using an appropriate method or disposed of in accordance with legally approved methods, such as being sent to a wastewater treatment facility. Following treatment, the water shall be tested for oil and grease, benzene, toluene, ethylbenzene, and xylene using 40 CFR part 136 methods. All pollutant levels must be below the most protective, applicable standards for the receiving stream, found in 10 CSR 20-7.031 Table A. Records of all testing and treatment of water accumulated in secondary containment shall be stored in the SWPPP to be available on demand to MDNR and EPA personnel.
12. 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 permit and made available to the department upon request.
13. Use and disposal of Coal Ash
  - (a) Disposal of ash is not authorized by this permit.
  - (b) This permit does not pertain to permits for disposal of ash or exemptions for beneficial use of ash under the Missouri Solid Waste Management Law and regulations, as established in 10 CSR 80.
  - (c) This permit does not authorize off-site storage, use, or disposal of ash in regard to water pollution control permits required under 10 CSR 20-6.015 and 10 CSR 20-6.200.
14. 316(b) Cooling Water Intake Structure
  - (a) Intakes shall be operated in a manner that minimizes impingement and entrainment until the permittee has submitted the application required in 40 CFR 122.21 and 40 CFR 125 Subpart J and best technology available is established in accordance with Clean Water Act 316(b) regulations. The promulgated 316(b) regulations require modifications to reduce impingement and entrainment caused by intake structures.
  - (b) The facility shall follow the timetable in 40 CFR 122.21 and 40 CFR 125 Subpart J regulations regarding reduction in impingement and the associated studies.
  - (c) Within six months of the issuance date of this permit, the permittee shall submit a work plan to address the impingement and entrainment requirements of 40 CFR 122.21 and 40 CFR 125 Subpart J.
  - (d) The facility shall submit annual status reports by February 28 each year, detailing the progress of the previous year.
  - (e) Six months prior to permit expiration, the applicant shall submit the renewal materials including and not limited to
    - (i.) detailed results of the studies below; and
      - a. Source Water Physical Data Report : 40 CFR 122.21(r)(2)
      - b. Cooling Water Intake Structure Data Report: 40 CFR 122.21(r)(3)
      - c. Source Water Baseline Biological Characterization Data Report: 40 CFR 122.21(r)(4)
      - d. Cooling Water System Data Report: 40 CFR 122.21(r)(5)
      - e. Chosen Method of Compliance with Impingement Mortality Standard: 40 CFR 122.21(r)(6)
      - f. Operational Status: 40 CFR 122.21(r)(8)
      - g. Additional measures to protect federally listed threatened and endangered species and designated critical habitat: 40 CFR 125.94(g)
        1. Basic assessment of technological feasibility
        2. Basic biological assessment
    - (ii.) the selected path forward for implementing impingement modifications at the intake structure; and
    - (iii.) sufficient information provided to the department to determine the best technology available and feasible for entrainment control at this facility.
  - (f) Should the facility ever withdraw greater than 125 MGD, the facility will need to also complete the full entrainment studies.
  - (g) This permit may be reopened and modified, or alternatively revoked and reissued to: incorporate new or modified requirements applicable to existing cooling water intake structures under Section 316(b) of the Clean Water Act. In the event it is necessary for this permit to be reopened and modified, or alternatively revoked and reissued, permittee shall comply with any such new or modified requirements or standards applicable to existing cooling water intake structures under 316(b) of the Clean Water Act.
15. 40 CFR 125.98(b)(1): "Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act."

C. SPECIAL CONDITIONS (CONTINUED)

16. Facility SIC codes found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2) shall implement a SWPPP and must be prepared and implemented 90 days after modification permit issuance. The SWPPP must be kept on-site and should not be sent to the department unless specifically requested. The SWPPP must be reviewed and updated every five (5) years or as site conditions change (see Rationale and Derivation: antidegradation analysis and SWPPP in the fact sheet). 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: *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in February 2009 ([www.epa.gov/npdes/pubs/industrial\\_swppp\\_guide.pdf](http://www.epa.gov/npdes/pubs/industrial_swppp_guide.pdf)). The SWPPP must include:
- (a) A listing of specific contaminants and their control measures (or BMPs) and a narrative explaining how BMPs are implemented to control and minimize the amount of contaminants potentially entering stormwater. The BMPs should be designed to treat the stormwater up to the 10 year, 24 hour rain event.
  - (b) For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. Failure to implement and maintain the chosen BMP is a permit violation. For further guidance, consult the antidegradation implementation procedure at <http://dnr.mo.gov/env/wpp/docs/AIP050212.pdf>.
  - (c) The SWPPP must include a schedule for once per month site inspections and brief written reports. The inspection report must include precipitation information for the entire period since last inspection, as well as observations and evaluations of BMP effectiveness. Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
    - i. Operational deficiencies must be corrected within seven (7) calendar days.
    - ii. Minor structural deficiencies must be corrected within fourteen (14) calendar days.
    - iii. Major structural deficiencies must be reported to the regional office within seven (7) days of discovery. The initial report shall consist of the deficiency noted, the proposed remedies, the interim or temporary remedies (including the general timing of the placement of the interim measures), and an estimate of the timeframe needed to wholly complete the repairs or construction. The permittee will work with the regional office to determine the best course of action, including but not limited to temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
    - iv. All actions taken to correct the deficiencies shall be included with the written report, including photographs.
    - v. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to department and EPA personnel upon request.
  - (d) A provision for designating an individual to be responsible for environmental matters.
  - (e) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of the department.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
**STATEMENT OF BASIS FOR MODIFICATION**  
**OF**  
**MO-0004847**  
**VEOLIA ENERGY KC, INC**

This Statement of Basis (Statement) gives pertinent information regarding the modification(s) to the above listed operating permit with the need for a public comment process. A Statement is not an enforceable part of a Missouri State Operating Permit.

**PART I – FACILITY INFORMATION**

Facility Type:	Industrial
Facility SIC Code(s):	4961
Facility NAICS code:	221330
Modification Application Date:	06/07/2016
Effective Date:	June 1, 2015
Expiration Date:	June 30, 2019

**FACILITY DESCRIPTION:**

The Veolia Energy Kansas City, Inc. facility supplies 185 pounds per square inch by gauge (psig) steam into a downtown distribution system, which services Truman Medical Center, Cargill Soybean and Biodiesel plant, and Ingredion starch production company with steam, and additional downtown area customers with building heating. The plant also supplies 33° F chilled water into a downtown distribution system, which provides customers with building cooling in the summer. The plant consists of two coal burning boilers (300,000 and 375,000 pounds per hour), two gas fired boilers (375,000 and 320,000 pounds per hour), one steam turbine generator (five megawatts) three steam chillers (2000 tons per hour cooling each) and one electric chiller (3000 tons per hour cooling). The facility has proposed, and has requested this modification, and the department has approved through issuance of this modification for the facility to use an ultrafiltration (UF) system and reverse osmosis (RO) system on the river water for use in the boiler system.

**PART II – MODIFICATION RATIONALE**

This operating permit is hereby modified to reflect a change in Missouri River usage for process water. The facility has proposed using an ultrafiltration (UF) system and reverse osmosis (RO) system to be able to use cleaner water for their boiler water makeup system. The pollutants already present in the river are concentrated in the influent by use of this system, leading to a higher strength of pollutants in the effluent. The permit writer has determined additional monitoring is required for the influent and the discharge for total suspended solids and total recoverable copper.

The facility submitted influent and discharge data for the following metals: total recoverable antimony, total recoverable arsenic, total recoverable copper, total recoverable lead, total recoverable mercury, total recoverable selenium, total recoverable thallium, and total recoverable zinc. The data show only copper and zinc as being above detection limits. The levels of zinc in the influent and discharge are much lower than the water quality standard but the levels of copper may be notable. Because of the large volume of mixing afforded by the Missouri River, the department has concluded monitoring for the remainder of the permit cycle is sufficient to provide the department with information to determine if the UF and RO process are contributing to significant levels of metals. See Part IV Effluent Limits Determination for copper monitoring requirements under outfall #001 and influent monitoring requirements under permitted feature #002. The permit writer added a 7Q10 calculation in the fact sheet for the Missouri River as it is needed to calculate the mixing considerations for metals limits.

The effluent limitation guideline (ELG) at 40 CFR 423 for the steam-electric point source category indicates low-volume waste sources (in this permit, UF and RO wastes) have total suspended solids (TSS) limitations at 40 CFR 423.12(b)(3). The limitations have been included at the modification of this permit. These are technology based limits appropriate to all steam-electric facilities generating low volume wastes at all times therefore no schedule of compliance is afforded but the department has allowed net solids as per 40 CFR 122.45(g) because the Missouri River has concentrations of solids in excess of the technology limits.

The permit writer noted that although stormwater from the facility is sent to the city's storm sewer, the permit must include language for inclusion of a stormwater pollution prevention plan (SWPPP). The permittee will have 90 days from the issuance of the modified permit to have the SWPPP written and in place.

Additional minor typographical and formatting changes were also completed. Certain special conditions were updated to reflect changes within the template language. The statement of basis and full fact sheet is included for informational purposes.

### **PART III – 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 for this modification was from 7/15/2016 to 8/15/2016. No comments were received.

**DATE OF STATEMENT OF BASIS:** JUNE 28, 2016

#### **COMPLETED BY:**

PAM HACKLER, ENVIRONMENTAL SPECIALIST  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
OPERATING PERMITS SECTION - INDUSTRIAL UNIT  
573-526-3386  
[PAM.HACKLER@DNR.MO.GOV](mailto:PAM.HACKLER@DNR.MO.GOV)

**MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FACT SHEET  
FOR THE PURPOSE OF RENEWAL OF  
MO-0004847  
VEOLIA ENERGY KANSAS CITY, INC.**

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

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

**Part I. FACILITY INFORMATION**

Facility Type:	Industrial
Facility SIC Code(s):	4961
Application Date:	12/05/2013
Expiration Date:	06/30/2014
Last Inspection:	03/02/2011 (in compliance)

**FACILITY DESCRIPTION:**

The Veolia Energy Kansas City, Inc. facility supplies 185 pounds per square inch by gauge (psig) steam into a downtown distribution system, which services Truman Medical Center, Cargill Soybean and Biodiesel plant, and Ingredion starch production company with steam, and additional downtown area customers with building heating. The plant also supplies 33° F chilled water into a downtown distribution system, which provides customers with building cooling in the summer. The plant consists of two coal burning boilers (300,000 and 375,000 pounds per hour), two gas fired boilers (375,000 and 320,000 pounds per hour), one steam turbine generator (five megawatts) three steam chillers (2000 tons per hour cooling each) and one electric chiller (3000 tons per hour cooling).

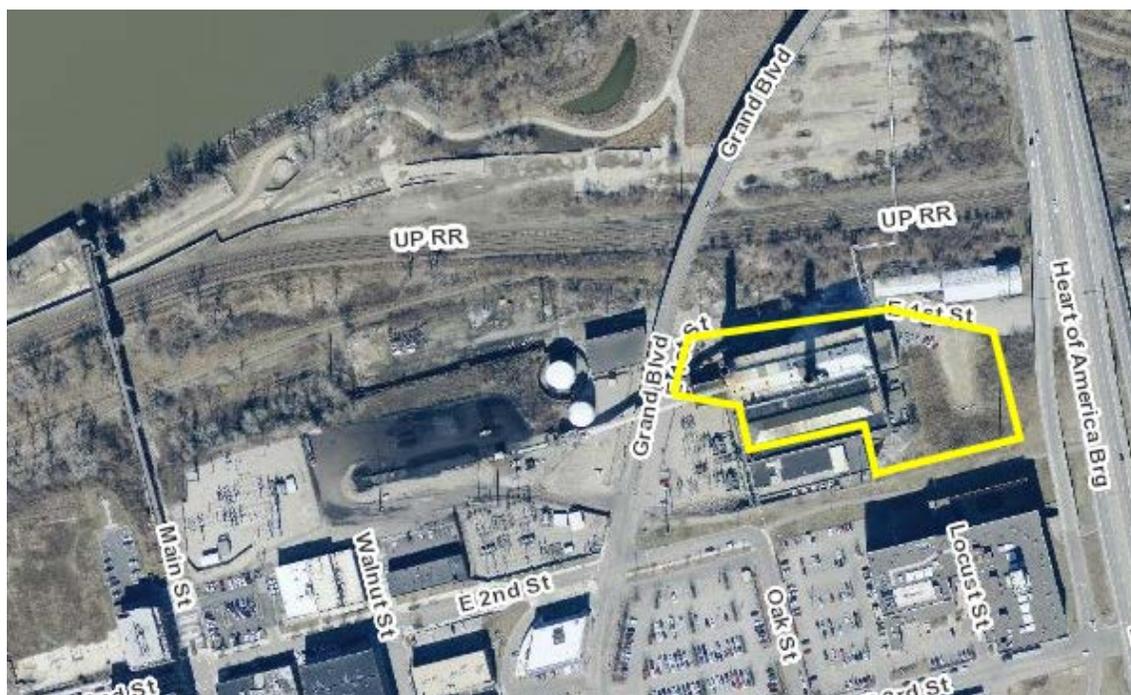


Plate1: Eastern portion of the facility—generating portion, main plant



Plate 2: Western portion of the facility—storage of coal and coal ash



Plate 3: Northern Portion of the facility—intake and outfall

Outfall #001 is non-contact cooling water. The water from the coolers flows into a series of discharge pipes which combine into an 84" diameter river water return pipe. This pipe travels underground back to the river where it is connected to a weir assembly. The purpose of the weir is to insure that the 84" discharge line stays full of water from the main plant to the weir to insure that there always a slight draw on the line prior to discharge to the Missouri River. The water from the slag tanks is discharged to the plant sump pump system where it is pumped into the City of Kansas City, Missouri's combined sanitary sewer system.

Permitted feature #002 (new to this permit) is the facility's pump house which withdraws water from the Missouri River and is comprised of three sections. The first section was built in the early 1900s and is currently abandoned in place. To the east of the 1900 section is the 1929 addition. The 1929 section houses pumps No. 3, 4, 5, and 6. Pumps No. 3, 4 and 5 are high volume, low pressure pumps capable of pumping 2.7 million gallons/hour. Pump No. 6 is rated at 0.24 million gallons/hr. and is used when plant flow requirements are lower than pumps 3, 4, and 5's pumping curves allow. Pumps No. 3, 4 and 5 have suction hoods and take their suction from the suction bays which are 43 feet deep as measured from the floor of the pump house. USGS places the floor of these suction bays at +2.33' which is above the USGS station gage datum of elevation 706.4' above sea level.

East of the 1929 addition is the 1939 addition which houses pumps Nos. 1 and 2. No. 2 pump is a high volume, low pressure pump capable of moving 2.7 million gallons per hour (GPH). No. 1 Pump is capable of 1.47 million GPH and is driven by a variable frequency drive which allows the facility to vary the speed of the pump to adjust the pumping volume and pressure. The suction bays for these pumps are 55' 2" deep. These bays have a five-foot wooden bulkhead installed at the bottom of the bay. Both the 1929 and 1939 pump house sections have movable screens installed in the river in front of the pump suction bays to keep debris from entering the pump suction. These are slow moving, self-cleaning screens that utilize river water sprays to clean the screens into a trough where the debris is removed.

The pumps move the river water to the main plant via two 54-inch diameter and one 48-inch diameter pipe where the water is used for once through cooling in the chiller condensers, chiller turbine oil coolers, bearing cooling water heat exchanger and the house turbine generator oil cooler. The water is also used to fill the boiler slag collection tanks which seal the bottom of the boilers from the atmosphere and provide cooling of the slag (molten bottom ash) that flows from the boilers. The water from the slag tanks is discharged to the plant sump pump system where it is pumped into the Kansas City Missouri's sanitary sewer system.

The water from the coolers flows into a series of discharge pipes that combine into an 84" diameter river water return pipe. This pipe travels underground back to the river where it is connected to a weir assembly. The purpose of the weir is to insure the 84" discharge line stays full of water from the main plant to the weir to insure there always a slight draw on the line. The water that overflows the weir is discharged into the Missouri river downstream and to the east of the Pump House. Veolia Energy Kansas City, Inc.'s central region manager certified the facility through its processes, are not adding pollutants to the cooling water prior to discharge. The design flow is 82.0 MGD according to the application.

Coal for the facility is offloaded from trucks on the west side of the plant and is dumped onto the storage pile. The coal is then conveyed into bunkers into the main building where it is fed at a controlled rate into the coal mill. The coal combustion residuals (fly ash and bottom ash) are not disposed of onsite but are collected in tanks and then transported via truck to several permitted disposal sites. The facility stated it does not chlorinate, have cooling towers, or use any of the priority pollutant chemicals.

Veolia Energy Kansas City, Inc. has an electrostatic precipitator (ESP). The fly ash and bottom ash (coal combustion residuals or CCR) are removed from the facility by Underground Services Company. USC uses the ash for structural stabilization of underground limestone mines. The EPA Administrator signed the final rule regarding coal ash's new labelling as a RCRA Subtitle D hazardous waste on December 19, 2014: *Hazardous and Solid Waste Management System; Disposal Of Coal Combustion Residuals From Electric Utilities*. This rule outlines handling of coal ash. While minefilling prohibition or permission is not addressed in the rule, the document does provide other sources of guidance. To quote the prepublication version "The U. S. Department of Interior (DOI) and EPA will address the management of CCR in minefills in a separate regulatory action(s). EPA will work with the OSM to develop effective federal regulations to ensure that the placement of coal combustion residuals in minefill operations is adequately controlled." The department has permitted the collection and disposal agency Underground Services Company through Missouri state operating permit UI-0000010 which falls under section 260.242 of the Missouri Revised Statutes.

The receiving stream is the Missouri River. All stormwater runoff, material storage runoff and construction runoff flows to the Kansas City sanitary sewer system. Kansas City Water Services department is the downstream landowner. The city of Kansas City does periodic water quality sampling and analysis of the storm water runoff, material storage runoff and construction runoff. The analysis consists of pH and total suspended solids (TSS). Additionally, precipitation runoff from the coal pile is first settled in a basin and then released to the same sewerage.

In this MSOP, the department has added a permitted feature (PF). PF #002 is the river water intake for the facility. Monitoring has been and will continue to occur for this facility at the intake location as there are temperature change limitations within the permit. The facility is considered a major water user and is listed in the Missouri Major Water Users 2001-2005 Water Use Data document found at <http://www.dnr.mo.gov/env/wrc/mwu/measure.pdf#page=152> as user #095200006 (Jackson Co.). See additional information in the [Cooling Water Intake Structure \(CWIS\); Clean Water Act § 316\(b\)](#) section below.

**PERMITTED FEATURES TABLE**

FEATURE	DESIGN FLOW	TREATMENT LEVEL	EFFLUENT TYPE
#001	82.0 MGD (max)	none	once through cooling water
#002	29.3 MGD (avg)	none	intake

**FACILITY PERFORMANCE HISTORY & COMMENTS**

The facility received a letter of warning for failure to submit stream flow, temperature, and temperature cap on the September 2012 discharge monitoring report. No other issues were noted. Additional information about this facility can be found at [echo.epa.gov](http://echo.epa.gov).

**MAJOR WATER USER DATA**

<b>095200006</b>		<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	
Metered?	No	Amt. Pumped	5,951,630,000	4,779,130,000	8,718,300,000	4,722,070,000	11,493,780,000
Last Update	6/26/06	Amt. Returned	5,951,630,000	4,779,130,000	8,718,300,000	4,722,070,000	11,493,780,000
GW or SW?	SW	Water use categories: Industrial					

**MAXIMUM PUMPING RATES**

Pump #	Million Gallons per Hour Maximum	Million Gallons per Day Max
1	1.47	35.28
2	2.7	64.8
3	2.7	64.8
4	2.7	64.8
5	2.7	64.8
6	0.24	5.76
Total		300.24 MGD

**Part II. RECEIVING STREAM INFORMATION**

**RECEIVING WATER BODY'S WATER QUALITY**

The Missouri River is on the impaired waters list for *Escherichia coli*, and has total maximum daily loads associated with chlordane and PCBs. The facility is not likely a contributor of the above pollutants. The limits imposed in this permit are acceptable for this river. Uses of this river are for aquatic life, livestock watering, irrigation, drinking water, and recreational boating and similar contact uses.

**303(d) LIST**

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.

- ✓ Applicable. The Missouri River is listed on the 2006 Missouri 303(d) List for chlordane and polychlorinated biphenyls (PCBs) where a TMDL was developed, and the 2008, 2010, 2012, and 2014 CWA Section 303(d) list for *Escherichia coli* without an associated TMDL.
  - ✓ This facility is not considered to be a source of the above listed pollutants or considered to contribute to the impairment of the Missouri River.

**TOTAL MAXIMUM DAILY LOAD (TMDL)**

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 Missouri River is associated with the 2006 EPA approved TMDL for chlordane and polychlorinated biphenyls (PCBs).
  - ✓ This facility is not considered to be a source of the above listed pollutant(s) or considered to contribute to the impairment of the Missouri River.

**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:
- Lake or Reservoir:
- Losing:
- Metropolitan No-Discharge:
- Special Stream:
- Subsurface Water:
- All Other Waters:

**RECEIVING STREAM TABLE**

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES	DISTANCE TO CLASSIFIED SEGMENT	12-DIGIT HUC
#001	Missouri River	P	0356	AQL/WWH, DWS, IND, IRR, LWW/LWP, SCR, WBC-B	0.0 mi	103000101-0301 Buckeye Creek-Missouri River

n/a not applicable

WBID = Waterbody IDentification: Missouri Use Designation Dataset 8-20-13 MUDD V1.0 data can be found as an ArcGIS shapefile on MSDIS at [http://msdis.missouri.edu/pub/Inland\\_Water\\_Resources/MO\\_2014\\_WQS\\_Stream\\_Classifications\\_and\\_Use\\_shp.zip](http://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_shp.zip)

\* As per 10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission’s water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and 1<sup>st</sup> classified receiving stream’s beneficial water uses to be maintained are in the receiving stream table in accordance with [10 CSR 20-7.031(1)(C)].

Uses which may be found in the receiving streams table, above:

10 CSR 20-7.031(1)(C)1.:

**AQL** = Protection of aquatic life (Current narrative use(s) are defined to ensure the protection and propagation of fish shellfish and wildlife, which is further subcategorized as: WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat. This permit uses AQL effluent limitations in 10 CSR 20-7.031 Table A for all habitat designations unless otherwise specified.)

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

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

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

**WBC-B** = Whole body contact recreation supporting swimming;

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

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

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

**IRR** = Irrigation for use on crops utilized for human or livestock consumption;

**LWW** = Livestock and wildlife watering (Current narrative use is defined as LWP = Livestock and Wildlife Protection);

**DWS** = Drinking Water Supply;

**IND** = Industrial water supply

10 CSR 20-7.031(1)(C)8-11.: Wetlands (10 CSR 20-7.031 Table A currently does not have corresponding habitat use criteria for these defined uses)

WSA = Storm- and flood-water storage and attenuation; WHP = Habitat for resident and migratory wildlife species;

WRC = Recreational, cultural, educational, scientific, and natural aesthetic values and uses; WHC = Hydrologic cycle maintenance.

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

**RECEIVING STREAM LOW-FLOW VALUES TABLE:**

RECEIVING STREAM	LOW-FLOW VALUES (CFS)	
	7Q10	30Q10
Missouri River (P)-summer	11,674	28,823
Missouri River (P)-winter	11,674	17,248

The flows and level of the Missouri River are controlled by the US Army Corps of Engineers and is subject to human interference. The critical low flow values for the Missouri River were calculated by the U.S. EPA, at a 30Q10 of 28,823 cfs in the summer and 17,248 cfs in the winter (applicable to Ammonia) a 7Q10 of 11,674 cfs (applicable to all other parameters). Recalculation of the low flow values may occur at permit renewal to reflect overall changes in climate possibly affecting low flows.

**MIXING CONSIDERATIONS -- THERMAL**

Missouri’s Water Quality Standards [10 CSR 20-7.031(4)(A)1.], specifically state mixing considerations for toxics do not apply to thermal mixing considerations and thermal mixing considerations are located in [10 CSR 20-7.031(4)(D)6.], which states thermal mixing considerations are limited to 25% of the cross-sectional area or volume of a river, unless a biological survey performed in response to 316(a) of the Clean Water Act indicate no significant adverse effect on aquatic life. For the purpose of mixing considerations, the Department typically uses the 25% of the daily flow instead of the cross-sectional area. Daily flows are available through United States Geological Survey’s website; a cross-sectional area is more difficult to determine as it too changes on a daily basis. This has been continued from the previous permit.

**RECEIVING STREAM MONITORING REQUIREMENTS**

The receiving stream will be monitored to determine changes in temperature. Intake temperature may be used as a substitute for stream temperature. Intake velocity may NOT be used for stream velocity (CFS).

PARAMETER(S)	SAMPLING FREQUENCY	SAMPLE TYPE	LOCATION
Stream Flow (CFS)	daily	measured	Missouri River
Temperature (°F)	daily	measured	

**Part III. RATIONALE AND DERIVATION OF EFFLUENT LIMITATIONS & PERMIT CONDITIONS**

**ALTERNATIVE EVALUATIONS FOR NEW FACILITIES**

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

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

**ANTI-BACKSLIDING**

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

- ✓ The Department determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
  - The previous permit required the permittee to report stream flow, stream temperature, and effluent temperature while also requiring reporting of  $\Delta T$  and  $T_{cap}$  calculations. It is the department’s position reporting the stream flow, stream temperature, and effluent temperature are duplicative and are not necessarily indicative of the facility’s impact on the receiving water. The permit does require these raw numbers to be kept for a minimal period of five years, the source of the numbers, how the values were obtained, and the time and day of the collection or when the gauging station reported the values, and are to be available for department review should the need arise.

**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.
- For stormwater discharges with new, altered, or expanding discharges, the stormwater BMP chosen for the facility, through the antidegradation analysis performed by the facility, must be implemented and maintained at the facility. Failure to implement and maintain the chosen BMP alternative is a permit violation; see SWPPP.
- ✓ Not applicable; the facility does not have stormwater discharges to waters of the state or the stormwater outfalls onsite have no industrial exposure. If stormwater discharges are diverted to waters of the state, the facility must under an antidegradation review at <http://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm>

**BENCHMARKS:**

When a permitted feature or outfall consists of only stormwater, a benchmark may be implemented at the discretion of the permit writer. Benchmarks require the facility to monitor, and if necessary, replace and update stormwater control measures. Benchmark concentrations are not effluent limitations. A benchmark exceedance, therefore, is not a permit violation; however, failure to take corrective action is a violation of the permit. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the permittee in knowing when additional corrective actions may be necessary to comply with the limitations of the permit.

Because of the fleeting nature of stormwater discharges, the department, under the direction of EPA guidance, has determined monthly averages are capricious measures of stormwater discharges. The *Technical Support Document for Water Quality Based Toxics Control* (EPA/505/2-90-001; 1991) Section 3.1 indicates most procedures within the document apply only to water quality based approaches, not end-of-pipe technology-based controls. Hence, stormwater only outfalls will generally only contain a maximum daily limit (MDL), benchmark, or monitoring requirement determined by the site specific conditions including the receiving water’s current quality. While inspections of the stormwater BMPs occur monthly, facilities with no compliance issues are usually expected to sample stormwater quarterly.

Numeric benchmark values are based on water quality standards or other stormwater permits including guidance forming the basis of Environmental Protection Agency's (EPA's) *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* (MSGP). Because precipitation events are sudden and momentary, benchmarks based on state or federal standards or recommendations use the Criteria Maximum Concentration (CMC) value, or acute standard. The CMC is the estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed briefly without resulting in an unacceptable effect. The CMC for aquatic life is intended to be protective of the vast majority of the aquatic communities in the United States.

✓ Not applicable; this facility does not have any stormwater outfalls discharging to waters of the state.

#### **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://extension.missouri.edu/main/DisplayCategory.aspx?C=74>, 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.

#### **COOLING WATER INTAKE STRUCTURE (CWIS); CLEAN WATER ACT § 316(b)**

Section 316(b) of the Clean Water Act (CWA) applies to new or existing facilities operating a cooling water intake structure (CWIS). Section 316(b) requires location, design, construction, and capacity of CWISs reflect the best technology available (BTA) for minimizing adverse environmental impacts (AEI). Under current regulations, existing facilities are subject to section 316(b) conditions that reflect BTA for minimizing AEI on a case-by-case, best professional judgment (BPJ) basis.

The Environmental Protection Agency's (EPA) Phase II Section 316(b) Existing Facilities Rule was remanded to the EPA in *Riverkeeper, Inc. et al. v EPA 475 F.3d 83* (2d Cir. 2007). The Federal Water Pollution Control Act Amendments of 1972 require cooling water intake structures to reflect the best technology available for minimizing adverse environmental impact. Best technology available must consider intake design, location, construction, and capacity. The EPA has finalized the 316(b) standards and they became effective on October 16, 2014 (<http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/index.cfm>).

EPA consulted with the US Fish and Wildlife Service and the National Marine Fisheries Service under the Endangered Species Act rules. The Services concluded the new 316(b) rule is not likely to jeopardize the continued existence of listed species or result in adverse modification of designated critical habitat. However the Services added a number of conditions to the final rule. The rule requires each facility identify all federally-listed, threatened, and endangered species and designated critical habitat present in the zone of influence of the intake. This condition includes all listed species not just fish and shellfish. Additional control measures and monitoring and reporting requirements may be established to minimize incidental take. The Services will have 60 days to review and comment on measures related to listed species and critical habitat during the next permit renewal process.

This operating permit contains language indicating the permit may be reopened and modified, or alternatively revoked and reissued to: incorporate new or modified requirements applicable to existing cooling water intake structures under Section 316(b) of the Clean Water Act consistent with any standard established pursuant to section 1311 or section 1316 of 33 USC 1326. In the event it is necessary for this permit to be reopened and modified, or alternatively revoked and reissued, the permittee shall comply with any such new or modified requirements or standards applicable to existing cooling water intake structures under §316(b) of the Clean Water Act.

To meet the 316(b) requirements, Veolia will be required to submit the following information with the next permit renewal application. As 40 CFR 122.21(r)(1)(2) indicates:

- i. Source Water Physical Data Report : 40 CFR 122.21(r)(2) This report requires a description and scaled drawings showing the physical configuration of the water body, including areal dimensions, depths, and temperature regimes, identification and characterization of the source waterbody's hydrological and geomorphological features, estimate the intake's area of influence within the waterbody and locational maps.
- ii. Cooling Water Intake Structure Data Report, 40 CFR 122.21(r)(3) This report requires information on the design of the intake structure and its location in the water column. It includes design intake flows, daily hours of operation, number of days of the year in operation and seasonal changes, if applicable; a flow distribution and water balance diagram that includes all sources of water to the facility, recirculating flows, and discharges, and engineering drawings of the cooling water intake structure.
- iii. Source Water Baseline Biological Characterization Data Report, 40 CFR 122.21(r)(4) This report characterizes the biological community in the vicinity of the cooling water intake structure.
- iv. Cooling Water System Data Report, 40 CFR 122.21(r)(5) This report provides information on the operation of the cooling water system including descriptions of reductions in water withdrawals, recycled water, proportion of the source waterbody withdrawn.
- v. Chosen Method of Compliance with Impingement Mortality Standard, 40 CFR 122.21(r)(6) Veolia must identify their chosen compliance method and if applicant chooses to comply with a technology option that requires the Impingement Technology Optimization Study, the study must be submitted.
- vi. Operational Status, 40 CFR 122.21(r)(8) The operational status report includes descriptions of each unit's operating status including age of the unit, capacity utilization for the previous 5 years, and any major upgrades completed within the last 15 years, including boiler replacement, condenser replacement, turbine replacement, and fuel change.
- vii. Additional measures to protect federally listed threatened and endangered species and designated critical habitat, 40 CFR 125.94(g) The Director may establish additional permit control measures, monitoring requirements, reporting requirements than the minimum established to minimize incidental take, reduce or remove detrimental effects, or such control measures may include measures identified by the US Fish and Wildlife Service field office during their 60 day review. When the Director requires additional measures for federally listed species, monitoring is required, 40 CFR 125.96(g) and may require additional studies and monitoring if threatened or endangered species identified in the vicinity of the intake, 40 CFR 125.98(d).
  1. An evaluation of entrainment into the intake structure; and
    - a. Because several endangered species are present in the Missouri River, the facility will need to complete a best technology available (BTA) evaluation for entrainment protection. In section 7.3.2 of the Federal Register Vol. 79 No. 158, the EPA has indicated facilities falling under the 125 MGD withdrawal rate are not automatically exempt from installing entrainment controls. The report is necessary to evaluate the potential for entrainment of any threatened or endangered species and the feasibility of installing entrainment controls. The permittee is required to submit a work plan to the department for review and approval. As 40 CFR 125.98(d) indicates, the director may consider information collected from other parties. Veolia may request local entrainment data from other facilities and use the information to make the technological anti-entrainment method evaluation (Permit § C.14.(e)(i)g.2.). While the study at 40 CFR 122.21(r)(7) does not apply, the department at the direction of the EPA has determined a need for a portion of this information.
    - b. Factors which may be required in the report include (but are not limited to):
      - i. evaluation of the technical feasibility of closed-cycle recirculating system (Permit § C.14.(e)(i)g.1.),
      - ii. fine mesh screens,
      - iii. water reuse,
      - iv. alternate sources of cooling water,
      - v. process changes,
      - vi. or other entrainment technologies considered by the facility to reduce or eliminate larval or juvenile stages of aquatic organisms from entering the cooling system.
    - c. At the permit renewal, the facility will need to submit documentation qualifying the entrainment method chosen/not chosen. This report will be used by the department to concur or reject the technology considered by the applicant to be appropriate to their facility for entrainment reduction.
  2. engineering cost estimates of technologies considered; and
  3. assessment of potential impacts to threatened or endangered species; and
  4. evaluation of non-water quality environmental impacts.

#### **INDUSTRIAL SLUDGE**

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

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

### **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)(1)(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.

### **SCHEDULE OF COMPLIANCE (SOC)**

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

✓ Not applicable, this permit does not contain a SOC.

### **SPILL REPORTING:**

Per 10 CSR 24-3.010, any emergency involving a hazardous substance must be reported to the department's 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. The department may require the submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply whether or not the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the noncompliance reporting requirement found in Standard Conditions Part I. <http://dnr.mo.gov/env/esp/spillbill.htm>

### **STORMWATER POLLUTION PREVENTION PLAN (SWPPP):**

In accordance with 40 CFR 122.44(k), Best Management Practices (BMPs) must be used 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 waters of the state from a permitted facility. 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 storm water discharges.

A SWPPP must be prepared by the permittee if the SIC code is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2). A SWPPP may be required of other facilities where stormwater has been identified as necessitating better management. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream pollution from stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures determined to be adequate to achieve the benchmark values discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.

For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. Failure to implement and maintain the chosen BMP is a permit violation. For further guidance, consult the antidegradation implementation procedure (<http://dnr.mo.gov/env/wpp/docs/AIP050212.pdf>).

Alternative Analysis (AA) evaluation of the BMPs is a structured evaluation of BMPs that are reasonable and cost effective. The AA evaluation should include practices that are designed to be: 1) non-degrading; 2) less degrading; or 3) degrading water quality. The glossary of AIP defines these three terms. The chosen BMP will be the most reasonable and effective management strategy while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The AA evaluation must demonstrate why “no discharge” or “no exposure” is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and *Antidegradation Implementation Procedure* (AIP), Section II.B.

If parameter-specific numeric exceedances continue to occur and the permittee feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification; the application is found at: <http://dnr.mo.gov/forms/index.html>.

✓ Applicable; at this time, the permittee is required to develop and implement a SWPPP because 1) the SIC code is listed within the federal and state regulations and 2) numeric limitations are not appropriate at this time because the discharge goes to the city’s stormwater management system.

**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:

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

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

- Acute wasteload allocations (daily maximum limits; MDL) were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).
- Chronic wasteload allocations (monthly average limits; AML) were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ).
- 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* or TSD EPA/505/2-90-001; March 1991.
- Number of Samples “n”: 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, targeted to comply with the values dictated by the WLA. Therefore, it is recommended 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**

Permittees may submit site specific studies to better determine the site specific wasteload allocations applied in permits. (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(4)], 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. The facility discharges once-through cooling water, is a minor, does not use chlorine for disinfection, and does not use pesticides for intake cleaning.

**Part IV. EFFLUENT LIMITS DETERMINATION**

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

**OUTFALL #001 – MAIN FACILITY OUTFALL**

**EFFLUENT LIMITATIONS TABLE:**

PARAMETERS	UNIT	BASIS FOR LIMITS	DAILY MAX	MONTHLY AVG	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
<b>PHYSICAL</b>								
FLOW (EFFLUENT)	MGD	1	*	*	*	DAILY	MONTHLY	GRAB
ΔT	°F	1, 2, 3	5	5	5, 5	DAILY	MONTHLY	GRAB
T <sub>CAP</sub>	°F	1, 2, 3	90	90	90, 90	DAILY	MONTHLY	GRAB
TOTAL SUSPENDED SOLIDS	MG/L	6	*	*	NEW AT MODIFICATION	MONTHLY	MONTHLY	GRAB
<b>METAL</b>								
COPPER, TOTAL RECOVERABLE	μG/L	1, 2, 4	*	*	NEW AT MODIFICATION	MONTHLY	MONTHLY	GRAB

\* - Monitoring requirement only

A – Permittee was submitting data in CFS, changed submission to MGD

**Basis for Limitations Codes:**

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

**DERIVATION AND DISCUSSION OF LIMITS:**

**PHYSICAL:**

**Flow**

In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification. In the previous permit, the facility was reporting effluent flow in CFS. To become in line with most other facilities in the state, the facility will need to submit the flow rate for the effluent in MGD.

**Flow (Effluent)**

Daily monitoring requirement (MGD and CFS); the facility will need to record flow data for the effluent in millions of gallons per day (MGD) and cubic feet per second (CFS). The MGD value will be reported to the department; the CFS value will be used in calculating the maximum effluent temperature (T<sub>cap</sub>) and the change in effluent temperature (ΔT).

**Flow (Stream)**

Daily monitoring-only requirement (CFS); it is the department's expectations the permittee will obtain stream flow data from appropriate and applicable nearby USACE or USGS gauging stations or similar mechanical measurement. The department will only use gauging data as a viable source of stream flow; flows (design or actual) from other point sources will not be considered. Not directly reported to the department.

**Temperature Cap ( $T_{cap}$ )**

In accordance with 10 CSR 20-7.031(4)(D)5, this facility shall not exceed the monthly temperature criteria established of 90°F.  $T_{cap}$  is calculated as follows:

$$T_{cap} = [(Q_s/4)T_s + Q_e T_e] / [(Q_s/4) + Q_e]$$

Where,

$Q_s/4$  = the receiving stream flow in CFS divided by 4 or the flow represented in the cross-sectional area of the receiving stream divided by 4 in accordance with [10 CSR 20-7.031(4)(D)6.]

$Q_e$  = effluent flow

$T_s$  = Receiving stream's ambient temperature. Daily monitoring requirement (°F); the ambient stream temperature can be used or, for many facilities, the intake temperature can be used to determine stream's temperature. This requirement is used to calculate the change in temperature ( $\Delta T$ ) and the maximum temperature ( $T_{cap}$ ). A facility's intake temperature can be used for this parameter if the facility believes that it is representative of the receiving stream's actual temperature.

$T_e$  = Temperature of the effluent. Daily monitoring requirement (°F); effluent temperature is the measured temperature of the discharge and is used to determine the change in temperature ( $\Delta T$ ) and the maximum temperature ( $T_{cap}$ ).

**Delta Temperature ( $\Delta T$ )**

The permittee shall not cause the temperature of the receiving stream to change by  $\pm 5^\circ\text{F}$ , in accordance with [10 CSR 20-7.031(4)(D)1.].  $\Delta T$  is calculated as follows:

$$\Delta T = [(Q_s/4)T_s + Q_e T_e] / [(Q_s/4) + Q_e] - T_s$$

Where,

$Q_s/4$  = the receiving stream flow in CFS divided by 4 or the flow represented in the cross-sectional area of the receiving stream divided by 4 in accordance with [10 CSR 20-7.031(4)(D)6.]

$Q_e$  = Effluent Flow.

$T_s$  = Receiving stream's ambient temperature. Daily monitoring requirement (°F); the ambient stream temperature can be used or, for many facilities, the intake temperature can be used to determine stream's temperature. This requirement is used to calculate the change in temperature ( $\Delta T$ ) and the maximum temperature ( $T_{cap}$ ).

$T_e$  = Temperature of the effluent. Daily monitoring requirement (°F); effluent temperature is the measured temperature of the discharge and is used to determine the change in temperature ( $\Delta T$ ) and the maximum temperature ( $T_{cap}$ ).

**Total Suspended Solids (TSS)**

The UF and RO systems are new at modification. The permittee has established these systems as increasing the total suspended solids within the effluent. The ELG at 40 CFR 423.12(b)(3) has indicated TSS is a low volume waste source therefore is controlled through technology limitations. Additionally, federal regulations at 40 CFR 122.45(g) allow for net credits of TSS. Technology limits are 100 mg/L daily maximum, and 30 mg/L monthly average. The facility will measure the effluent and intake. Monthly monitoring is now required of the effluent and the intake. Should the facility require additional monitoring to meet the monthly average, the facility may sample as frequently as necessary. The facility will report the true concentration and the net concentration to the department. The facility must measure the intake and effluent at generally the same time.

**METALS:**

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in the *Technical Support Document For Water Quality-based Toxic Controls* (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 habitat criteria apply (WWH) designated as AQL in 10 CSR 20-7.031 Table A. Additional use criterion (HHP, DWS, GRW, IRR, or LWW) may also be used as applicable to determine the most protective effluent limit for the stream class and uses.

When ambient site specific hardness data is not available, standard water hardness of 162 mg/L for effluent is used in the conversion below. Additionally, when there are no site specific translator studies, partitioning between the dissolved and absorbed phases is assumed 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, the department may integrate those findings into derivation of the water quality limits. N/A means not applicable.

METAL	CONVERSION FACTORS USING HARDNESS OF 162 MG/L	
	ACUTE	CHRONIC
Copper	0.960	0.960

**Copper, Total Recoverable**

Monitoring is required by the modification of the permit. The facility reported 36 µg/L of total recoverable copper in the effluent during sampling for permit modification. There are background concentrations of copper in the Missouri River. They are accounted for in the WLA calculation. Until better data is supplied, the department has determined one-half of the detection limit (10 µg/L) supplied by the permittee is to be used in the calculation below for the background value and projected wasteload allocation (WLA) calculation. Also, the permit writer has chosen to use the average flows (66.686 CFS) as reported by the permittee instead of the design flow to approximate calculated projected effluent limits below.

ZID 7Q10 = 11,674 CFS ÷ 4 \* 0.1 = 291.85

MZ 7Q10 = 11,674 CFS ÷ 4 = 2918.5

Acute AQL WQS:  $e^{(0.9422 * \ln 162 - 1.7003)} * (0.96) = 21.2$

[at Hardness 162]

Chronic AQL WQS:  $e^{(0.8545 * \ln 162 - 1.702)} * (0.96) = 13.5$

[at Hardness 162]

Acute WQS:  $21.2 \div 0.96 = 22.05 \mu\text{g/L}$

[Total Recoverable Conversion]

Chronic WQS:  $13.5 \div 0.96 = 14.09 \mu\text{g/L}$

[Total Recoverable Conversion]

Acute WLA:  $C_e = ((66.686 + 291.85) 22.05 - (291.85 * 10.0)) / 66.686$

$C_e = 74.78 \mu\text{g/L}$

Chronic WLA:  $C_e = ((66.686 + 2918.5) 14.09 - (2918.25 * 10.0)) / 66.686$

$C_e = 193.02 \mu\text{g/L}$

LTA<sub>a</sub>:  $74.78 (0.321) = 24.01 \mu\text{g/L}$

[CV = 0.6, 99<sup>th</sup> Percentile]

LTA<sub>c</sub>:  $193.02 (0.527) = 101.80 \mu\text{g/L}$

[CV = 0.6, 99<sup>th</sup> Percentile]

Use most protective number of LTA<sub>a</sub> or LTA<sub>c</sub>.

MDL:  $24.01 (3.11) = 74.8 \mu\text{g/L}$

[CV = 0.6, 99<sup>th</sup> Percentile]

AML:  $24.01 (1.55) = 37.3 \mu\text{g/L}$

[CV = 0.6, 95<sup>th</sup> Percentile, n = 1]

The department has determined the above calculated thresholds could be highly variable dependent upon the true upstream concentration of copper, the facility's actual reported values (changing the coefficient of variation), site specific hardness values (should the facility decide to gather influent data for hardness), and updated 7Q10 (values may be decreasing due to climate change) upon permit renewal. Hence, taking the rest of the permit cycle to obtain monthly data of the intake and effluent is appropriate. Discharge limits are not appropriate at this time. The facility must use 40 CFR 136 approved analytical methods to analyze for total recoverable copper. The laboratory reporting limit for the test must be at or below 10 µg/L for the purposes of compliance with this permit.

**PERMITTED FEATURE #002 – INTAKE STRUCTURE**

The intake structure has become a permitted feature for the facility. The facility has submitted effluent data for outfall #001 indicating they discharge between 15.7 and 67.7 millions of gallons per day depending on the heating or cooling needs of the supplied businesses. New regulations are requiring any facility which intakes greater than 2 MGD of surface water (used for 25% or more for cooling) to manage and characterize fish or other aquatic organisms which may become pinned against the intake structure (impingement) or entrained (sucked into the intake structure) and die. This facility uses 100% of the water withdrawn for cooling purposes and the effluent volume is very closely linked to the intake volume. Federal Register Vol. 79 No. 158 on 08/15/2014 updated sections of 40 CFR parts 122 and 125. The facility withdraws less than 125 MGD so is not subject to all new requirements. However, the facility will need to submit information as requested in 40 CFR 122.21(r)(2) through (r)(6) and (r)(8) with the next permit renewal (180 days prior to expiration) and yearly progress reports on February 28<sup>th</sup>. 40 CFR 122.21(r)(6) indicates the need for facilities to identify the best technology based compliance method to meet impingement mortality standards.

If the facility chooses to comply with 40 CFR 125.94(c)(5) by operating modified travelling screens, optimization studies must also be completed under 122.21(r)(6)(i). Additional information regarding traveling screens can be found on the Federal Register pages 48364-48366. This facility does not currently withdraw over 125 MGD of surface water hence is not required to perform entrainment monitoring or peer reviewed studies but will still need to complete the best technology available assessment for entrainment. However, the facility has the pumping capability to withdraw up to 300.24 MGD, should any increase occur over 125 MGD occur, the facility will be required to perform studies associated with entrainment. See Cooling Water Intake Structure (CWIS); Clean Water Act § 316(b) section earlier in the document for additional information.

**Permitted Feature #002 – Derivation and Discussion of Limits**

**INFLUENT MONITORING TABLE:**

PARAMETERS	UNIT	BASIS FOR LIMITS	DAILY MAX	MONTHLY AVG	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL								
TOTAL SUSPENDED SOLIDS	MG/L	1, 6	*	*	NEW AT MODIFICATION	MONTHLY	MONTHLY	GRAB
METAL								
COPPER, TOTAL RECOVERABLE	µG/L	1, 2, 4	*	*	NEW AT MODIFICATION	MONTHLY	MONTHLY	GRAB

\* - Monitoring requirement only

**Basis for Limitations Codes:**

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

**INFLUENT MONITORING**

**Temperature (River)**

Daily monitoring requirement (°F);  $T_s$  = Receiving stream’s ambient temperature. The ambient stream temperature can be used or, for many facilities, the intake temperature can be used to determine stream’s temperature. This requirement is used to calculate the change in temperature ( $\Delta T$ ) and the maximum temperature ( $T_{cap}$ ). Not directly reported.

**Total Suspended Solids (Intake)**

The department has determined influent measurement of TSS is necessary to determine net limitations for this facility. The process employed at the facility has been known to concentrate solids and metals in the effluent. Monthly monitoring is required to determine the extent of the concentration the solids undergo.

**Copper, Total Recoverable (Intake)**

The department has determined influent monitoring of copper is necessary to determine upstream concentrations of copper in the Missouri River. The process employed at the facility has been known to concentrate solids and metals in the effluent. Monthly monitoring is required to determine the extent of the concentration the metals undergo.

**Part V. SAMPLING AND REPORTING REQUIREMENTS:**

Refer to each outfall’s derivation and discussion of limits section to review individual sampling and reporting frequencies and sampling type.

**ELECTRONIC DISCHARGE MONITORING REPORTING:**

Due to upcoming federal regulations, all facilities will need to begin submitting their discharge monitoring reports electronically, called the eDMR system. To begin the process, please visit <http://dnr.mo.gov/env/wpp/edmr.htm>. This process is expected to save time, lessen paperwork, and reduce operating costs for both the facilities and the water protection program. Additional information may also be found at <http://dnr.mo.gov/pubs/pub2474.pdf>.

**SAMPLING FREQUENCY JUSTIFICATION:**

Sampling and reporting frequency was generally retained from previous permit.

40 CFR 122.45(d)(1) indicates all continuous discharges shall be permitted with daily maximum and monthly average limits.

**SAMPLING TYPE JUSTIFICATION:**

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

## **Part VI. ADMINISTRATIVE REQUIREMENTS**

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

### **PERMIT SYNCHRONIZATION**

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than three years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit. *This permit will expire in the second quarter of 2019 to maintain permit synchronization.*

### **PUBLIC NOTICE**

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

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

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

The Public Notice period for this operating permit was from 4/17/2015 to 5/18/2015. No comments were received.

**DATE OF FACT SHEET: MAY 2015**

### **COMPLETED BY:**

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

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

## Part I – General Conditions

### Section A – Sampling, Monitoring, and Recording

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

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

### Section B – Reporting Requirements

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



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

## Section C – Bypass/Upset Requirements

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

## Section D – Administrative Requirements

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



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- 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.



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REVISED  
AUGUST 1, 2014

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

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JUN 07 2016



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
FORM A - APPLICATION FOR NONDOMESTIC PERMIT UNDER MISSOURI  
CLEAN WATER LAW

FOR AGENCY USE ONLY	
CHECK NUMBER	211217
DATE RECEIVED	6/7/16
SEE SUBMITTED	\$1250.00

SB

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

1. This application is for:

An operating permit for a new or unpermitted facility:  
Please indicate the original Construction Permit # \_\_\_\_\_

An operating permit renewal:  
Please indicate the permit # MO- \_\_\_\_\_ Expiration Date \_\_\_\_\_

An operating permit modification:  
Please indicate the permit # MO- 0004847 Modification Reason: Ancillary use of river water

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

2. FACILITY

NAME Veolia Energy Kansas City, Inc.		TELEPHONE NUMBER WITH AREA CODE (816) 889-4900	
ADDRESS (PHYSICAL) 115 Grand Blvd.		CITY Kansas City	STATE MO
		ZIP CODE 64106	FAX (816) 842-4272

3. OWNER

NAME Thermal North America		TELEPHONE NUMBER WITH AREA CODE (617) 849-6600	
ADDRESS (MAILING) 53 State Street, 14th Floor		CITY Boston	STATE MA
		ZIP CODE 02110	FAX

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

4. CONTINUING AUTHORITY

NAME Veolia Energy Kansas City, Inc.		TELEPHONE NUMBER WITH AREA CODE (816) 889-4977	
ADDRESS (MAILING) 115 Grand Blvd.		CITY Kansas City	STATE MO
		ZIP CODE 64106	FAX (816) 842-4272

5. OPERATOR

NAME Veolia Energy Kansas City, Inc.		TELEPHONE NUMBER WITH AREA CODE (816) 889-4900	
ADDRESS (MAILING) 115 Grand Blvd.		CITY Kansas City	STATE MO
		ZIP CODE 64106	FAX (816) 842-4272

6. FACILITY CONTACT

NAME Michael Stoppa, CSP		TELEPHONE NUMBER WITH AREA CODE (816) 889-4976	
TITLE Regional Director of EHS		FAX (816) 842-4272	
E-MAIL ADDRESS michael.stoppa@veolia.com			

7. ADDITIONAL FACILITY INFORMATION

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

001 SW 1/4 \_\_\_\_\_ 1/4 \_\_\_\_\_ Sec 32 T 50N R 33W Jacks County  
UTM Coordinates Easting (X): \_\_\_\_\_ Northing (Y): \_\_\_\_\_  
*For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)*

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

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

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

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

001 - SIC 4961 and NAICS 221330 002 - SIC \_\_\_\_\_ and NAICS \_\_\_\_\_  
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? YES  NO   
If yes, complete Form C or 2F.  
(2F is the U.S. EPA's Application for Storm Water Discharges Associate with Industrial Activity.)
- B. Is application for storm water discharges only? YES  NO   
If yes, complete Form C or 2F.
- C. Is your facility considered a "Primary Industry" under EPA guidelines? YES  NO   
If yes, complete Forms C or 2F and D.
- D. Is wastewater land applied? YES  NO   
If yes, complete Form I.
- E. Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? YES  NO   
If yes, complete Form R.
- F. If you are a Class IA CAFO, please disregard part D and E of this section. However, please attach any revision to your Nutrient Management Plan.
- F. Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.

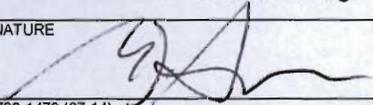
**9. DOWNSTREAM LANDOWNER(S)** Attach additional sheets as necessary. See instructions.  
(PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE).

NAME  
City of Kansas City Missouri

ADDRESS Grand Avenue Viaduct Property	CITY Kansas City	STATE MO	ZIP CODE 64106
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**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) Matthew DiGeronimo - General Manager	TELEPHONE NUMBER WITH AREA CODE (816) 889-4900
---	---

SIGNATURE 	DATE SIGNED 6/3/2016
--	-------------------------

MO 780-1479 (07-14)

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

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

HAVE YOU INCLUDED:

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

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

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

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

1.00 NAME OF FACILITY  
Veolia Energy Kansas City, Inc.

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER  
MO-0004847

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).  
N/A

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

A. FIRST 4961 B. SECOND \_\_\_\_\_

C. THIRD \_\_\_\_\_ D. FOURTH \_\_\_\_\_

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) SW 1/4 1/4 SEC 32 T 50N R 33W Jackson COUNTY

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST)	RECEIVING WATER
001	Missouri River (p) (00356)

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

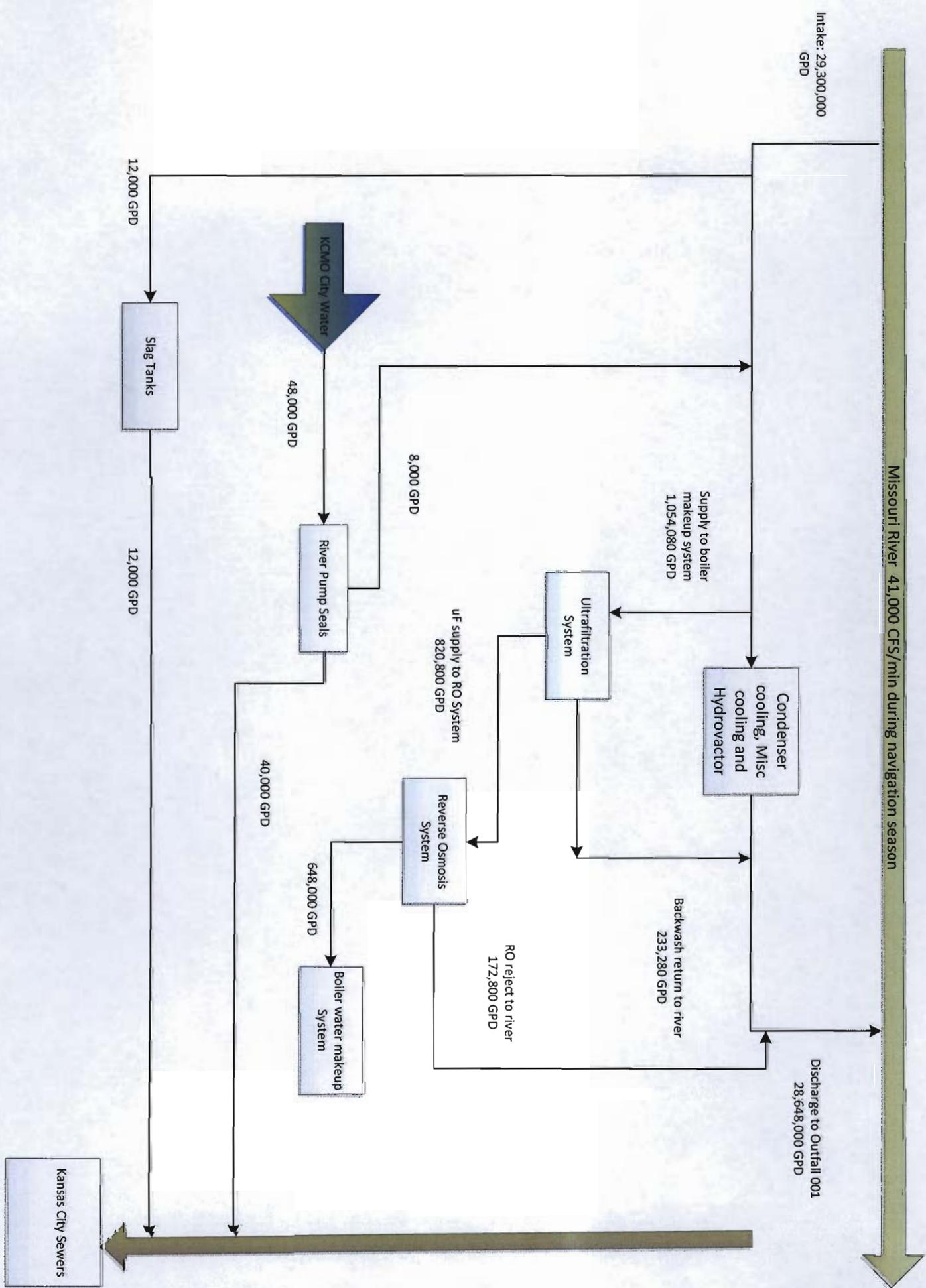
District heating and cooling supply via steam and air conditioning manufacture and distribution system.

Non-contact pass through cooling water use

Design flow is 153.67 MGD



# Veolia Kansas City Grand Ave. Plant Water Balance



**2.40 CONTINUED**

C. EXCEPT FOR STORM RUNOFF, LEAKS OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL?

YES (COMPLETE THE FOLLOWING TABLE)  NO (GO TO SECTION 2.50)

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

**2.50 MAXIMUM PRODUCTION**

A. DOES AN EFFLUENT GUIDELINE LIMITATION PROMULGATED BY EPA UNDER SECTION 304 OF THE CLEAN WATER ACT APPLY TO YOUR FACILITY?

YES (COMPLETE B.)  NO (GO TO SECTION 2.60)

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINES EXPRESSED IN TERMS OF PRODUCTION (OF OTHER MEASURE OF OPERATION)?

YES (COMPLETE c.)  NO (GO TO SECTION 2.60)

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

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

**2.60 IMPROVEMENTS**

A. ARE YOU NOW REQUIRED BY ANY FEDERAL, STATE OR LOCAL AUTHORITY TO MEET, ANY IMPLEMENTATION SCHEDULE FOR THE CONSTRUCTION, UPGRADING OR OPERATION OF WASTEWATER TREATMENT EQUIPMENT OR PRACTICES OR ANY OTHER ENVIRONMENTAL PROGRAMS THAT MAY AFFECT THE DISCHARGES DESCRIBED IN THIS APPLICATION? THIS INCLUDES, BUT IS NOT LIMITED TO, PERMIT CONDITIONS, ADMINISTRATIVE OR ENFORCEMENT ORDERS, ENFORCEMENT COMPLIANCE SCHEDULE LETTERS, STIPULATIONS, COURT ORDERS AND GRANT OR LOAN CONDITIONS.

YES (COMPLETE THE FOLLOWING TABLE)  NO (GO TO 3.00)

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

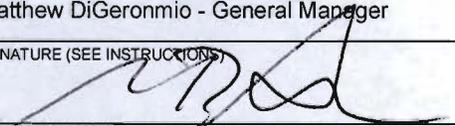
WERE ANY OF THE ANALYSES REPORTED PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM?

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)
Blue Valley Laboratories	814 East 16th Street Kansas City, MO. 64108	816-471-4719	Antimony Arsenic Copper Cyanide, Total Lead Mercury Magnesium Selenium Thallium Zinc Metals Digestion, Total

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) Matthew DiGeronmio - General Manager	TELEPHONE NUMBER WITH AREA CODE (816) 889-4900
SIGNATURE (SEE INSTRUCTIONS) 	DATE SIGNED 6/3/2014

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

FORM C  
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO.  
001

**INTAKE AND EFFLUENT CHARACTERISTICS**

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)		A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE			
	CONCENTRATION (1)	(2) MASS	CONCENTRATION (1)	(2) MASS	CONCENTRATION (1)	(2) MASS			CONCENTRATION (1)	(2) MASS		
A. Biochemical Oxygen Demand (BOD)	<5.0 mg/L											
B. Chemical Oxygen Demand (COD)	35.0 mg/L											
C. Total organic Carbon (TOC)	4.0 mg/L											
D. Total Suspended Solids (TSS)	178 mg/L											
E. Ammonia (as N)	3.2 mg/L											
F. Flow	VALUE 26,642 cfs									VALUE 26,642 cfs		
G. Temperature (winter)	VALUE 22.40									VALUE 22.44		
H. Temperature (summer)	VALUE 36.11									VALUE 31.02		
I. pH	MINIMUM 8.08									MAXIMUM		

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

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

MO 780-1514 (06-13)

1. POLLUTANT AND GAS 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	
G. Nitrogen, Total Organic (as N)		X													
H. Oil and Grease		X													
I. Phosphorus (as P), Total (7723-14-0)		X													
J. Sulfate (as SO <sub>4</sub> ) (14808-79-8)		X													
K. Sulfide (as S)		X													
L. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X													
M. Surfactants		X													
N. Aluminum, Total (7429-90-5)		X													
O. Barium, Total (7440-39-3)		X													
P. Boron, Total (7440-42-8)		X													
Q. Cobalt, Total (7440-48-4)		X													
R. Iron, Total (7439-89-6)		X													
S. Magnesium, Total (7439-95-4)	X		30 mg/L									29 mg/L			
T. Molybdenum, Total (7439-98-7)		X													
U. Manganese, Total (7439-96-5)	X		0.04 mg/L									0.04 mg/L			
V. Tin, Total (7440-31-5)		X													
W. Titanium, Total (7440-32-5)		X													

MO 780-1514 (06-13)

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION		B. MAXIMUM 30 DAY VALUE (1) CONCENTRATION		C. LONG TERM AVRG. VALUE (1) CONCENTRATION		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION		B. NO. OF ANALYSES
<b>METALS, AND TOTAL PHENOLS</b>														
1M. Antimony, Total (7440-36-9)		X	<0.050 mg/L									<0.050 mg/L		
2M. Arsenic, Total (7440-38-2)		X	<0.010 mg/L									<0.010 mg/L		
3M. Beryllium, Total (7440-41-7)		X												
4M. Cadmium, Total (7440-43-9)		X												
5M. Chromium III (16065-83-1)		X												
6M. Chromium VI (18540-29-9)		X												
7M. Copper, Total (7440-50-8)	X		0.036 mg/L									0.02 mg/L		
8M. Lead, Total (7439-92-1)		X	<0.050 mg/L									<0.050 mg/L		
9M. Mercury, Total (7439-97-6)		X	<0.0004 mg/L									<0.0004 mg/L		
10M. Nickel, Total (7440-02-0)		X												
11M. Selenium, Total (7782-49-2)		X	<0.050 mg/L									<0.050 mg/L		
12M. Silver, Total (7440-22-4)		X												
13M. Thallium, Total (7440-28-0)		X	<0.050 mg/L									<0.050 mg/L		
14M. Zinc, Total (7440-66-6)	X		0.010 mg/L									0.09 mg/L		
15M. Cyanide, Amenable to Chlorination		X												
16M. Phenols, Total		X												
<b>RADIOACTIVITY</b>														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												



# Blue Valley Laboratories, Inc.

Water Treatment Professionals Since 1973

814 East 16th Street Kansas City, MO 64108  
Phone (816) 471-4719 Fax (816) 471-0268

## Report of Analysis

Submitted by:

Richard Behrens  
Veolia Energy  
115 Grand Boulevard

Kansas City, MO 64106

Report Email: rbehrens@veoliaenergyna.com  
Copy Email:  
Lab Report Fax No:  
Lab Report Contact 1: (816) 889-4977  
Lab Report Contact 2:  
Customer ID No: 7466  
Customer PO No: KAN6833  
Collected By: Client  
Invoice No: 28060

## Report of Analysis

BVL Lab Report ID No:

**14573**

Sample Matrix: Waste Water

Project Name:

Item Count	Analysis Sample Site	Date: Collected & Analyzed Site Notes	Detection Limit Test Method	Results
1 6028	<b>BOD (Biochemical Oxygen Demand)</b>	11/14/13   11/15/13 RIVER WATER DISCHARGE	5.000 mg/L SM5210B	<b>&lt;5.0 mg/L</b>
2 6004	<b>Chemical Oxygen Demand (COD)</b>	11/14/13   11/22/13 RIVER WATER DISCHARGE	10.000 mg/L SM5220 D	<b>35.0 mg/L</b>
3 6405	<b>Nitrogen, Ammonia as N</b>	11/14/13   11/18/13 RIVER WATER DISCHARGE	0.500 mg/L SM4500 NH3 F	<b>3.2 mg/L</b>
4 6005	<b>Solids, Total Suspended</b>	11/14/13   11/19/13 RIVER WATER DISCHARGE	5.000 mg/L SM2540 D	<b>178 mg/L</b>
5 6293	<b>Total Organic Carbon</b>	11/14/13   11/18/13 RIVER WATER DISCHARGE	1.000 mg/L SM5130B	<b>4.0 mg/L</b>

Comments, if present, concern this Lab Work Order:

The reported analytical results relate only to the sample submitted.

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Report Email: richard.behrens2@veolia.com

Copy Email:

Lab Report Fax No:

Lab Report Contact 1: (816) 889-4977

Lab Report Contact 2:

Richard Behrens  
 Veolia Energy  
 115 Grand Boulevard

Customer ID No: 7466

Customer PO No:

Collected By: Client

Invoice No: 34700

Kansas City, MO 64106

**Report of Analysis**

Laboratory Report ID No:

**15883**

**Project Name:**

Item No.	Cat NO Line NO	ANALYSIS	COLLECTED	ANALYZED	REPORTING LIMIT	RESULTS
		SAMPLE TYPE	SAMPLE SITE NOTES		TEST METHOD	
1	114702	<b>ICP Antimony</b>	5/9/16	5/16/16	.05 mg/L	<b>&lt;0.050</b>
	88346		RIVER WATER INLET AUTO		EPA 6010C	mg/L
2	114702	<b>ICP Antimony</b>	5/9/16	5/16/16	.05 mg/L	<b>&lt;0.050</b>
	88353		RIVER WATER OUT 84" LINE		EPA 6010C	mg/L
3	114711	<b>ICP Copper</b>	5/9/16	5/16/16	.02 mg/L	<b>&lt;0.020</b>
	88344		RIVER WATER INLET AUTO		EPA 6010C	mg/L
4	114711	<b>ICP Copper</b>	5/9/16	5/16/16	.02 mg/L	<b>0.036</b>
	88351		RIVER WATER OUT 84" LINE		EPA 6010C	mg/L
5	105810	<b>ICP Magnesium</b>	5/9/16	5/16/16	1 mg/L	<b>29</b>
	88342		RIVER WATER INLET AUTO		EPA 6010C	mg/L
6	105810	<b>ICP Magnesium</b>	5/9/16	5/16/16	1 mg/L	<b>30</b>
	88350		RIVER WATER OUT 84" LINE		EPA 6010C	mg/L
7	114718	<b>ICP Selenium</b>	5/9/16	5/16/16	.05 mg/L	<b>&lt;0.050</b>
	88345		RIVER WATER INLET AUTO		EPA 6010C	mg/L
8	114718	<b>ICP Selenium</b>	5/9/16	5/16/16	.05 mg/L	<b>&lt;0.050</b>
	88352		RIVER WATER OUT 84" LINE		EPA 6010C	mg/L
9	114722	<b>ICP Thallium</b>	5/9/16	5/16/16	.05 mg/L	<b>&lt;0.050</b>
	88347		RIVER WATER INLET AUTO		EPA 6010C	mg/L
10	114722	<b>ICP Thallium</b>	5/9/16	5/16/16	.05 mg/L	<b>&lt;0.050</b>
	88354		RIVER WATER OUT 84" LINE		EPA 6010C	mg/L

**Comments, if present, concern this Lab Work Order:**

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**Blue Valley Laboratories, Inc.**  
**Report For: Veolia Energy**

**Report of Analysis**

Report ID No: **15883**

Item No.	Cat NO	ANALYSIS	COLLECTED	ANALYZED	REPORTING LIMIT	RESULTS
	Line NO	SAMPLE TYPE	SAMPLE SITE NOTES		TEST METHOD	
11	114724	<b>ICP Zinc</b>	5/9/16	5/16/16	.05 mg/L	<b>0.090</b> mg/L
	88348		RIVER WATER INLET AUTO		EPA 6010C	
12	114724	<b>ICP Zinc</b>	5/9/16	5/16/16	.05 mg/L	<b>0.10</b> mg/L
	88355		RIVER WATER OUT 84" LINE		EPA 6010C	
13	6330	<b>Metals Digestion, Total</b>	5/9/16	5/12/16	0	<b>COMPLETE</b>
	88339		RIVER WATER INLET AUTO		EPA 3005A	
14	6330	<b>Metals Digestion, Total</b>	5/9/16	5/12/16	0	<b>COMPLETE</b>
	88356		RIVER WATER OUT 84" LINE		EPA 3005A	

Report Email: richard.behrens2@veolia.com  
 Copy Email:  
 Lab Report Fax No:  
 Lab Report Contact 1: (816) 889-4977  
 Lab Report Contact 2:  
 Customer ID No: 7466  
 Customer PO No:  
 Collected By: Client  
 Invoice No: 34441

Richard Behrens  
 Veolia Energy  
 115 Grand Boulevard

Kansas City, MO 64106

**Report of Analysis**

Laboratory Report ID No:

**15814**

**Project Name:**

Item No.	Cat NO Line NO	ANALYSIS SAMPLE TYPE	COLLECTED SAMPLE SITE NOTES	ANALYZED	REPORTING LIMIT TEST METHOD	RESULTS
1	114703	<b>ICP Arsenic</b>	4/4/16	4/15/16	.1 mg/L	<b>&lt;0.10</b> mg/L
	86363		CHILLER DISCHARGE		EPA 6010C	
2	114713	<b>ICP Lead</b>	4/4/16	4/15/16	.05 mg/L	<b>&lt;0.050</b> mg/L
	86362		CHILLER DISCHARGE		EPA 6010C	
3	6330	<b>Metals Digestion, Total</b>	4/4/16	4/13/16	0	<b>COMPLETE</b>
	86205		CHILLER DISCHARGE		EPA 3005A	
4	6275	<b>Cyanide, Total</b>	4/4/16	4/7/16	.02 mg/L	<b>&lt;0.02</b> mg/L
	86204		Subcontracted to Midwest Laboratories, Inc. CHILLER DISCHARGE		SM4500 CN-E-1999	
5	6187	<b>Mercury</b>	4/4/16	4/6/16	.0004 mg/L	<b>&lt;0.0004</b> mg/L
	86203		Subcontracted to Midwest Laboratories, Inc. CHILLER DISCHARGE		EPA 245.1	

**Comments, if present, concern this Lab Work Order:**

The reported analytical results relate only to the sample submitted.



NE 1/4, NE 1/4, SW 1/4, Sec 32, T11S, R33W  
 Jackson Co., MO

Vicinity Map



Scale: 1" = 2000'

Source: 7.5 Minute USGS  
 Quadrangle Map

**B** Butler Environmental  
 CONSULTANTS INC.

DSCR	Veolia Energy KC, Inc.
DR	
CK	
DATE Dec. 91	
FILE 91-040	Plate II-1



RECEIVED  
JUN 07 2016  
Water Protection Program

Missouri Department of Natural Resources  
Water Protection Program-Industrial Wastewater Unit  
PO 176  
Jefferson City, MO. 65102-0176  
Attn: Pam Hackler  
Environmental Scientist

RE: Modification to NPDES permit No. MO-0004847

June 3, 2016

Dear Pam,

Please find attached our application, accompanying documentation and associated fee, for a permit modification to our NPDES permit No: MO-0004847.

As a reminder, this request is to utilize a small ancillary part of the current river water drawn by us for pass through cooling, in order to provide boiler make-up at our facility in Kansas City. The process requires the use of an RO and uF system to clean and prepare the water for boiler makeup, resulting in a small effluent from these two processes, back into the river water loop, at the plant level.

Per your e-mail of May 3<sup>rd</sup>, we did complete the additionally requested sampling for metals, at both influent and effluent locations. Lab results are attached and recorded in the permit modification document as well.

I hope this meets with the approval of the MDNR and your office. Please let me know if you need anything else from us. I look forward to your response at your earliest convenience.

Regards,

A handwritten signature in blue ink, appearing to read 'Michael Stoppa', with a long horizontal line extending to the right.

Michael Stoppa, CSP  
Regional Director EH&S  
Veolia North America  
115 Grand Blvd.  
Kansas City, MO. 64015

[Michael.stoppa@veolia.com](mailto:Michael.stoppa@veolia.com)

cc. DiGeronimo  
dd. file