

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-0000345

Owner: Veolia North America  
Address: 53 State Street, Boston, MA 02110-1265

Continuing Authority: Same as above  
Address: Same as above

Facility Name: Trigen – St. Louis Energy Corporation  
Facility Address: 1 Ashley Place, St. Louis, MO 63102

Legal Description: See page 2  
UTM Coordinates: See page 2

Receiving Stream: See page 2  
First Classified Stream and ID: See page 2  
USGS Basin & Sub-watershed No.: See page 2

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

**FACILITY DESCRIPTION**

See page 2

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.

January 1, 2015  
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

June 30, 2017  
Expiration Date

John Madros, Director, Water Protection Program

**FACILITY DESCRIPTION (continued):**

**Outfall #001** - Eliminated 1998. Formerly non-contact cooling water from condensing turbine generators.

**Outfall #002** - Industrial, Utilities - SIC #4961, 4939

The use or operation of this facility does not require the supervision of a **Certified Operator**.

Clarifier blowdown / flocculation tank blowdown / stormwater

Design flow is 356,370 gallons per day.

Actual flow is 45,208 gallons per day.

Legal Description:	Landgrant 671, St. Louis City
UTM Coordinates:	X= 745395, Y= 4280202
Receiving Stream:	Mississippi River (P) (1707.02)
First Classified Stream and ID:	Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.:	07140101-0403

**Outfall #003** - No record of an Outfall #003 in previous permits.

**Outfall #004** - Industrial, Utilities - SIC #4961,4939

The use or operation of this facility does not require the supervision of a **Certified Operator**.

Sand filter backwash / reverse osmosis concentrate / sodium zeolite softener regeneration

Design flow is 372,400 gallons per day.

Actual flow is 130,200 gallons per day.

Legal Description:	Landgrant 671, St. Louis City
UTM Coordinates:	X= 745395, Y= 4280202
Receiving Stream:	Mississippi River (P) (1707.02)
First Classified Stream and ID:	Mississippi River (P) (1707.02)
USGS Basin & Sub-watershed No.:	07140101-0403

<b>OUTFALL #002</b>	<b>TABLE A-1. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>
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The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective **January 1, 2015**, and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Settleable Solids	mL/L/hr	*		*	once/quarter***	grab
Total Suspended Solids	mg/L	*		*	once/quarter***	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter***	grab
pH – Units	SU	**		**	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Temperature (Note 1, Page 4)	°F	*		*	once/quarter***	grab
Conductivity	µmhos/cm	*		*	once/quarter***	grab
Water Treatment Plant Additives by Type (Note 2, page 4)	tons/month	*		*	once/month	report

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

- \* Monitoring requirement only.
- \*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.
- \*\*\* See table below for quarterly sampling.

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

<b>OUTFALL #004</b>	<b>TABLE A-2. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>
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The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective **January 1, 2015**, and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Settleable Solids	mL/L/hr	*		*	once/quarter***	grab
Total Suspended Solids	mg/L	*		*	once/quarter***	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter***	grab
pH – Units	SU	**		**	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Temperature (Note 1, Page 4)	°F	*		*	once/quarter***	grab
Conductivity	µmhos/cm	*		*	once/quarter***	grab

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

- \* Monitoring requirement only.
- \*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.
- \*\*\* See table below for quarterly sampling.

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

Note 1 – Discharge from this facility shall not cause or contribute to temperatures that exceed water quality standards according to 10 CSR 20-7.031(4)(D)5.

Note 2 – The total amount of water treatment plant additives used by the plant shall be reported quarterly. This report shall include the total amount, in tons, of each individual additive used for each month within a quarter.

EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Acute Whole Effluent Toxicity	TU <sub>a</sub>	*			once/year	composite*

MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2016.

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

**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:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri’s Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri’s list of waters of the state not fully achieving the state’s water quality standards, also called the 303(d) list.

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

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

C. SPECIAL CONDITIONS cont'd

- (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. Changes in Discharges of Toxic Substances

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

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
  - (1) One hundred micrograms per liter (100 µg/L);
  - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
  - (4) The level established by the Director in accordance with 40 CFR 122.44(f).
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

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

6. 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 provide the "Non-Detect" sample 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.

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

8. All paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) shall be stored so that these materials are not exposed to stormwater. Spill prevention, control, and/or management shall be provided sufficient to prevent any spills of these pollutants from entering a water 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.

9. Good housekeeping practices shall be maintained on the site to keep solid waste from entry into waters of the state.

10. 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.

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

- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
- (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.

C. SPECIAL CONDITIONS cont'd

- (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.
12. The purpose of the BMPs listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.
13. Before releasing water that has accumulated in secondary containment areas it must be examined for hydrocarbon odor and presence of a sheen. If the presence of hydrocarbons is indicated, this water must be tested for Total Petroleum Hydrocarbons (TPH). The suggested analytical method for testing TPH is non-Halogenated Organic by Gas Chromatography method 8015 (also known as OA1 and OA2). However, if the permittee so desires to use other approved testing methods (i.e. EPA 1664), they may do so. If the concentration for TPH exceeds 10mg/L, the water shall be taken to a WWTP for treatment.
14. 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.
15. Acute Whole Effluent Toxicity (WET) tests shall be conducted as follows:

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT					
OUTFALL	AEC	Acute Toxic Unit (TU <sub>a</sub> )	FREQUENCY	SAMPLE TYPE	MONTH
002	8.7%	*	once/year	24 hr. composite	any
004	9.1%	*	once/year	24 hr. composite	any

\*Monitoring only

Outfall	Dilution Series						
	8.7%	4.35%	2.175%	1.0875%	0.54375%	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water
002	8.7%	4.35%	2.175%	1.0875%	0.54375%	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water
004	9.1%	4.55%	2.275%	1.1375%	0.56875%	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

(a) Freshwater Species and Test Methods

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

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

And the following invertebrate species:

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

C. SPECIAL CONDITIONS cont'd

- (2) Chemical and physical analysis of an upstream control sample and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping. Where upstream receiving water is not available, synthetic laboratory control water may be used.
  - (3) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.
  - (4) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analysis performed upon any other effluent concentration.
  - (5) All chemical analyses shall be performed and results shall be recorded in the appropriate field of the report form. The parameters for chemical analysis include Temperature (°C), pH (SU), Conductivity (µmohs/cm), Dissolved Oxygen (mg/L), Total Residual Chlorine (mg/L), Un-ionized Ammonia (mg/L), Total Alkalinity (mg/L), and Total Hardness (mg/L).
16. Reporting of Acute Toxicity Monitoring Results
- (a) WET test results shall be submitted to the St. Louis Regional Office, or by eDMR, with the permittee's Discharge Monitoring Reports annually, by January 28 of each year. The submittal shall include:
    - (1) A full laboratory report for all toxicity testing.
    - (2) Copies of chain-of-custody forms.
    - (3) The WET form provided by the Department upon permit issuance.
  - (b) The report must include a quantification of acute toxic units ( $TU_a = 100/LC_{50}$ ) reported according to the test methods manual chapter on report preparation and test review. The Lethal Concentration, 50 Percent ( $LC_{50}$ ) is the toxic or effluent concentration that would cause death in 50 percent of the test organisms over a specified period of time.
17. Permit Reopener for Acute Toxicity
- In accordance with 40 CFR Parts 122 and 124, this permit may be modified to include effluent limitations or permit conditions to address acute toxicity in the effluent or receiving waterbody, as a result of the discharge; or to implement new, revised, or newly interpreted water quality standards applicable to acute toxicity.

**Missouri Department of Natural Resources**  
**FACT SHEET**  
**FOR THE PURPOSE OF RENEWAL**  
**OF**  
**MO-0000345**  
**TRIGEN – ST. LOUIS ENERGY CORPORATION**

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 – Utilities  
Facility SIC Code(s): 4961/4939

**Facility Description:**

Utilities generation facility – natural gas and number 2 fuel oil fired district heating and cooling facility. This facility has two wastewater streams. The first stream combines flocc tank blowdown, clarifier blowdown and stormwater, which discharges from Outfall #002. The second stream combines sand filter backwash, reverse osmosis concentrate and sodium zeolite softener regeneration wastewater, which discharges from Outfall #004.

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

- Yes.  
 - No.

Application Date: 09/04/2008  
Expiration Date: 03/04/2009  
Last Inspection: 06/09/2010 In Compliance ; Non-Compliance

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
002	0.55	None	Industrial and Stormwater
004	0.58	None	Industrial

**Facility Performance History & Comments:**

The most recent site-inspection was conducted on June 9, 2010. The goal of this site-inspection was to determine the amount of stormwater in the facility outfalls and to provide assistance in the permit renewal process. The facility was found to be in compliance during the time of this inspection.

**Part II – Receiving Stream Information**

Receiving Water Body’s Water Quality

No stream surveys exist for the Mississippi River (P) (1707.02). Currently, this segment is not on the 303(d) List; however, this segment has been included in the Total Maximum Daily Load (TMDL) report for Chlordane and PCBs. This facility is not specifically listed as a pollutant source. Since, Chlordane and PCBs have been banned, there is no specific remediation plant required by the TMDL.

**APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:**

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

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

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

**RECEIVING STREAM(S) TABLE: OUTFALL #002 & #004**

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	DISTANCE TO CLASSIFIED SEGMENT	12-DIGIT HUC**
Mississippi River	P	1707.02	AQL, DWS, GEN, IND, IRR, LWW, SCR	0.0	07140101-0403

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

**RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:**

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Mississippi River (P)	53,605	57,436	64,309

**MIXING CONSIDERATIONS TABLE:**

MIXING ZONE (CFS) [10 CSR 20-7.031(5)(A)4.B.(III)(a)]		ZONE OF INITIAL DILUTION (CFS) [10 CSR 20-7.031(5)(A)4.B.(III)(b)]	
7Q10	30Q10	1Q10	7Q10
14,359	16,077	5.8*	5.8*

\*10 CSR 20-7.031(5)(A)4.B.(III)(b) does not allow a ZID greater than 10 times the effluent design flow. Therefore, the permit writer has used best professional judgment to grant a ZID of 10 times the largest design flow between the two outfalls.

**RECEIVING STREAM MONITORING REQUIREMENTS:**

No receiving water monitoring requirements recommended at this time.

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

#### **ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:**

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

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

#### **ANTI-BACKSLIDING:**

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

- Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.

- 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 writer required an Average Weekly Limit (AWL) and an Average Monthly Limit (AML) for Oil & Grease. However, the 15 mg/L associated with the AWL in the previous permit should actually be a Maximum Daily Limit (MDL). Therefore, the permit writer used best professional judgment to move that concentration to the MDL and implement only an MDL and an AML instead of an AWL and AML. Additionally, the AWL monitoring only requirement was removed for Chemical Oxygen Demand (COD) at Outfall #002. Whether this was intentional or a typographical error, it creates excessive monitoring requirements for COD at this facility. A MDL and a AML monitoring requirement will capture any issues with oxygen demand the facility may have.

#### **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.

#### **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.

#### **REASONABLE POTENTIAL ANALYSIS (RPA):**

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

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

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

**SCHEDULE OF COMPLIANCE (SOC):**

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

Not Applicable; This permit does not contain a SOC.

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP):**

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

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

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

Not Applicable; At this time, the permittee is not required to develop and implement a SWPPP.

**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.

**VARIANCE:**

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

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

**WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:**

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

Not Applicable; Wasteload allocations were not calculated.

**WLA MODELING:**

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

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

**WATER QUALITY STANDARDS:**

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

**WHOLE EFFLUENT TOXICITY (WET) TEST:**

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

Applicable;

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

- Facility is a designated Major.
- Facility continuously or routinely exceeds its design flow.
- Facility that exceeds its design population equivalent (PE) for BOD<sub>5</sub> whether or not its design flow is being exceeded.
- Facility (whether primarily domestic or industrial) that alters its production process throughout the year.
- Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH<sub>3</sub>)
- Facility is a municipality with a Design Flow  $\geq$  22,500 gpd.
- Other – please justify.

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

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

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

Not Applicable; This facility does not discharge to a 303(d) listed stream; however, the Mississippi (P) (1707.02) is associated with a TMDL for Chlordane and PCBs. This facility is not specifically listed as a pollutant source. Since, Chlordane and PCBs have been banned, there is no specific remediation plan required by the TMDL.

**Part IV – Effluent Limits Determination**

**Outfall #002 – Main Facility Outfall**

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

NOTE – This outfall discharges to the Mississippi River (P) (1707.02), which has a large mixing allowance associated with it. Therefore, the existing effluent limitations have been carried over from the previous permit. Many parameters require monitoring only. This is due to the fact that when mixing considerations are incorporated into the wasteload allocation calculations, the results are much less stringent than the water quality standards.

**EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	Basis for Limits	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	*/*
SETTLABLE SOLIDS	ML/L/HR	9	*		*	NO	*/*
TSS	MG/L	1, 3	*		*	NO	*/*
COD	MG/L	9	*		*	YES	*/**
pH	SU	1, 3	6.0-9.0		6.0-9.0	NO	6.0-9.0
OIL & GREASE (MG/L)	MG/L	1, 3	15		10	YES	15/10
TEMPERATURE	°F	1, 9	***		***	NO	***
CONDUCTIVITY	µmhos/cm	9	*		*	NO	*/*
WATER TREATMENT ADDITIVES BY TYPE	tons/month	9	****		****	NO	****
WHOLE EFFLUENT TOXICITY (WET) TEST	% Survival	11	Please see WET Test in the Derivation and Discussion Section below.				

\* - Monitoring requirement only.

\*\* - Parameter not previously established in previous state operating permit.

\*\*\* - Discharge shall not exceed temperature requirements listed in 10 CSR 20-1.031(4)(D)5.&6.

\*\*\*\* - Total amount of treatment additives used by facility.

**Basis for Limitations Codes:**

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

**OUTFALL #002 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Settleable Solids.** The monitoring requirement for this parameter has been re-evaluated and determined to be necessary to protect the water quality in the receiving stream. The permit writer has used best professional judgment to continue the monitoring only requirement based on the nature of the discharge being industrial flow.
- **Total Suspended Solids (TSS).** The monitoring requirement for this parameter has been re-evaluated and determined to be necessary to protect the water quality in the receiving stream. The permit writer has used best professional judgment to continue the monitoring only requirement based on the nature of the discharge being industrial flow.
- **Chemical Oxygen Demand (COD).** The monitoring requirement for this parameter has been re-evaluated and determined to be necessary to protect the water quality in the receiving stream. The permit writer has used best professional judgment to continue the monitoring only requirement based on the nature of the discharge being industrial flow. However, the permit writer has used best professional judgment to remove the Weekly Average monitoring requirement. There does not appear to be any technical reasoning or best professional judgment to require this extra monitoring.

- **pH.** – 6.0-9.0 SU. Technology based limits [10 CSR 20-7.015] are protective of the water quality standard [10 CSR 20-7.031(4)(E)], due to the buffering capacity of the mixing zone.
- **Oil & Grease.** Conventional pollutant, in accordance with 10 CSR 20-7.031 Table A effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum. The permit writer has used best professional judgment to change the weekly average effluent limitation to a daily maximum effluent limitation. It was a mistake by the previous permit writer to have a weekly average effluent limitation for this parameter. This is consistent with all permits issued in the State of Missouri.
- **Temperature.** The monitoring requirement for this parameter has been re-evaluated and determined to be necessary to protect the water quality in the receiving stream. The temperature can be affected by nature of the heating and cooling process within the generation system. The permit writer has used best professional judgment to continue the monitoring only requirement based on the nature of the discharge being industrial flow. However, the permit writer has used best professional judgment to convert the unit from degrees Celsius to degrees Fahrenheit. This is consistent with other industrial permits issued in the State of Missouri.
- **Conductivity.** The monitoring requirement for this parameter has been re-evaluated and determined to be necessary to protect the water quality in the receiving stream. The permittee utilizes polymers for flocculation and reverse osmosis. These components to the industrial process may contain dissolved solids that can affect water quality. High conductivity correlates to high concentrations of dissolved solids in the water. Monitoring for conductivity provides the permittee and the Department with an indicator that operations and maintenance need to be evaluated to ensure the facility is treating the wastewater adequately to protect the water quality in the receiving stream.
- **Water Treatment Additives by Type.** The monitoring requirement for this parameter has been re-evaluated and determined to be necessary to protect the water quality in the receiving stream. Due to the potential variety of polymers, cleaners and other additives that can be used in this process, the permittee shall monitor for these additives along with the other parameters listed in the permit. The permit writer has used best professional judgment to continue the monitoring only requirement based on the nature of the discharge being industrial flow. These parameters will assist in the WET Test analysis to determine if the discharge is toxic and what components of that discharge may be contributing to the toxicity.
- **WET Test.** WET Testing schedules and intervals are established in accordance with the Department’s Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow.
  - Acute
  - No less than **ONCE/YEAR:**
    - Facility is designated as a Major facility or has a design flow  $\geq 1.0$  MGD.
    - Facility continuously or routinely exceeds their design flow.
    - Facility exceeds its design population equivalent (PE) for BOD<sub>5</sub> whether or not its design flow is being exceeded.
    - Facility has Water Quality-based effluent limitations for toxic substances (other than NH<sub>3</sub>).

Acute AEC% =  $((0.55 + 5.8) / 0.55)^{-1} \times 100 = 8.7\%$

**Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/quarter	once/quarter
Settleable Solids	once/quarter	once/quarter
TSS	once/quarter	once/quarter
COD	once/quarter	once/quarter
pH	once/quarter	once/quarter
Oil & Grease	once/quarter	once/quarter
Temperature	once/quarter	once/quarter
Conductivity	once/quarter	once/quarter
Water Treatment Additives by Type	once/quarter	once/quarter
WET Test	once/year	once/year

**Sampling Frequency Justification:**

Sampling and Reporting Frequency was retained from previous permit. The permit writer uses best professional judgment to determine that quarterly frequencies provide adequate data to make a determination as to the potential for the discharge to cause impairment to the receiving stream.

**Sampling Type Justification**

Sampling Type was retained from previous permit. The permit writer uses best professional judgment to determine that grab samples provide represented samples of the discharge.

**Outfall #004 – Main Facility Outfall**

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

NOTE – This outfall discharges to the Mississippi River (P) (1707.02), which has a large mixing allowance associated with it. Therefore, the existing effluent limitations have been carried over from the previous permit. Many parameters require monitoring only. This is due to the fact that when mixing considerations are incorporated into the wasteload allocation calculations, the results are much less stringent than the water quality standards.

**EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	Basis for Limits	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	*/*
SETTLABLE SOLIDS	ML/L/HR	9	*		*	NO	*/*
TSS	MG/L	1, 3	*		*	NO	*/*
COD	MG/L	9	*		*	NO	*/**
pH	SU	1, 3	6.0-9.0		6.0-9.0	NO	6.0-9.0
OIL & GREASE (MG/L)	MG/L	1, 3	15		10	YES	15/10
TEMPERATURE	°F	1, 9	***		***	NO	***
CONDUCTIVITY	µmhos/cm	9	*		*	NO	*/*
TOTAL RESIDUAL CHLORINE	mg/L	1, 3, 9	*****		*****	NO	*/*
WHOLE EFFLUENT TOXICITY (WET) TEST	% Survival	11	Please see WET Test in the Derivation and Discussion Section below.				

- \* - Monitoring requirement only.
- \*\* - Parameter not previously established in previous state operating permit.
- \*\*\* - Discharge shall not exceed temperature requirements listed in 10 CSR 20-1.031(4)(D)5.&6.
- \*\*\*\* - Total amount of treatment additives used by facility.
- \*\*\*\*\* - Parameter removed from permit.

**Basis for Limitations Codes:**

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

**OUTFALL #004 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Settleable Solids.** The monitoring requirement for this parameter has been re-evaluated and determined to be necessary to protect the water quality in the receiving stream. The permit writer has used best professional judgment to continue the monitoring only requirement based on the nature of the discharge being industrial flow.

- **Total Suspended Solids (TSS)**. The monitoring requirement for this parameter has been re-evaluated and determined to be necessary to protect the water quality in the receiving stream. The permit writer has used best professional judgment to continue the monitoring only requirement based on the nature of the discharge being industrial flow.
- **Chemical Oxygen Demand (COD)**. The monitoring requirement for this parameter has been re-evaluated and determined to be necessary to protect the water quality in the receiving stream. The permit writer has used best professional judgment to continue the monitoring only requirement based on the nature of the discharge being industrial flow. However, the permit writer has used best professional judgment to remove the Weekly Average monitoring requirement. There does not appear to be any technical reasoning or best professional judgment to require this extra monitoring.
- **pH** – 6.0-9.0 SU. Technology based limits [10 CSR 20-7.015] are protective of the water quality standard [10 CSR 20-7.031(4)(E)], due to the buffering capacity of the mixing zone.
- **Oil & Grease**. Conventional pollutant, in accordance with 10 CSR 20-7.031 Table A effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum. The permit writer has used best professional judgment to change the weekly average effluent limitation to a daily maximum effluent limitation. It was a mistake by the previous permit writer to have a weekly average effluent limitation for this parameter. This is consistent with all permits issued in the State of Missouri.
- **Temperature**. The monitoring requirement for this parameter has been re-evaluated and determined to be necessary to protect the water quality in the receiving stream. The temperature can be affected by nature of the heating and cooling process within the generation system. The permit writer has used best professional judgment to continue the monitoring only requirement based on the nature of the discharge being industrial flow. However, the permit writer has used best professional judgment to convert the unit from degrees Celsius to degrees Fahrenheit. This is consistent with other industrial permits issued in the State of Missouri.
- **Conductivity**. The monitoring requirement for this parameter has been re-evaluated and determined to be necessary to protect the water quality in the receiving stream. The permittee utilizes polymers for flocculation and reverse osmosis. These components to the industrial process may contain dissolved solids that can affect water quality. High conductivity correlates to high concentrations of dissolved solids in the water. Monitoring for conductivity provides the permittee and the Department with an indicator that operations and maintenance need to be evaluated to ensure the facility is treating the wastewater adequately to protect the water quality in the receiving stream.
- **Total Residual Chlorine (TRC)**. The monitoring requirement for this parameter has been re-evaluated and determined to be unnecessary to protect the water quality in the receiving stream. It is unclear why this parameter was implemented in the previous permit. After discussion with the permittee, the permit writer used best professional judgment to remove this parameter from the permit. The permittee indicated that they now use the municipal water supply as source water for the industrial process, which can possibly be a source of TRC. However, the permittee explained that TRC is corrosive to the Reverse Osmosis (RO) system being used at the facility, so sodium bisulfate is added to the water prior to the RO system to ensure that TRC is reduced to an operational level in the water supply. The DMR results show 0.10 mg/L over the past five years for all samples. The permit writer assumes this is the minimum detection level for the method and all samples resulted in concentrations below detection level.
- **WET Test**. WET Testing schedules and intervals are established in accordance with the Department's Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow.
  - Acute
  - No less than ONCE/YEAR:**
    - Facility is designated as a Major facility or has a design flow  $\geq 1.0$  MGD.
    - Facility continuously or routinely exceeds their design flow.
    - Facility exceeds its design population equivalent (PE) for BOD<sub>5</sub> whether or not its design flow is being exceeded.
    - Facility has Water Quality-based effluent limitations for toxic substances (other than NH<sub>3</sub>).

$$\text{Acute AEC\%} = ((0.58 + 5.8) / 0.58)^{-1} \times 100 = 9.1\%$$

**Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/quarter	once/quarter
Settleable Solids	once/quarter	once/quarter
TSS	once/quarter	once/quarter
COD	once/quarter	once/quarter
pH	once/quarter	once/quarter
Oil & Grease	once/quarter	once/quarter
Temperature	once/quarter	once/quarter
Conductivity	once/quarter	once/quarter
Water Treatment Additives by Type	once/quarter	once/quarter
WET Test	once/year	once/year

**Sampling Frequency Justification:**

Sampling and Reporting Frequency was retained from previous permit. The permit writer uses best professional judgment to determine that quarterly frequencies provide adequate data to make a determination as to the potential for the discharge to cause impairment to the receiving stream.

**Sampling Type Justification**

Sampling Type was retained from previous permit. The permit writer uses best professional judgment to determine that grab samples provide represented samples of the discharge.

## **Part V– 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.

### **PUBLIC NOTICE:**

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

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

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

- The Public Notice period for this operating permit is began on September 19, 2014 and ended on October 20, 2014. The permittee provided a correct owner name and address during the Public Notice period. The correct information is reflected in the permit.

**DATE OF FACT SHEET:** JULY 31, 2014

### **COMPLETED BY:**

**LOGAN COLE, ENVIRONMENT SPECIALIST  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
OPERATING PERMITS SECTION – INDUSTRIAL PERMIT UNIT  
(573) 751-5827  
[logan.cole@dnr.mo.gov](mailto:logan.cole@dnr.mo.gov)**



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(a)(1);
    - iii. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
    - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **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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MISSOURI CLEAN WATER COMMISSION  
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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



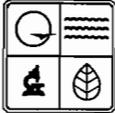
STANDARD CONDITIONS FOR NPDES PERMITS  
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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (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 permittee 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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10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
  - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
  - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
  - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
  - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
  - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
  - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.



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

**REISSUE**

AP 5782

FOR AGENCY USE ONLY

CHECK NO.

No Fee Required

DATE RECEIVED

2/16/12

FEE SUBMITTED

0

(R)

**NOTE**

PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.



1.00 This application is for:

a construction permit

an operating permit for a new or unpermitted facility  
 (See instructions for appropriate fee to be submitted with application)

an operating permit modification

Reason: \_\_\_\_\_

an operating permit renewal: permit # MO0000345

Expiration date: 03/04/2009

a site specific storm water permit

**2.00 FACILITY**

NAME TRIGEN-ST. LOUIS ENERGY CORPORATION		PHONE	314-621-3550
		FAX	314-621-8516
ADDRESS (PHYSICAL) 1 ASHLEY PLACE	CITY ST. LOUIS, MO	STATE MO	ZIP 63102

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

If yes, please provide Missouri Construction Permit Number: \_\_\_\_\_

**3.00 OWNER**

NAME VEOLIA ENERGY NORTH AMERICA		EMAIL ADDRESS	PHONE	617-482-8080
			FAX	
ADDRESS (MAILING) 99 SUMMER STREET SUITE 900	CITY BOSTON	STATE MA	ZIP	02110-1265

3.10 Request review of draft permit prior to Public Notice?  YES  NO

**4.00 CONTINUING AUTHORITY**

NAME SAME AS ABOVE		PHONE	
		FAX	
ADDRESS (MAILING) SAME AS ABOVE	CITY	STATE	ZIP

**5.00 OPERATOR**

NAME SAME AS ABOVE		CERTIFICATE NUMBER	PHONE	
			FAX	
ADDRESS (PHYSICAL) SAME AS ABOVE	CITY	STATE	ZIP	

**6.00 FACILITY CONTACT**

NAME DON ANDERSON		TITLE OPERATIONS MANAGER	PHONE	314-621-3550
			FAX	314-621-3866

**7.00 ADDITIONAL FACILITY INFORMATION**

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

001	_____ 1/4	_____ 1/4	Sec _____	T 45N R 7E	ST. LOUIS CITY County
002	_____ 1/4	_____ 1/4	Sec _____	T 45N R 7E	ST. LOUIS CITY County
003	_____ 1/4	_____ 1/4	Sec _____	T _____	R _____ County
004	_____ 1/4	_____ 1/4	Sec _____	T 45N R 7E	ST. LOUIS CITY County

7.20 Primary Standard Industrial Classification (SIC) Code: 4961

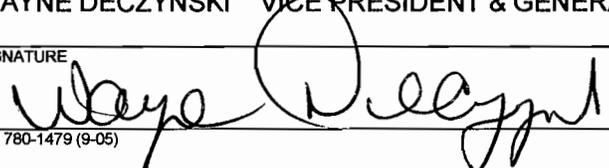
**8.0 ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION**  
 (Complete all forms that are applicable)

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

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

NAME CITY OF ST. LOUIS - PORT AUTHORITY			
ADDRESS 1015 LOCUST ST.	CITY ST. LOUIS	STATE MO	ZIP 63101

10.0 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) WAYNE DECZYNSKI VICE PRESIDENT & GENERAL MANAGER	PHONE NO. (AREA CODE & NO.) 314-621-3550 ex 2141
SIGNATURE 	DATE SIGNED

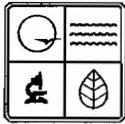
MO 780-1479 (9-05)

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

HAVE YOU INCLUDED:

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

*Ken Rung, New JP*  
*Don Anderson, Ops guy*



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

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

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

1.00 NAME OF FACILITY

TRIGEN - ST. LOUIS ENERGY CORPORATION - ASHLEY PLANT

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

MO 0000345

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

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

A. FIRST 4961 B. SECOND \_\_\_\_\_  
 C. THIRD \_\_\_\_\_ D. FOURTH \_\_\_\_\_

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 SEC \_\_\_\_\_ T 45N R 7E ST. LOUIS CITY County

OD1 (INACTIVE-FORMERLY NON-CONTACT COOLING WATER FROM CONDENSING TURBINE GENERATORS - REMOVED 1998)

OD2 CLARIFIER BLOWDOWN

OD4 FILTER BACKWASH/SODIUM ZEOLITE SOFTENER REGENERATION/REVERSE OSMOSIS CONCENTRATE

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

OUTFALL NUMBER (LIST) RECEIVING WATER

001, 002, 004: MISSISSIPPI RIVER - MILE UM 180.5

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS:

NATURAL GAS/NO. 2 FUEL OIL FIRED DISTRICT HEATING AND COOLING



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. DUR- ATION (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	
002	CLARIFIER BLOWDOWN	7	12	0.0405	0.3087		
002	FLOC TANK BLOWDOWN	7	12	0.0047	0.0472		
004	SAND FILTER BACKWASH	7	12	0.0022	0.0700		
004	R.O. CONCENTRATE	7	12	0.0488	0.1440		
004	SODIUM ZEOLITE SOFTENER REGENERATION	7	12	0.0792	0.1584		

2.50 MAXIMUM PRODUCTION

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

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

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

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

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

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

2.60 IMPROVEMENTS

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

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

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

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

MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED.



3.10 BIOLOGICAL TOXICITY TESTING DATA

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

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

3.20 CONTRACT ANALYSIS INFORMATION

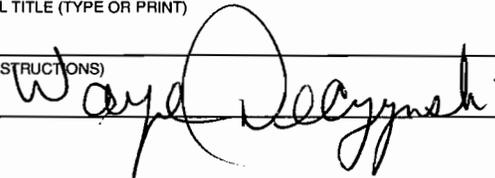
WERE ANY OF THE ANALYSES REPORTED PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM?

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

A. NAME	B. ADDRESS	C. TELEPHONE (area code and number)	D. POLLUTANTS ANALYZED (list)
PDC LABORATORIES, INC	P.O. Box 9071 PEORIA, IL. 61612-9071	(309) 692-9688	COD TSS PH CHLORINE (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)	TELEPHONE NUMBER (AREA CODE AND NUMBER)
SIGNATURE (SEE INSTRUCTIONS) 	DATE SIGNED

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

FORM C  
 TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO.  
 002

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

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

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		D. NO. OF ANAL. YSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL. YSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	<5.0					MG/L				
B. Chemical Oxygen Demand (COD)						MG/L				
C. Total Organic Carbon (TOC)										
D. Total Suspended Solids (TSS)	360					MG/L				
E. Ammonia (as N)										
F. Flow	VALUE	0.3560	VALUE							
G. Temperature (winter)	VALUE	AMBIENT	VALUE			*C				
H. Temperature (summer)	VALUE	AMBIENT	VALUE			*C				
I. pH	MINIMUM	6.5	MAXIMUM	9.0		STANDARD UNITS				

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

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT		4. UNITS		5. INTAKE (optional)					
	A. BE- LIEVED PRE- SENT	B. BE- LIEVED AB- SENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	B. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	D. NO. OF ANAL. YSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	B. NO. OF ANAL. YSES
A. Bromide (24959-67-9)	X											
B. Chlorine Total Residual	X											
C. Color	X											
D. Fecal Coliform	X											
E. Fluoride (16984-48-8)	X											
F. Nitrate-Nitrite (as N)	X											

NOTE: POLLUTANTS ANALYZED IN B&D ARE FROM 1ST QUARTER 2008 COMPLIANCE ANALYSIS  
 (NO DISCHARGE FROM OUTFALL NO.002 SINCE APRIL 4, 2008)

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

3.10 BIOLOGICAL TOXICITY TESTING DATA

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

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

3.20 CONTRACT ANALYSIS INFORMATION

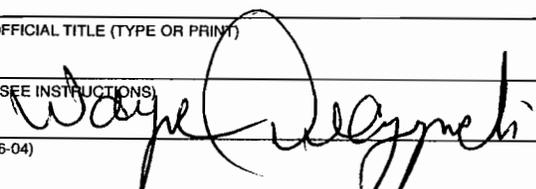
WERE ANY OF THE ANALYSES REPORTED PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM?

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

A. NAME	B. ADDRESS	C. TELEPHONE (area code and number)	D. POLLUTANTS ANALYZED (list)
PDC LABORATORIES, INC.	P.O. Box 971 PEORIA, IL. 61612-9071	(309) 692-9688	COD TSS PH CHLORINE (TOTAL) BOD AMMONIA TOC

3.30 CERTIFICATION

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE NUMBER (AREA CODE AND NUMBER)
SIGNATURE (SEE INSTRUCTIONS) 	DATE SIGNED

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

FORM C  
TABLE 1 FOR 3.00 ITEM A AND B

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

OUTFALL NO.

004

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

1. POLLUTANT	2. EFFLUENT		3. LONG TERM AVRG. VALUE		D. NO. OF ANAL. YSES	3. UNITS (Specify if blank)		4. INTAKE (optional)		B. NO. OF ANAL. YSES
	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	B. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	(2) MASS		A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	<6					MG/L				
B. Chemical Oxygen Demand (COD)	13					MG/L				
C. Total Organic Carbon (TOC)	2.9					MG/L				
D. Total Suspended Solids (TSS)	6					MG/L				
E. Ammonia (as N)	0.91					MG/L				
F. Flow	VALUE	VALUE	VALUE	VALUE						
G. Temperature (winter)	VALUE	VALUE	VALUE	VALUE		°C				
H. Temperature (summer)	VALUE	VALUE	VALUE	VALUE		°C				
I. pH	MINIMUM	MINIMUM	MAXIMUM	MAXIMUM		STANDARD UNITS				
	7.0	7.0	9.0							

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

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT		4. UNITS		5. INTAKE (optional)		
	A. BE- LIEVED PRE- SENT	B. BE- LIEVED AB- SENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	B. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	(2) MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	B. NO. OF ANAL. YSES
A. Bromide (24959-67-9)	X								
B. Chlorine Total Residual	X		ND						
C. Color	X								
D. Fecal Coliform	X								
E. Fluoride (16984-48-8)	X								
F. Nitrate- Nitrite (as N)	X								

MO 780-1514 (6-04)

PAGE 6

B. NO. OF ANAL. YSES

CONTINUED FROM FRONT **OUTFALL NO. 004**

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

MO 780-1514 (6-04)





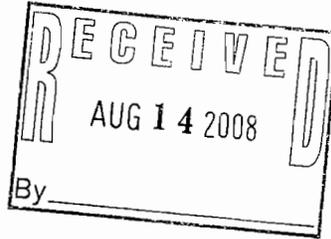




**PDC Laboratories, Inc.**  
 P.O. Box 9071 • Peoria, IL 61612-9071  
 (309) 692-9688 • (800) 752-6651 • FAX (309) 692-9689



Trigen - St. Louis Energy  
 One Ashley Place  
 St. Louis, MO 63102  
 Attn: Mr. Don Anderson



Date Received: 24-Jul-08  
 Date Reported: 29-Jul-08

Sample No:	Client Id:	Site:	Collect Date:	Locator:	Result	Units	Date / Time	Analyst	Lab
08078415-1	SOFTNER	GRAB #1	24-Jul-08 9:15	BACKWASH					
<b>EPA 1664 REV 2/99</b>									
Hexane Ext. Material (HEM) by LLE		<	5	mg/l	28-Jul-08 15:30	MEP			3
08078415-2	SOFTNER	GRAB #2	24-Jul-08 9:45	BRINE					
<b>EPA 1664 REV 2/99</b>									
Hexane Ext. Material (HEM) by LLE		<	5	mg/l	28-Jul-08 15:30	MEP			3
08078415-3	SOFTNER	GRAB #3	24-Jul-08 10:30	RINSE SLOW					
<b>EPA 1664 REV 2/99</b>									
Hexane Ext. Material (HEM) by LLE			7.5	mg/l	28-Jul-08 15:30	MEP			3
08078415-4	SOFTNER	GRAB #4	24-Jul-08 11:15	RINSE FAST					
<b>EPA 1664 REV 2/99</b>									
Hexane Ext. Material (HEM) by LLE		<	5	mg/l	28-Jul-08 15:30	MEP			3
08078415-5	SOFTNER	9:15-11:15	24-Jul-08 11:15	SOFTNER D					
<b>SM (18) 2510B</b>									
Conductivity			23000	umhos/cm	25-Jul-08 10:30	DM			3
<b>SM (18) 2540D</b>									
Solids, Total Suspended			17	mg/l	24-Jul-08 17:00	AV			3
<b>SM (18) 2540F</b>									
Settleable Solids		<	0.1	ml/l	24-Jul-08 14:00	DM			3
<b>SM (18) 4500 NH3 F</b>									
Nitrogen, Ammonia as N			6.1	mg/l	24-Jul-08 17:00	AV			3





**PDC Laboratories, Inc.**  
 P.O. Box 9071 • Peoria, IL 61612-9071  
 (309) 692-9688 • (800) 752-6651 • FAX (309) 692-9689



Trigen - St. Louis Energy  
 One Ashley Place  
 St. Louis, MO 63102

Date Received 27-Aug-08  
 Date Reported 04-Sep-08

Attn: Mr. Don Anderson

Sample No: 08088491-1			Collect Date: 27-Aug-08 9:25			
Client Id: OUTFALL 004	Site: STL	Locator: FILTER BACKWASH				
		<b>Result</b>	<b>Units</b>	<b>Date / Time</b>		<b>Analyst</b>
<b>SM (18) 4500 NH3 F</b>						
Nitrogen, Ammonia as N		0.91	mg/l	29-Aug-08	17:00	AV
<b>SM (18) 5210B</b>						
Biochemical Oxygen Demand		<	6 mg/l	27-Aug-08	12:00	DM
<b>SM (18) 5310D</b>						
Carbon, Total Organic		2.9	mg/l	04-Sep-08	10:51	pli



**PUROLITE**

## MATERIAL SAFETY DATA SHEET

### 1 PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** C100

C100E,C100EAG,C100EB,C100EDK,C100EF,C100EFM,C100EG,C100ELT,C100FM,C100x10,C120E,  
C145,C148,C150,C160,SST-60,SST-60E,SST-80 (also in STD,C,E,G,S,CL,DL,EP,FL,MB,PL,TL grade  
and PFC,PPC)

**Manufacturer Name:**

The Purolite Company  
150 Monument Road  
Bala Cynwyd, PA 19004, USA  
Tel: +1 610 668 9090; Fax: +1 610 668 8139

**Emergency Telephone:**

(866) 387-7344  
Non-toll free number: 760-602-8703

**Supplier:**

Purolite International Limited  
Llantrisant Business Park  
Llantrisant, Wales, UK CF72 8 L  
Tel: +44 1443 229334; Fax: +44 1443 227073

Purolite Company Ltd.  
Dongmenwai, Chengguan Town. Deqing Co.,  
Huzhou City, Zhejiang 313216  
Tel: +86 572 842 2908; Fax: +86 572 842 5345

**Intended Use:** Ion Exchange, Adsorbent, and / or  
Catalyst

**Contact Person:**  
Ken Shaner, E-mail: [kshaner@puroliteusa.com](mailto:kshaner@puroliteusa.com)

### 2 HAZARDS IDENTIFICATION

**Emergency Overview**

**Physical State:** Solid (bead)

**Color:** Not applicable.

**Odor:** Not applicable.

Low hazard for usual industrial or commercial handling by trained personnel.

**Potential Health Effects**

**Inhalation:** Limited inhalation hazard at normal work temperatures.

C100  
C100E,C100EAG,C100EB,C100EDK,C1  
00EF,C100EFM,C100EG,C100ELT,C10  
0FM,C100x10,C120E,C145,C148,C150,  
C160,SST-60,SST-60E,SST-80 (also in  
STD,C,E,G,S,CL,DL,EP,FL,MB,PL,TL  
grade and PFC,PPC)

07-Dec-2007

**Eye Contact:** May cause temporary eye irritation.

**Skin Contact:** May be slightly irritating to skin.

**Ingestion:** Under normal conditions of intended use, this material does not pose a risk to health. However, ingestion may cause irritation and malaise.

**Chronic Health Effects:** No other specific acute or chronic health impact noted.

**Target Organ(s):** | Eye | Skin.

**Potential Physical / Chemical Effects:** This product is not flammable.

**OSHA Regulatory Status:** This product is not hazardous according to OSHA 29CFR 1910.1200.

**Environment:** The environmental hazard of the product is considered to be limited.

### 3 COMPOSITION / INFORMATION ON INGREDIENTS

**General Information:** The product contains: Polymer.

The components are not hazardous or are below required disclosure limits.

Chemical Name	CAS-No.	Concentration*
Benzene, diethenyl-, polymer with ethenylbenzene and ethenylethylbenzene, sulfonated, sodium salts	69011-22-9	40 - 60%
Water	7732-18-5	40 - 60%

### 4 FIRST AID MEASURES

**Inhalation:** No specific first aid measures noted.

**Eye Contact:** Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. Get medical attention if any discomfort continues.

**Skin Contact:** Wash skin with soap and water.

**Ingestion:** Immediately rinse mouth and drink plenty of water (200-300 ml). Large quantities: Get medical attention if irritation develops and persists.

### 5 FIRE-FIGHTING MEASURES

**Extinguishing Media:** Extinguish with foam, carbon dioxide, dry powder or water fog.

**Unsuitable Extinguishing Media:** Not applicable.

**Special Fire Fighting Procedures:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**Unusual Fire & Explosion Hazards:** None known.

**Hazardous Combustion Products:** Benzene compounds, Carbon Oxides, Styrene, Sulfur Oxides

**Protective Measures:** Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

**Flammability Class:** NFPA Rating Fire = 1.

## 6 ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** In case of spills, beware of slippery floors and surfaces. See Section 8 of the MSDS for Personal Protective Equipment.

**Spill Cleanup Methods:** Sweep up spilled substance and remove to safe place. Do not discharge onto the ground or into water courses. Collect and dispose of spillage as indicated in section 13 of the MSDS.

## 7 HANDLING AND STORAGE

**Handling:** Avoid contact with eyes and prolonged skin contact. See Section 8 of the MSDS for Personal Protective Equipment. Observe good industrial hygiene practices.

**Storage:** Store at temperatures above 0°C. Store at temperature below 40°C. Keep in original container. Keep container tightly closed to prevent the loss of water. Store away from incompatible materials.

## 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Limits:** No exposure limits noted for ingredient(s).

**Engineering Controls:** Provide adequate ventilation.

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: High-efficiency particulate respirator.

**Eye Protection:** Risk of contact: Wear approved safety goggles.

**Hand Protection:** Risk of contact: Wear protective gloves. Suitable gloves can be recommended by the glove supplier.

**Skin Protection:** Risk of contact: Use skin protection. It is a good industrial hygiene practice to minimize skin contact.

**Hygiene Measures:** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**Environmental Exposure Controls:** Environmental manager must be informed of all major spillages.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

**Color:** Not applicable.  
**Odor:** Not applicable.  
**Odor Threshold:** Not applicable.  
**Physical State:** Solid (bead)  
**pH:** Not applicable  
**Melting Point:** Not applicable.  
**Freezing Point:** Not applicable.  
**Boiling Point:** Not applicable.  
**Flash Point:** Not applicable.  
**Evaporation Rate:** Not applicable.  
**Flammability Limit - Upper (%):** Not applicable.  
**Flammability Limit - Lower (%):** Not applicable.  
**Vapor Pressure:** Not applicable.  
**Vapor Density (Air=1):** Not applicable.  
**Specific Gravity:** Not applicable.  
**Solubility in Water:** Insoluble  
**Solubility (Other):** Not applicable.  
**Partition Coefficient (n-Octanol/water):** Not applicable.  
**Autoignition Temperature:** Not applicable.  
**Decomposition Temperature:** Not applicable.

## 10 STABILITY AND REACTIVITY

**Stability:** Material is stable under normal conditions.

**Conditions to Avoid:** Avoid heat.

**Incompatible Materials:** Strong oxidizing agents. Nitric acid.

### Hazardous Decomposition Products:

At Elevated Temperatures:	Benzene compounds, Carbon Oxides, Styrene, Sulfur Oxides
---------------------------	--

**Possibility of Hazardous Reactions:** Will not occur.

## 11 TOXICOLOGICAL INFORMATION

**Listed Carcinogens:** None.

C100  
C100E,C100EAG,C100EB,C100EDK,C1  
00EF,C100EFM,C100EG,C100ELT,C10  
0FM,C100x10,C120E,C145,C148,C150,  
C160,SST-60,SST-60E,SST-80 (also in  
STD,C,E,G,S,CL,DL,EP,FL,MB,PL,TL  
grade and PFC,PPC)

07-Dec-2007

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### **Product Information**

**Acute Toxicity:** No additional adverse health effects noted.

**Chronic Toxicity:** No data available.

<b>12</b>	<b>ECOLOGICAL INFORMATION</b>
-----------	-------------------------------

**Ecotoxicity:** No data available.

**Mobility:** The product is insoluble in water and will sediment in water systems.

**Persistence and Degradability:** The product is not readily biodegradable.

**Bioaccumulation Potential:** Potential to bioaccumulate is low.

**Other Adverse Effects:** No data available.

<b>13</b>	<b>DISPOSAL CONSIDERATIONS</b>
-----------	--------------------------------

**General Information:** Dispose of waste and residues in accordance with local authority requirements.

**Disposal Methods:** No specific disposal method required.

**Container:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

<b>14</b>	<b>TRANSPORT INFORMATION</b>
-----------	------------------------------

**DOT** Not regulated.

**TDG** Not regulated.

**IATA** Not regulated.

**IMDG** Not regulated.

<b>15</b>	<b>REGULATORY INFORMATION</b>
-----------	-------------------------------

**Canadian Controlled Products Regulations:** This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, Section 33, and the MSDS contains all required information.

**WHMIS Classification:** This is not a WHMIS controlled product.

**Mexican Dangerous Statement:** This product is not dangerous according to Mexican regulations.

C100  
C100E,C100EAG,C100EB,C100EDK,C1  
00EF,C100EFM,C100EG,C100ELT,C10  
0FM,C100x10,C120E,C145,C148,C150,  
C160,SST-60,SST-60E,SST-80 (also in  
STD,C,E,G,S,CL,DL,EP,FL,MB,PL,TL  
grade and PFC,PPC)

07-Dec-2007

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### **Inventory Status**

**This product or all components are listed or exempt from listing on the following inventory: TSCA, DSL**

### **US Regulations**

**CERCLA Hazardous Substance List (40 CFR 302.4):** Not regulated.

### **SARA Title III**

**Section 302 Extremely Hazardous Substances (40 CFR 355, Appendix A):** Not regulated.

### **Section 311/312 (40 CFR 370):**

Acute (Immediate)     Chronic (Delayed)     Fire     Reactive     Pressure Generating

**Section 313 Toxic Release Inventory (40 CFR 372):** Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**  
Not regulated.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3):** Not regulated.

**Drug Enforcement Act:** Not regulated.

### **TSCA**

**TSCA Section 4(a) Final Test Rules & Testing Consent Orders:** Not regulated.

**TSCA Section 5(a)(2) Final Significant New Use Rules (SNURs) (40CFR 721, Subpt. E):** Not regulated.

**TSCA Section 5(e) PMN-Substance Consent Orders:** Not regulated.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D):** Not regulated.

### **State Regulations**

**California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):** Not regulated.

**Massachusetts Right-To-Know List:** Not regulated.

**Michigan Critical Materials List (Michigan Natural Resources and Environmental Protection Act (Act. 451 of 1994)):** Not regulated.

**Minnesota Hazardous Substances List:** Not regulated.

C100  
C100E,C100EAG,C100EB,C100EDK,C1  
00EF,C100EFM,C100EG,C100ELT,C10  
0FM,C100x10,C120E,C145,C148,C150,  
C160,SST-60,SST-60E,SST-80 (also in  
STD,C,E,G,S,CL,DL,EP,FL,MB,PL,TL  
grade and PFC,PPC)

07-Dec-2007

**New Jersey Right-To-Know List:** Not regulated.

**Pennsylvania Right-To-Know List:** Not regulated.

**Rhode Island Right-To-Know List:** Not regulated.

<b>16</b>	<b>OTHER INFORMATION</b>
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**HAZARD RATINGS**

	<b>Health Hazard</b>	<b>Fire Hazard</b>	<b>Instability</b>	<b>Special Hazard</b>
<b>NFPA</b>	1	1	0	0

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

NFPA Label colored diamond code: Blue - Health; Red - Flammability; Yellow - Instability; White - Special Hazards

	<b>Health Hazard</b>	<b>Flammability</b>	<b>Physical Hazard</b>	<b>Personal Protection</b>
<b>HMIS</b>	1	1	0	--

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

HMIS Label colored bar code: Blue - Health; Red - Flammability; Orange - Physical Hazards; White - Special

**Issue Date:** 07-Dec-2007

**Supersedes Date:**

**SDS No.:** 001

**Disclaimer:** The information provided in this material safety data sheet is based on current knowledge about the product and current legal requirements and standards. It relates specifically to health, safety and environmental requirements and standards, may not identify all hazards associated with the product or its uses or misuses, does not signify any warranty with regard to the properties of the product, and only applies when the product is used for the purposes indicated in section 1. This product is not sold as suitable for other purposes and such other usage may cause risks not mentioned in this material safety data sheet.

# NPDES RENEWAL CALCULATIONS - June 2008

## Average MGD Flows - Outfall 004

( for Form C, Section 2.40 (B) 2)

### Reverse Osmosis Concentrate (as reported)

	2005	2006	2007
1st Quarter:	0.0505	0.0691	0.0891
2nd Quarter:	0.0517	0.0458	0.0350
3rd Quarter:	0.0405	0.0325	0.0281
4th Quarter:	0.0374	0.0544	0.0517
Annual Average Flow (MGD):	0.0450	0.0505	0.0510
<b>Average Flow - 2005 through 2007(MGD):</b>	<b>0.0488</b>		

### Sand Filter Backwash (as reported)

	2005	2006	2007
1st Quarter:	0.0046	0.0027	0.0056
2nd Quarter:	0.0015	0.0011	0.0023
3rd Quarter:	0.0012	0.0007	0.0005
4th Quarter:	0.0026	0.0010	0.0026
Annual Average Flow (MGD)	0.0025	0.0014	0.0028
<b>Average Flow - 2005 through 2007(MGD):</b>	<b>0.0022 MGD</b>		

### Sodium Zeolite Softener Regeneration

<b>(Proposed Estimated Average MGD Flow to 004):</b>		<b>Minutes</b>	<b>Gallons</b>
No. of Softeners On Site:	4		
Avg. Regenerations Per Day:	4		
Backwash Flow Rate (GPM)	225	30	6750
Brine Flow Rate (GPM)	84	30	2520
Slow Rinse Flow Rate (GPM)	56	54	3024 (last 12 mins. of Brine cycle, 42 mins. Slow Rinse cycle)
Fast Rinse Flow Rate (GPM):	250	30	7500
Total Water Flow Per Regeneration(Gallons):	19794		
<b>Average MGD Water Flow to Outfall 004:</b>	<b>0.0792 MGD</b>		

### **Combined Average MGD Flow To Outfall 004**

**(Combined Sources - Current and Proposed): 0.1302 MGD**

# NPDES RENEWAL CALCULATIONS - June 2008

## Maximum Flow Calculations - Outfall 004

### Reverse Osmosis Concentrate

Number of Reverse Osmosis Units: 2  
Maximum Concentrate Flow - Each Unit (GPM): 50  
Maximum GPM: 100  
Minutes Per Day: 1440  
Gallons Per Day: 144000  
Maximum Concentrate Flow (MGD): 0.1440 MGD

### Sand Filter Backwash (estimated)

Average Gallons Per Backwash: 35000  
Maximum Backwash Events Per Day: 2  
Maximum Backwash MGD: 0.0700 MGD

### Sodium Zeolite Softener Regeneration

(Proposed)

Maximum Regenerations Per Day (Estimated): 8  
Total Water Flow Per Regeneration(Gallons): 19794  
Maximum MGD Water Flow to Outfall 004: 0.1584 MGD

Combined Maximum MGD Flow To Outfall 004  
(Combined Sources - Current and Proposed): 0.3724 MGD

# Trigen-St. Louis Energy Corporation

Ashley Plant - Permit # MO 0000345

## NPDES Stormwater Calculations

July 2008

### Rainfall Amounts

(From National Weather Service Archives)

Year	Inches
2000	37.37
2001	35.29
2002	40.95
2003	46.06
2004	42.27
2005	37.85
Average	39.965 Inches Per Year

### Average MGD Stormwater Discharged

Avg. Annual Rainfall (Inches):	39.965
X Total Square Inch Area:	968,256
= Avg. Cubic Inches Rainfall:	38,696,351
/ Cubic Inches per Cubic Ft.:	1728
= Avg. Annual Rainfall Cu. Ft.:	22,394
/ Gallons per Cubic Ft.:	7.48
= Avg. Annual Gallons Rainfall:	2,993.81
/ Days Per Year:	365
= Avg. Gallons Per Day:	8.20
/ 1,000,000 = Avg. MGD:	0.000082

### Collection Area

Total Square Feet:	6724
Sq. Inches per Sq. Feet:	144
Total Square Inches:	968,256

### Maximum MGD Stormwater Discharged

Max. Daily Rainfall (Inches):	6.359 (from avg. of NWS Top 10 Daily Rainfall Events)
X Total Square Inch Area:	968,256
= Max. Cubic Inches Rainfall:	6,157,140
/ Cubic Inches per Cubic Ft.:	1728
= Max. Daily Rainfall Cu. Ft.:	3563.16
/ Gallons per Cubic Ft.:	7.48
= Max. Gallons Per Day:	476.36
/ 1,000,000 = Max. MGD:	0.000476

## SIGN-IN SHEET

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