

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-0025151

Owner: Metropolitan St. Louis Sewer District  
Address: 2350 Market Street, St. Louis, MO 63103

Continuing Authority: Same as above  
Address: Same as above

Facility Name: MSD, Lemay WWTP  
Address: 201 Hoffmeister Avenue, St. Louis, MO 63125

Legal Description: Land Grant 904, St. Louis County  
Coordinates: X=738246, Y=4267463

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

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

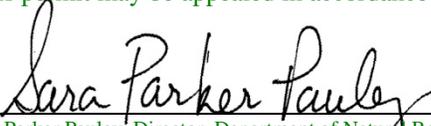
**FACILITY DESCRIPTION**

The Lemay Wastewater Treatment Plant is an activated sludge secondary treatment plant consisting of six grit/detritus tanks, five comminutors, two pre-aeration tanks, eight primary clarifiers with four additional wet weather primary clarifiers, eight step-feed aeration tanks, twelve final clarifiers, three ash slurry ponds, five stormwater outfalls, and solids handling facilities which include sludge dewatering belt filter presses, multiple hearth incinerators and landfill of incinerator ash. Service area includes combined sewers, master pump station with six, 60 MGD pumps.

(continued on 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 Section 644.051.6 of the Law.

April 1, 2012                      September 19, 2012  
Effective Date                      Revised Date

  
Sara Parker Pauley, Director, Department of Natural Resources

March 31, 2017  
Expiration Date

  
John Madras, Director Water Protection Program

FACILITY DESCRIPTION (continued)

Outfall #001 – POTW - SIC #4952 **Certified “A” Operator Required**

Legal Description: Land Grant 904, St. Louis County  
UTM Coordinates: X=738246, Y=4267463  
Receiving Stream: Mississippi River (P)  
First Classified Stream & ID: Mississippi River (P) (01707.02)  
USGS Basin and Subwatershed: 07140101 – 0507

Activated sludge/sludge filter press/sludge incineration/incinerator ash landfill. See Section D, Special Conditions for bypassing requirements.

Design population equivalent is 1,670,000  
Design flow is 167 million gallons per day (MGD). Design primary peak flow is 340 MGD  
Actual flow is 135 million gallons per day.  
Design sludge production is 73,000 dry tons/year.  
Actual sludge production is 34,600 dry tons/year.

Outfall #002 – POTW - SIC #4952

Legal Description: Land Grant 904, St. Louis County  
UTM Coordinates: X=738157, Y=4267204  
Receiving Stream: Mississippi River (P)  
First Classified Stream & ID: Mississippi River (P) (01707.02)  
USGS Basin and Subwatershed: 07140101 – 0507

Incinerated sludge is discharged to ash slurry ponds. Undisinfected wastewater from the final clarifiers is mixed with the ash to create slurry for discharge to the ash ponds. Three lagoon cells receive ash and operate in parallel. Incinerator ash is eventually landfilled.

Design flow is 1.8 MGD  
Actual flow is 1.4 MGD

Outfall #003 – Storm water runoff

Legal Description: Land Grant 904, St. Louis County  
UTM Coordinates: X=738066, Y=4268550  
Receiving Stream: Unnamed Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) (1710)  
USGS Basin and Subwatershed: 07140101-0506

Receives stormwater runoff from the fuel dispenser area, maintenance building, sludge incinerator and filter press area.  
Design flow is dependent on rainfall

Outfall #004 – Storm water runoff

Legal Description: Land Grant 904, St. Louis County  
UTM Coordinates: X=738101, Y=4268449  
Receiving Stream: Unnamed Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) (1710)  
USGS Basin and Subwatershed: 07140101-0506

Receives stormwater runoff mainly from roads that lead to the maintenance building, sludge incinerator and filter press area.  
Design flow is dependent on rainfall

FACILITY DESCRIPTION (continued)

Outfall #005 – Storm water runoff

Legal Description: Land Grant 904, St. Louis County  
UTM Coordinates: X=738078, Y=4268408  
Receiving Stream: Unnamed Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) (1710)  
USGS Basin and Subwatershed: 07140101-0506  
Receives stormwater runoff from the trash removal and grit/screening buildings.  
Design flow is dependent on rainfall

Outfall #006 – Storm water runoff

Legal Description: Land Grant 904, St. Louis County  
UTM Coordinates: X=737843, Y=4268086  
Receiving Stream: Unnamed Tributary to Mississippi River  
First Classified Stream & ID: Mississippi River (P) (01707.02)  
USGS Basin and Subwatershed: 07140101 – 0507  
Receives stormwater runoff from the blower/thickening building and final clarifiers.  
Design flow is dependent on rainfall

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until **December 31, 2013**. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<b>Outfall #001 - Effluent</b>						
Flow	MGD	*		*	once/day	24 hr. est.
Carbonaceous Biochemical Oxygen Demand ***	mg/L		40	25	once/weekday	24 hr. comp.
Total Suspended Solids***	mg/L		45	30	once/weekday	24 hr. comp.
pH – Units	SU	**		**	once/weekday	grab
Temperature	°F	*		*	once/weekday	grab
Oil and Grease	mg/L	15		10	once/week	grab
Ammonia Nitrogen as N (April – September)	mg/L	38.8		23.3	once/week	grab
(October – March)	lbs/day	42,714		25,651		
	mg/L	77.9		46.6		
	lb/day	85,759		51,301		
E. Coli (Note 1)	#/100 mL		*	*	once/week	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE May 28, 2012.

Arsenic, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Cadmium, Total Recoverable	µg/L	7.8		2.7	once/quarter *****	24 hr. comp.
Chromium III, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Chromium VI, Dissolved	µg/L	*		*	once/quarter *****	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Lead, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Mercury, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Nickel, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Silver, Total Recoverable	µg/L	21.5		7.4	once/quarter *****	24 hr. comp.
Zinc, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Cyanide, Amenable to Chlorination (Note 3)	µg/L	39.1		12.6 16 ML	once/quarter *****	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter *****	24 hr. comp.
Total Phosphorus as P	mg/L	*		*	once/quarter *****	24 hr. comp.
Nitrite & Nitrate	mg/L	*		*	once/quarter *****	24 hr. comp.
Total Nitrogen as N	mg/L	*		*	once/quarter *****	24 hr. comp.

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE July 28, 2012. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

**B. STANDARD CONDITIONS**

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, II & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until **December 31, 2013**. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<b>Outfall #002</b>						
Flow	MGD	*		*	once/week	24 hr. est.
Biochemical Oxygen Demand	mg/L		45	30	once/week	grab
Total Suspended Solids	mg/L		90	65	once/week	grab
pH – Units	SU	****		****	once/week	grab
Temperature	°F	*		*	once/week	grab
Oil and Grease	mg/L	15		10	once/month	grab
Ammonia Nitrogen as N (April – September)	mg/L	*		*	once/month	grab
(October – March)	lbs/day	*		*		
E. Coli (Note 1)	mg/L	*		*	once/month	grab
	#/100 mL		*	*	once/week	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE May 28, 2012.

Arsenic, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Chromium III, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Chromium VI, Dissolved	µg/L	*		*	once/quarter *****	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Cyanide, Amenable to Chlorination	µg/L	*		*	once/quarter *****	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter *****	grab
Total Phosphorus as P	mg/L	*		*	once/quarter *****	grab
Nitrite & Nitrate	mg/L	*		*	once/quarter *****	grab
Total Nitrogen as N	mg/L	*		*	once/quarter *****	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE July 28, 2012. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

**B. STANDARD CONDITIONS**

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, II & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

\* Monitoring requirement only.

\*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5 -9.0 pH units.

\*\*\* This facility is required to meet a removal efficiency of 85% or more. If the permittee can document an alternate removal efficiency during wet weather, then that removal efficiency can be considered for wet weather flows.

\*\*\*\* pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.5 pH units.

\*\*\*\*\* Once per quarter—see table below for sample months.

Note 1 -- Final limitations and monitoring requirements for E. Coli are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for E. Coli is expressed as a geometric mean.

Note 2 – See Total Toxic Organics page.

Note 3 -- This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved methods. The department has determined the current acceptable ML for Cyanide amenable to Chlorination to be 16 µg/L when using the Cyanide by Automated Colorimetric Method #335.3 from the U.S.EPA National Exposure Research Laboratory. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 16 µg/L will be considered violations of the permit and values less than the minimum quantification level of 16 µg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of Cyanide in excess of the effluent limits stated in the permit.

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

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 7 of 36	
					PERMIT NUMBER MO-0025151	
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 after <b>December 31, 2013</b> , and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<b>Outfall #001 - Effluent</b>						
Flow	MGD	*		*	once/day	24 hr. est.
Carbonaceous Biochemical Oxygen Demand***	mg/L		40	25	once/weekday	24 hr. comp.
Total Suspended Solids***	mg/L		45	30	once/weekday	24 hr. comp.
pH – Units	SU	**		**	once/weekday	grab
Temperature	°F	*		*	once/weekday	grab
Oil and Grease	mg/L	15		10	once/week	grab
Ammonia Nitrogen as N (April – September)	mg/L lbs/day	38.8 42,714		23.3 25,651	once/week	grab
(October – March)	mg/L lb/day	77.9 85,759		46.6 51,301		
E. Coli (Note 1)	#/100 mL		*	1134	once/week	grab
Total Residual Chlorine (Note 4)	mg/L	0.077 0.13 ML		0.038 0.13 ML	once/weekday	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>February 28, 2013</u> .						
Arsenic, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Cadmium, Total Recoverable	µg/L	7.8		2.7	once/quarter *****	24 hr. comp.
Chromium III, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Chromium VI, Dissolved	µg/L	*		*	once/quarter *****	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Lead, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Mercury, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Nickel, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Silver, Total Recoverable	µg/L	21.5		7.4	once/quarter *****	24 hr. comp.
Zinc, Total Recoverable	µg/L	*		*	once/quarter *****	24 hr. comp.
Cyanide, Amenable to Chlorination (Note3)	µg/L	39.1		12.6 (16 ML)	once/quarter *****	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter *****	24 hr. comp.
Total Phosphorus as P	mg/L	*		*	once/quarter *****	24 hr. comp.
Nitrite & Nitrate	mg/L	*		*	once/quarter *****	24 hr. comp.
Total Nitrogen as N	mg/L	*		*	once/quarter *****	24 hr. comp.
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>April 28, 2013</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I, II &amp; III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

PERMIT NUMBER MO-0025151

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 after **December 31, 2013**, and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<b>Outfall #002- Ash Pond</b>						
Flow	MGD	*		*	once/week	24 hr. est.
Biochemical Oxygen Demand	mg/L		45	30	once/week	grab
Total Suspended Solids	mg/L		90	65	once/week	grab
pH – Units	SU	****		****	once/week	grab
Temperature	°F	*		*	once/week	grab
Oil and Grease	mg/L	15		10	once/month	grab
Ammonia Nitrogen as N (April – September)	mg/L	*		*	once/month	grab
(October – March)	lbs/day mg/L lb/day	*		*		
E. Coli (Note 1)	#/100 mL		*	1134	once/week	grab
Total Residual Chlorine (Note 5)	mg/L	5.4		2.7	once/week	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE February 28, 2014.

Arsenic, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Cadmium, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Chromium III, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Chromium VI, Dissolved	µg/L	*		*	once/quarter *****	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Mercury, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Nickel, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Silver, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter *****	grab
Cyanide, Amenable to Chlorination	µg/L	*		*	once/quarter *****	grab
Chemical Oxygen Demand	mg/L	*		*	once/quarter *****	grab
Total Phosphorus as P	mg/L	*		*	once/quarter *****	grab
Nitrite & Nitrate	mg/L	*		*	once/quarter *****	grab
Total Nitrogen as N	mg/L	*		*	once/quarter *****	grab

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

**B. STANDARD CONDITIONS**

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, II & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 9 of 36	
					PERMIT NUMBER MO-0025151	
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 <b>effective upon issuance of this permit</b> and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<b>Outfall #001- Effluent</b> Whole Effluent Toxicity (WET) Test (AEC - 22.8%)	% Survival	See Special Condition #20			twice/year in January & July	24 hr. composite
MONITORING REPORTS SHALL BE SUBMITTED <u>SEMI-ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2012</u> .						
<b>Outfall #002 – Ash Pond</b> Whole Effluent Toxicity (WET) Test (AEC - 10%)	% Survival	See Special Condition #20			Once/year in January	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>April 28, 2013</u> .						
<b>Outfalls #001 &amp; #002</b> Total Toxic Organics (Note 2)	mg/L	*			once/year in July	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>August 28, 2012</u> .						
<b>Outfalls #003 - #006- Stormwater</b>						
Flow	MGD	*		*	once/quarter *****	instantaneous estimate
Precipitation	inches	*		*	once/quarter *****	total
Biochemical Oxygen Demand <sub>5</sub>	mg/L		*	*	once/quarter *****	grab
Total Suspended Solids	mg/L		*	*	once/quarter *****	grab
pH – Units	SU	*		*	once/quarter *****	grab
Oil & Grease	mg/L	*		*	once/quarter *****	grab
Settleable Solids	mL/L/hr	*		*	once/quarter *****	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>July 28, 2012</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I, II &amp; III</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> and <u>August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)**

- \* Monitoring requirement only.
  - \*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5 -9.0 pH units.
  - \*\*\* This facility is required to meet a removal efficiency of 85% or more. If the permittee can document an alternate removal efficiency during wet weather, then that removal efficiency can be considered for wet weather flows.
  - \*\*\*\* pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.5 pH units.
  - \*\*\*\*\* Once per quarter—see table below for sample months.
- Note 1 -- Final limitations and monitoring requirements for *E. Coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. Coli* is expressed as a geometric mean.
- Note 2 – See Total Toxic Organics page.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 3 - This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved methods. The department has determined the current acceptable ML for Cyanide amenable to Chlorination to be 16 µg/L when using the Cyanide by Automated Colorimetric Method #335.3 from the U.S.EPA National Exposure Research Laboratory. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 16 µg/L will be considered violations of the permit and values less than the minimum quantification level of 16 µg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of Cyanide in excess of the effluent limits stated in the permit.

Note 4 - This permit contains a Total Residual Chlorine (TRC) limit.

- (a) This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The department has determined the current acceptable ML for total residual chlorine to be 0.13 mg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 0.13 mg/L will be considered violations of the permit and values less than the minimum quantification level of 0.13 mg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.
- (b) Disinfection is required year-round unless the permit specifically states that “Final limitations and monitoring requirements for E. Coli are applicable only during the recreational season from April 1 through October 31.” If your permit does not require disinfection during the non-recreational months, do not chlorinate in those months.
- (c) Do not chemically dechlorinate **if it is not needed to meet the limits in your permit**.
- (d) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as “0 mg/L” TRC.

Note 5 - This permit contains a Total Residual Chlorine (TRC) limit.

- (a) Disinfection is required year-round unless the permit specifically states that “Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.” If your permit does not require disinfection during the non-recreational months, do not chlorinate in those months
- (b) Do not chemically dechlorinate **if it is not needed to meet the limits in your permit**.
- (c) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as “0 mg/L” TRC.

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

**C. INFLUENT MONITORING REQUIREMENTS**

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PERMIT NUMBER MO-0025151

The facility is required to meet a removal efficiency of 85 % or more for dry weather flows. The monitoring requirements shall become effective upon issuance and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:

SAMPLING LOCATIONS AND PARAMETERS	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
<b><u>OUTFALL #001 -- INFLUENT</u></b>			
Carbonaceous Biochemical oxygen Demand <sub>5</sub>	mg/L	once/week***	composite****
Total Suspended Solids	mg/L	once/week***	composite****

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE May 28, 2012.

\*\*\* This facility is required to meet a removal efficiency of 85% or more. If the permittee can document an alternate removal efficiency during wet weather, then that removal efficiency can be considered for wet weather flows

\*\*\*\* A composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of 2 hours between each grab sample.

D. 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. Report as no-discharge when a discharge does not occur during the report period.
4. Changes in Discharges of Toxic Substances

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

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
    - (1) One hundred micrograms per liter (100 µg/L);
    - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
    - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
    - (4) The level established in Part A of the permit by the Director.
  - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
  - (c) That the effluent limit established in part A of the permit will be exceeded.
5. Water Quality Standards
    - (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
    - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
      - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
      - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
      - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
      - (5) There shall be no significant human health hazard from incidental contact with the water;
      - (6) There shall be no acute toxicity to livestock or wildlife watering;

D. SPECIAL CONDITIONS (continued)

5. Water Quality Standards(continued)

- (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
- (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

6. Permittee shall implement and enforce its approved pretreatment program in accordance with the requirements of 40 CFR Part 403. The approved pretreatment program is hereby incorporated by reference.

Permittee shall submit to the Department on or before September 30 of each year a report briefly describing its pretreatment activities during the previous calendar year. At a minimum, the report shall include the following:

- (a) An updated list of the Permittee's Industrial Users, including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The Permittee shall provide a brief explanation of each deletion. This list shall identify which Industrial Users are subject to categorical pretreatment Standards and specify which Standards are applicable to each Industrial User. The list shall indicate which Industrial Users are subject to local standards that are more stringent than the categorical Pretreatment Standards. The Permittee shall also list the Industrial Users that are subject only to local Requirements;
- (b) A summary of the status of Industrial User compliance over the reporting period;
- (c) A summary of compliance and enforcement activities (including inspections) conducted by the Permittee during the reporting period; and
- (d) Any other relevant information requested by the Department.

7. As required in 40 CFR 122.21 (j)(4) the permittee shall, as part of its renewal application for this permit, submit to the department a written technical evaluation of the need to revise local limits under 40 CFR 403.5 (c)(1).

8. The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document: Storm Water Management For Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices, (Document number EPA 832-R-92-006) published by the United States Environmental Protection Agency (USEPA) in September 1992.

The SWPPP must include the following:

- (a) An assessment of all storm water discharges associated with the facility. This must include a list of potential contaminants and an annual estimate of amounts that will be used in the described activities.
- (b) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter storm water.
- (c) The SWPPP must include a schedule for a bi-monthly site inspection and a brief written report. The inspections must include observation and evaluation of BMP effectiveness, deficiencies, and corrective measures that will be taken. Deficiencies must be corrected within seven days. Inspection reports must be kept on site with the SWPPP. These must be made available to DNR personnel upon request.
- (d) A provision for designating an individual to be responsible for environmental matters.
- (e) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.

9. 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 storm water. 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.
10. Good housekeeping practices shall be maintained on the site to keep solid waste from entry into waters of the state.
11. All fueling facilities present on the site shall adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures.

D. SPECIAL CONDITIONS (continued)

12. Substances, regulated by federal law under the Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), that are transported, stored, or used for maintenance, cleaning or repair, shall be managed according to RCRA and CERCLA.
13. The permittee shall comply with any applicable requirements listed in 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.
14. Sewer Extension Authority
  - (a) The Department has approved the Sewer Extension Program for MSD to regulate and approve construction of sanitary sewers that are tributary to this wastewater treatment plant.
  - (b) The approval of the Sewer Extension Program may be modified or revoked by the Department if the sewage collection, transportation, and receiving treatment facility reach their respective design capacity, or if the Department determines that this program is causing or contributing to chronic non-compliance of the receiving treatment facility, or if the permittee fails to follow the terms and conditions of the submitted and approved program.
  - (c) The Sewer Extension Program Special Condition may be reopened and modified and reissued, or alternatively revoked to incorporate new or modified conditions to the sewer construction permit authority, if information or regulation or statute indicates changes are necessary to assure compliance with Missouri's Clean Water Law and associated regulations.
  - (d) If item b or item c of the Sewer Extension Program occurs, the permittee will be notified to any modification to this operating permit.
  - (e) The Permittee, as part of their Sewer Extension Program, shall submit an annual report January 28<sup>th</sup> of each year, to the Missouri Department of Natural Resources' St. Louis Regional Office. The report must provide the following: 1) list of the name of the projects approved, and 2) the length of sewers and force mains and the capacity of lift stations constructed under the sewer extension program. A summary of total flow at the treatment facility shall be included. Detailed project information and data including design flows and inspection records shall be available for review upon request.
  - (f) The Sewer Extension Authority is valid the length of this operating permit. Upon renewal of the permit, the Sewer Extension Authority for MSD- St. Louis will be reevaluated.

D. SPECIAL CONDITIONS (continued)

15. Nine Minimum Controls:

The permittee will implement the Nine Minimum Controls as specified by the U.S. EPA Combined Sewer Overflow (CSO) Policy dated April 19, 1994, (59 FR 18688):

Control 1 – Proper Operation and Maintenance Programs;

Control 2 – Maximum Use of the Collection System for Storage;

Control 3 – Review and Modification of Pretreatment Requirements;

Control 4 – Maximization of Flow to the POTW for Treatment;

The federal Consent Decree No. 4:07-CV-1120(CEJ) has been lodged with the court on August 4, 2011. The permittee shall increase secondary treatment capacity pursuant to Appendix D of the Consent Decree. The permittee shall subsequently conduct stress testing to confirm the peak wet-weather flow capacities of the treatment facilities pursuant to Appendix E of the Consent Decree.

Control 5 – Dry Weather Flows from CSOs are prohibited;

Control 6 – Control of Solid and Floatable Materials in CSOs;

Control 7 – Pollution Prevention;

Control 8 – Public Notification;

Control 9 – Monitoring to Effectively Characterize CSO Impacts and the Efficacy of CSO Controls.

The permittee shall submit annual reports to document the implementation of the nine minimum controls. The reports will be due October 31<sup>st</sup> of each year.

16. The permittee is authorized to discharge from the Combined Sewer Overflow (CSO) locations identified in Attachment A. New outfalls may be added by the permittee by applying for modification of the permit.
17. Any influent flows less than the facility's secondary treatment capacity that are diverted from secondary treatment are not authorized and are subject to the provisions of 40 CFR §122.41(m).
18. All final effluent samples from Outfall #001 must be taken at a point downstream of where primary effluent that bypasses secondary treatment is mixed with secondary effluent. All influent flows must receive primary treatment and meet the appropriate permit limitations.
19. The permittee shall report any substantial changes in volume or character of pollutants being introduced to the POTW. The authorization to bypass may be modified or terminated when there is substantial change in volume or character of pollutant being introduced to the POTW.

D. SPECIAL CONDITIONS (continued)

20. Whole Effluent Toxicity (WET) tests shall be conducted as follows:

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT					
OUTFALL	AEC	LC50%*	FREQUENCY	SAMPLE TYPE	MONTH
<b>001</b>	22.8%	76%	Twice/year	24 hr composite	January & July

\* LC50 = AEC / 0.3.

Dilution Series						
91.2%	45.6%	22.8%	11.4%	5.7%	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT					
OUTFALL	AEC	LC50%*	FREQUENCY	SAMPLE TYPE	MONTH
<b>002</b>	10%	33%	Once/year	Grab	January

\* LC50 = AEC / 0.3.

Dilution Series						
40%	20%	10%	5%	2.5%	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

(a) Test Schedule and Follow-Up Requirements

- (1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
  - (a) For discharges of stormwater, samples shall be collected within three hours from when discharge first occurs.
  - (b) Samples submitted for analysis of stormwater discharges shall be collected as a grab.
  - (c) For discharges of non-stormwater, samples shall be collected only when precipitation has not occurred for a period of forty-eight hours prior to sample collection. In no event shall sample collection occur simultaneously with the occurrence of precipitation excepting for stormwater samples.
  - (d) A twenty-four hour composite sample shall be submitted for analysis of non-stormwater discharges.
  - (e) Upstream receiving water samples, where required, shall be collected upstream from any influence of the effluent where downstream flow is clearly evident.
  - (f) Samples submitted for analysis of upstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
  - (g) Chemical and physical analysis of the upstream control 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.
  - (h) 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 analyses performed upon any other effluent concentration.
  - (i) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
  - (j) Where flow-weighted composite sample is required for analysis, the samples shall be composited at the laboratory where the test is to be performed.

D. SPECIAL CONDITIONS (continued)

20. Whole Effluent Toxicity (WET) tests shall be conducted as follows: (continued)

- (l) Where in stream testing is required downstream from the discharge, sample collection shall occur immediately below the established Zone of Initial Dilution in conjunction with or immediately following a release or discharge.
  - (m) Samples submitted for analysis of downstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
  - (n) All instream samples, including downstream samples, shall be tested for toxicity at the 100% concentration in addition to any other assigned AEC for in-stream samples.
  - (2) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.
  - (3) If the effluent fails the test, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) until one of the following conditions are met:
    - (a) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
    - (b) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.
  - (4) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.
  - (5) Additionally, the following shall apply upon failure of the third MULTIPLE DILUTION test: A toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.
  - (6) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.
  - (7) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
- (b) PASS/FAIL procedure and effluent limitations:
- (1) To pass a multiple-dilution test:
    - (a) For facilities with a computed percent effluent at the edge of the zone of initial dilution, Allowable Effluent Concentration (AEC) OF 30% OR LESS, the AEC must be less than three-tenths (0.3) of the LC<sub>50</sub> concentration for the most sensitive of the test organisms; **OR**,
    - (b) For facilities with an AEC greater than 30%, the LC<sub>50</sub> concentration must be greater than 100%; **AND**,
    - (c) All effluent concentrations equal to or less than the AEC must be nontoxic. Mortality observed in all effluent concentrations equal to or less than the AEC shall not be significantly different (at the 95% confidence level; p = 0.05) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; p = 0.05) than that observed in the laboratory control. The appropriate statistical tests of significance shall be consistent with the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS or other federal guidelines as appropriate or required.

D. SPECIAL CONDITIONS (continued)

20. Whole Effluent Toxicity (WET) tests shall be conducted as follows: (continued)
- (c) Test Conditions
    - (1) Test Type: Acute Static non-renewal
    - (2) All tests, including repeat tests for previous failures, shall include both test species listed below.
    - (3) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.
    - (4) Test period: 48 hours at the "Allowable Effluent Concentration" (AEC) specified above.
    - (5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.
    - (6) Unless otherwise specified above, multiple-dilution tests will be run with:
      - (a) 100%, 50%, 25%, 12.5%, and 6.25% effluent, unless the AEC is less than 25% effluent, in which case dilutions will be 4 times the AEC, two times the AEC, AEC, 1/2 AEC and 1/4 AEC;
      - (b) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
      - (c) Reconstituted water.
    - (7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
    - (8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.
21. Due to the nature of concentrated industrial inputs and the suppression of nitrification in the MSD, Lemay treatment system, all BOD samples should be seeded as per the Standard Methods for the Examination of Water and Wastewater, prior to testing to assure a population of microorganisms capable of oxidizing the biodegradable organic matter in the sample.
22. The permittee shall implement and effectively operate and maintain the CSO controls identified in the Long Term control Plan dated February 2011 and approved by the Department on June 1, 2011.

E. SCHEDULE OF COMPLIANCE

1. The permittee shall submit annual reports to document implementation of the Nine Minimum Controls. The reports will be due October 31 of each year.

F. SCHEDULE OF COMPLIANCE (For disinfection)

1. The permittee must attain compliance with the final effluent limits as soon as possible, but no later than December 31, 2013.
2. Within one year of issuance of this permit, the permittee shall report progress made in attaining compliance with the final effluent limits.
3. Within two years of issuance of this permit, the permittee shall submit a report detailing progress made in attaining compliance with the final effluent limits.
4. If the permittee fails to meet any of the interim dates above, the permittee shall notify the Department in writing of the reason for non compliance no later than 14 days following each interim date.
5. Upon completion of construction, the permittee shall submit a Statement of Work Complete signed by the owner and a Professional Engineer that is registered in the state of Missouri.

## SUMMARY OF TEST METHODOLOGY FOR ACUTE WHOLE-EFFLUENT TOXICITY TESTS

Whole-effluent-toxicity test required in NPDES permits shall use the following test conditions when performing single or multiple dilution methods. Any future changes in methodology will be supplied to the permittee by the Missouri Department of Natural Resources (MDNR). Unless more stringent methods are specified by the DNR, the procedures shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.

### Test conditions for Ceriodaphnia dubia:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light, 8 h dark
Size of test vessel:	30 mL (minimum)
Volume of test solution:	15 mL (minimum)
Age of test organisms:	<24 h old
No. of animals/test vessel:	5
No. of replicates/concentration:	4
No. of organisms/concentration:	20 (minimum)
Feeding regime:	None (feed prior to test)
Aeration:	None
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$ )
Test acceptability criterion:	90% or greater survival in controls

### Test conditions for Pimephales promelas:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light/ 8 h dark
Size of test vessel:	250 mL (minimum)
Volume of test solution:	200 mL (minimum)
Age of test organisms:	1-14 days (all same age)
No. of animals/test vessel:	10
No. of replicates/concentration:	4 (minimum) single dilution method 2 (minimum) multiple dilution method
No. of organisms/concentration:	40 (minimum) single dilution method 20 (minimum) multiple dilution method
Feeding regime:	None (feed prior to test)
Aeration:	None, unless DO concentration falls below 4.0 mg/L; rate should not exceed 100 bubbles/min.
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$ )
Test Acceptability criterion:	90% or greater survival in controls

Total Toxic Organics (Note 2)

Acenaphthene	4-chlorophenyl phenyl ether
Acrolein	4-bromophenyl phenyl ether
Acrylonitrile	Bis (2-chloroisopropyl) ether
Benzene	Bis (2-chloroethoxy) methane
Benzidine	Methylene Chloride (dichloromethane)
Carbon Tetrachloride (tetrachloromethane)	Methyl Chloride (chloromethane)
Chlorobenzene	Methyl bromide (bromomethane)
1,2,4-trichlorobenzene	Bromoform (tribromomethane)
Hexachlorobenzene	Dichlorobromomethane
1,2-dichloroethane	Chlorodibromomethane
1,1,1-trichloroethane	Hexachlorobutadiene
Hexachloroethane	Hexachlorocyclopentadiene
1,1-dichloroethane	Isophorone
1,1,2-trichloroethane	Naphthalene
1,1,2,2-tetrachloroethane	Nitrobenzene
Chloroethane	2-nitrophenol
Bis (2-chloroethyl) ether	4-nitrophenol
2-chloroethyl vinyl ether	2,4-dinitrophenol
N-nitrosodi-n-propylamine	4,6-dinitro-o-cresol
Pentachlorophenol	N-nitrosodimethylamine
Phenol	N-nitrosodiphenylamine
Bis (2-ethylhexyl) phthalate	Phenanthrene
Butyl benzyl phthalate	1,2,5,6-dibenzanthracene (dibenzo(a,h)anthracene)
Di-n-butyl phthalate	Indeno (1,2,3-cd) pyrene
	(2,3-o-phenylene pyrene)
Di-n-octyl phthalate	Pyrene
Diethyl phthalate	Tetrachloroethylene
Dimethyl phthalate	Toluene
1,2-benzanthracene (benzo(a)anthracene)	Trichloroethylene
Benzo(a)pyrene (3,4-benzopyrene)	Vinyl Chloride (chloroethylene)
3,4-benzofluoranthene (benzo(b)fluoranthene)	Aldrin
11,12-benzofluoranthene (benzo(k)fluoranthene)	Dieldrin
Chrysene	Chlordane (technical mixture and metabolites)
Anthracene	4,4-DDT
1,12-benzoperylene (benzo(ghi)perylene)	4,4-DDE (p,p-DDX)
Fluorene	4,4-DDD (p,p-TDE)
2-chloronaphthalene	Alpha-endosulfan
2,4,6-trichlorophenol	Beta-endosulfan
Parachlorometa cresol	Endosulfan sulfate
Chloroform (trichloromethane)	Endrin
2-chlorophenol	Endrin aldehyde
1,2-dichlorobenzene	Heptachlor
1,3-dichlorobenzene	Heptachlor epoxide (BHC hexachlorocyclohexane)
1,4-dichlorobenzene	Alpha-BHC
3,3-dichlorobenzidine	Beta-BHC
1,1-dichloroethylene	Gamma-BHC
1,2-trans-dichloroethylene	Delta-BHC (PCB polychlorinated biphenyls)
2,4-dichlorophenol	PCB-1242 (Arochlor 1242)
1,2-dichloropropane (1,3-dichloropropane)	PCB-1254 (Arochlor 1254)
2,4-dimethylphenol	PCB-1221 (Arochlor 1221)
2,4-dinitrotoluene	PCB-1232 (Arochlor 1232)
2,6-dinitrotoluene	PCB-1248 (Arochlor 1248)
1,2-diphenylhydrazine	PCB-1260 (Arochlor 1260)
Ethylbenzene	PCB-1016 (Arochlor 1016)
Fluoranthene	Toxaphene

**ATTACHMENT A**

**CSO LOCATIONS**

**Outfall #008**

Legal Description: Land Grant 3102, St. Louis County  
UTM Coordinates: X= 737899.2, Y= 4269772.6  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 1710  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #009**

Legal Description: Land Grant 3102, St. Louis County  
UTM Coordinates: X=737752.9, Y=4270377.9  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 1710  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #10**

Legal Description: Land Grant 3102, St. Louis County  
UTM Coordinates: X=737831.2, Y=4270535.3  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 1710  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #11**

Legal Description: Land Grant 3102, St. Louis County  
UTM Coordinates: X=737577.2, Y=4271063.7  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 1710  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #12**

Legal Description: Land Grant 3102, St. Louis County  
UTM Coordinates: X=737060.4 Y=4271162.4  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 1710  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #13**

Legal Description: Land Grant 3102, St. Louis County  
UTM Coordinates: X=737205.9, Y=4271027.1  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 1710  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #14**

Legal Description: Land Grant 3102, St. Louis County  
UTM Coordinates: X=736831.2, Y=4271370.5  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 1710  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #15**

Legal Description: Land Grant 3217, St. Louis City  
UTM Coordinates: X=736902.8, Y=4272213.5  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 1710  
USGS Basin and Subwatershed: 07140101-0506

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

**Outfall #16**

Legal Description: Land Grant 3217, St. Louis City  
UTM Coordinates: X=736611.0, Y=4271876.0  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 1710  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #17**

Legal Description: Land Grant 1339, St. Louis County  
UTM Coordinates: X=736673.6, Y=4271419.6  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 1710  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #18**

Legal Description: Land Grant 3217, St. Louis County  
UTM Coordinates: X=736324.6, Y=4271585.5  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #19**

Legal Description: Land Grant 3217, St. Louis County  
UTM Coordinates: X=735861.9, Y=4271663.9  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #20**

Legal Description: Land Grant 1953, St. Louis County  
UTM Coordinates: X=735869.1, Y=4271604.5  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #21**

Legal Description: Land Grant 3217, St. Louis County  
UTM Coordinates: X=735698.9, Y=4271809.4  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #22**

Legal Description: Land Grant 3217, St. Louis County  
UTM Coordinates: X=735571.5, Y=4271930.8  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

Outfall #23

Legal Description: Land Grant 3217, St. Louis County  
UTM Coordinates: X=734785.7, Y=4272761.9  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #24

Legal Description: Land Grant 1953, St. Louis County  
UTM Coordinates: X=734236.5, Y=4273487.9  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #25

Legal Description: Land Grant 3217, St. Louis County  
UTM Coordinates: X=734385.2, Y=4273469.6  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #26

Legal Description: Land Grant 1953, St. Louis County  
UTM Coordinates: X=734162.0, Y=4274099.4  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #27

Legal Description: Land Grant 3217, St. Louis County  
UTM Coordinates: X=734235.3, Y=4274063.3  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #28

Legal Description: Land Grant 3217, St. Louis County  
UTM Coordinates: X=733959.8, Y=4274505.8  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #29

Legal Description: Land Grant 3217, St. Louis County  
UTM Coordinates: X=733670.6, Y=4274892.8  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #30

Legal Description: Land Grant 2035, St. Louis County  
UTM Coordinates: X=733557.0, Y=4275508.2  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

Outfall #31

Legal Description: Land Grant 2037, St. Louis County  
UTM Coordinates: X=733763.0, Y=4275724.1  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #32

Legal Description: Land Grant 2035, St. Louis City  
UTM Coordinates: X=733485.3, Y=4275490.6  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #36

Legal Description: Land Grant 2037, St. Louis City  
UTM Coordinates: X=733924.8, Y=4276612.5  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #37

Legal Description: Land Grant 2037, St. Louis County  
UTM Coordinates: X=734203.3, Y=4276639.1  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #39

Legal Description: Land Grant 2037, St. Louis County  
UTM Coordinates: X=734331.6, Y=4276819.9  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #41

Legal Description: Land Grant 2037, St. Louis County  
UTM Coordinates: X= 734214.3, Y= 4276681.9  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #42

Legal Description: Land Grant 2037, St. Louis County  
UTM Coordinates: X=734393.9, Y=4276910.3  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #43

Legal Description: Land Grant 2037, St. Louis County  
UTM Coordinates: X= 734390.5, Y=4276942.7  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

**Outfall # 44**

Legal Description: Land Grant 2037, St. Louis City  
UTM Coordinates: X=734759.1, Y=4277316.2  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #48**

Legal Description: Land Grant 2037, St. Louis County  
UTM Coordinates: X=735165.6, Y=4277715.4  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #50**

Legal Description: Land Grant 2037, St. Louis County  
UTM Coordinates: X=735354.9, Y=4278063.2  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #52**

Legal Description: Land Grant 2037, St. Louis City  
UTM Coordinates: X=735749.9, Y=4278250.3  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #53**

Legal Description: Land Grant 2037, St. Louis City  
UTM Coordinates: X=735911.8, Y=4278265.3  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #54**

Legal Description: Land Grant 2037, St. Louis City  
UTM Coordinates: X=736171.6, Y=4278225.3  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #57**

Legal Description: Land Grant 2037, St. Louis County  
UTM Coordinates: X=736750.4, Y=4278346.2  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #58**

Legal Description: Land Grant 2037, St. Louis County  
UTM Coordinates: X=736755.7, Y=4278326.8  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

**Outfall #61**

Legal Description: Land Grant 2037, St. Louis County  
UTM Coordinates: X=737158.8, Y=4278355.9  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #62**

Legal Description: Land Grant 2037, St. Louis City  
UTM Coordinates: X=737209.7, Y=4278387.6  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #63**

Legal Description: Land Grant 2037, St. Louis County  
UTM Coordinates: X=737501.6, Y= 4278396.1  
Receiving Stream: River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #64**

Legal Description: Land Grant 0378, St. Louis County  
UTM Coordinates: X=734370.6, Y=4282866.6  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**Outfall #66**

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=734326.2, Y=4283206.7  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**Outfall #67**

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X= 734328.7, Y= 4283270.1  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**Outfall #68**

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=734335.9, Y= 4283278.2  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**Outfall #69**

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=734232.5, Y=4283429.3  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

**Outfall #70**

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=734202.2, Y=4283482.7  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**Outfall #71**

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=734040.4, Y=4283684.0  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**Outfall #72**

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=734040.8, Y=4283690.1  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**Outfall #73**

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=733873.5, Y=4283714.7  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**Outfall #74**

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=734005.3, Y=4283692.3  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**Outfall #75**

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=733841.9, Y=4283801.2  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**Outfall #76**

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=733824.8, Y=4283877.4  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**Outfall #77**

Legal Description: Land Grant 2775, St. Louis County  
UTM Coordinates: X= 733607.6, Y=4284270.4  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

Outfall #78

Legal Description: Land Grant 0378, St. Louis County  
UTM Coordinates: X=733958.7, Y=4282695.4  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #79

Legal Description: Land Grant 0378, St. Louis County  
UTM Coordinates: X=733591.5, Y=4282736.1  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #80

Legal Description: Land Grant 0378, St. Louis County  
UTM Coordinates: X=733643.6, Y=4282723.4  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #81

Legal Description: Land Grant 0378, St. Louis County  
UTM Coordinates: X=733551.6, Y=4282728.7  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #82

Legal Description: Land Grant 0378, St. Louis County  
UTM Coordinates: X=733565.9, Y=4282740.4  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #83

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=732863.4, Y=4283335.2  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #84

Legal Description: Land Grant 0378, St. Louis County  
UTM Coordinates: X=733074.4, Y=4282852.0  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #85

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=732845.9, Y=4283356.4  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

Outfall #86

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=732707.8, Y=4283650.2  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #87

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=732849.2, Y=4283340.9  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #88

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=732291.2, Y=4283129.3  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #89

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=732039.8, Y=4283140.7  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #90

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=731716.4, Y=4282733.1  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #91

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=731716.1, Y=4282735.3  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #92

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=731716.4, Y=4282739.1  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #93

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=731781.1, Y=4283173.1  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

Outfall #94

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=731686.7, Y=4283182.6  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #95

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=731597.6, Y=4283230.4  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #96

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=731516.3, Y=4283372.3  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #99

Legal Description: Section 4, T45N, R06E, St. Louis County  
UTM Coordinates: X=731223.4, Y=4283875.5  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #100

Legal Description: Section 33, T46N, R06E, St. Louis County  
UTM Coordinates: X=731071.7, Y=4284481.5  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #101

Legal Description: Section 33, T46N, R06E, St. Louis County  
UTM Coordinates: X=731131.0, Y=4284723.9  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #102

Legal Description: Section 5, T45N, R06E, St. Louis County  
UTM Coordinates: X=729582.0, Y=4283812.4  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #103

Legal Description: Land Grant 2037, St. Louis County  
UTM Coordinates: X=733662.8, Y=4275906.0  
Receiving Stream: Deer Creek (P)  
First Classified Stream & ID: Deer Creek (P) 3826  
USGS Basin and Subwatershed: 07140101-0504

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

**Outfall #104**

Legal Description: Land Grant 2844, St. Louis County  
UTM Coordinates: X=732914.3, Y=4275866.4  
Receiving Stream: Deer Creek (P)  
First Classified Stream & ID: Deer Creek (P) 3826  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #105**

Legal Description: Land Grant 2844, St. Louis County  
UTM Coordinates: X=732346.2, Y=4276141.9  
Receiving Stream: Deer Creek (P)  
First Classified Stream & ID: Deer Creek (P) 3826  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #106**

Legal Description: Land Grant 1930, St. Louis County  
UTM Coordinates: X= 731088.8, Y= 4276978.7  
Receiving Stream: Deer Creek  
First Classified Stream & ID: Deer Creek (P) 3826  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #111**

Legal Description: Section 21, T45N, R06E, St. Louis County  
UTM Coordinates: X=731040.9, Y=4279078.7  
Receiving Stream: Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #117**

Legal Description: Section 27, T45N, R06E, St. Louis County  
UTM Coordinates: X=732147.7, Y=4277144.5  
Receiving Stream: Black Creek (P)  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #118**

Legal Description: Section 22, T45N, R06E, St. Louis County  
UTM Coordinates: X=732431.6, Y=4277619.1  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #119**

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X=732477.7, Y=4277694.0  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #120**

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X= 732626.3, Y=4278040.6  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

**Outfall #121**

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X= 732629.3, Y=4278026.4  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #122**

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X= 732731.3, Y=4278305.8  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #123**

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X=732792.4, Y=4278415.3  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #124**

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X= 732944.3, Y=4278567.0  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #125**

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X= 732955.2, Y=4278665.0  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #126**

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X= 732950.4, Y=4278862.2  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #127**

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X= 732944.4, Y= 4278862.5  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #128**

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X=733095.1, Y=4279490.4  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

Outfall #130

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X=733131.3, Y=4279665.6  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

Outfall #131

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X=732459.7, Y=4278500.9  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

Outfall #134

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X=732176.2, Y=4279093.7  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

Outfall #136

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X=732232.6, Y=4279637.9  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

Outfall #137

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X= 732149.7, Y=4279294.6  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

Outfall #138

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X= 732168.4, Y=4279412.9  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

Outfall #139

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X=732226.1, Y=4279762.3  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

Outfall #140

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X=732223.9, Y=4279761.1  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

Outfall #141

Legal Description: Land Grant 2484, St. Louis County  
UTM Coordinates: X=732204.2, Y=4279885.4  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

Outfall #142

Legal Description: Land Grant 3102, St. Louis City  
UTM Coordinates: X=740204.0, Y=4271329.6  
Receiving Stream: Mississippi River (P)  
First Classified Stream & ID: Mississippi River (P) 1707.02  
USGS Basin and Subwatershed: 07140101-0507

Outfall #143

Legal Description: Land Grant 3102, St. Louis County  
UTM Coordinates: X= 739643.9, Y=4270406.8  
Receiving Stream: Mississippi River (P)  
First Classified Stream & ID: Mississippi River (P) 1707.02  
USGS Basin and Subwatershed: 07140101-0507

Outfall #144

Legal Description: Land Grant 3102, St. Louis County  
UTM Coordinates: X=739438.8, Y=4270024.7  
Receiving Stream: Mississippi River (P)  
First Classified Stream & ID: Mississippi River (P) 1707.02  
USGS Basin and Subwatershed: 07140101-0507

Outfall #147

Legal Description: Land Grant 3102, St. Louis County  
UTM Coordinates: X= 738946.1, Y=4268804.2  
Receiving Stream: Mississippi River (P)  
First Classified Stream & ID: Mississippi River (P) 1707.02  
USGS Basin and Subwatershed: 07140101-0507

Outfall #149

Legal Description: Land Grant 3344, St. Louis County  
UTM Coordinates: X= 737893.1, Y=4265912.9  
Receiving Stream: Mississippi River (P)  
First Classified Stream & ID: Mississippi River (P) 1707.02  
USGS Basin and Subwatershed: 07140101-0507

Outfall #151

Legal Description: Land Grant 3344, St. Louis County  
UTM Coordinates: X= 737632.1, Y=4265225.0  
Receiving Stream: Mississippi River (P)  
First Classified Stream & ID: Mississippi River (P) 1707.02  
USGS Basin and Subwatershed: 07140101-0507

Outfall #152

Legal Description: Land Grant 3344, St. Louis County  
UTM Coordinates: X=737556.9, Y= 4264949.3  
Receiving Stream: Mississippi River (P)  
First Classified Stream & ID: Mississippi River (P) 1707.02  
USGS Basin and Subwatershed: 07140101-0507

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

**Outfall #153**

Legal Description: Land Grant 3344, St. Louis County  
UTM Coordinates: X=737463.4, Y=4264528.0  
Receiving Stream: Mississippi River (P)  
First Classified Stream & ID: Mississippi River (P) 1707.02  
USGS Basin and Subwatershed: 07140101-0507

**Outfall #154**

Legal Description: Land Grant 3344, St. Louis County  
UTM Coordinates: X=737386.1, Y=4263915.5  
Receiving Stream: Mississippi River (P)  
First Classified Stream & ID: Mississippi River (P) 1707.02  
USGS Basin and Subwatershed: 07140101-0507

**Outfall #160**

Legal Description: Land Grant 2799, St. Louis County  
UTM Coordinates: X= 729637.9, Y=4280712.5  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #161**

Legal Description: Land Grant 1930, St. Louis County  
UTM Coordinates: X= 729559.4, Y=4277128.4  
Receiving Stream: Deer Creek  
First Classified Stream & ID: Deer Creek (P) 3826  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #163**

Legal Description: Land Grant 1953, St. Louis County  
UTM Coordinates: X=734401.6, Y=4271678.9  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Outfall #166**

Legal Description: Land Grant 2035, St. Louis County  
UTM Coordinates: X=733013.9, Y=4275677.9  
Receiving Stream: Tributary to Deer Creek  
First Classified Stream & ID: Deer Creek (P) 3826  
USGS Basin and Subwatershed: 07140101-0504

**Outfall #167**

Legal Description: Land Grant 2033, St. Louis County  
UTM Coordinates: X=735176.3, Y=4283867.8  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

**Outfall #170**

Legal Description: Land Grant 3102, St. Louis County  
UTM Coordinates: X= 737965.7, Y=4269575.1  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 1710  
USGS Basin and Subwatershed: 07140101-0506

**ATTACHMENT A**

**CSO LOCATIONS (continued)**

Outfall #173

Legal Description: Land Grant 2035, St. Louis County  
UTM Coordinates: X= 733472.6, Y=4275356.6  
Receiving Stream: River des Peres (P)  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

Outfall #176

Legal Description: Section 27, T45N, R06E, St. Louis County  
UTM Coordinates: X=732299.3, Y=4277347.1  
Receiving Stream: Tributary to Black Creek  
First Classified Stream & ID: Black Creek (P) 3825  
USGS Basin and Subwatershed: 07140101-0504

Outfall #178

Legal Description: Land Grant 2775, St. Louis County  
UTM Coordinates: X= 733592.9, Y=4284372.6  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #179

Legal Description: Land Grant 3102, St. Louis City  
UTM Coordinates: X= 740453.9, Y=4271682.0  
Receiving Stream: Mississippi River (P)  
First Classified Stream & ID: Mississippi River (P) 1707.02  
USGS Basin and Subwatershed: 07140101-0507

Outfall #180

Legal Description: Land Grant 0378, St. Louis County  
UTM Coordinates: X=733815.4, Y=4282701.7  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0403

Outfall #181

Legal Description: Land Grant 1339, St. Louis County  
UTM Coordinates: X= 736016.4, Y=4271326.4  
Receiving Stream: Tributary to River des Peres  
First Classified Stream & ID: River des Peres (P) 3827  
USGS Basin and Subwatershed: 07140101-0506

**Missouri Department of Natural Resources**  
**STATEMENT OF BASIS**  
**FOR THE PURPOSE OF MODIFICATION**  
**OF**  
**MO-00025151**  
**LEMAY WASTE WATER TREATMENT PLANT**

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

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Statement of Basis 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 Statement of Basis is not an enforceable part of an operating permit.

**Part I – Facility Information**

Facility Type: POTW  
Facility SIC Code(s): 4952

Facility Description: The Lemay Wastewater Treatment Plant is an activated sludge secondary treatment plant consisting of six grit/detritus tanks, five comminutors, two pre-aeration tanks, eight primary clarifiers with four additional wet weather primary clarifiers, eight step-feed aeration tanks, twelve final clarifiers, three ash slurry ponds, five stormwater outfalls, and solids handling facilities which include sludge dewatering belt filter presses, multiple hearth incinerators and landfill of incinerator ash.

**Part II – Modification Rationale**

This operating permit is hereby modified to reflect a change stormwater outfalls. Outfall #006 and #007 have been combined into one stormwater outfall. This combined stormwater outfall will be labeled Outfall #006 and will be physically located at the new UTM coordinates detailed in the permit under Outfall #006.

No other changes were made at this time.

**Part III – Finding of Affordability**

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

Not Applicable; The Department is not required to determine findings of affordability because the permit does not contain any new environmental requirements. Therefore, the Department has determined that there is nothing new to afford.

## **Part IV – 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.

**Date of Statement of Basis:** July 23, 2012

Submitted by

**Logan Cole, Environmental Specialist**  
Domestic Wastewater Unit  
Operating Permits Section  
Water Protection Program  
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