

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, RSMo, as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. **MO0000931**

Owner: The Clorox Company
Owner Address: PO Box 24305, Oakland, CA 94623

Continuing Authority: Kingsford Manufacturing Company
Continuing Authority Address: 21200 Maries Rd. 314, Belle, MO 65013

Facility Name: Kingsford Manufacturing Company
Facility Address: 21200 Maries Rd. 314, Belle, MO 65013

Legal Description: See Page 2
UTM Coordinates: See Page 2

Receiving Stream: Unnamed tributary to Dry Fork Creek (U) (gaining)
First Classified Stream and ID: Dry Fork Creek (C) (02041) (gaining/losing)
USGS Basin & Sub-watershed No.: (07140103-040001)

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

FACILITY DESCRIPTION

See Page 2

This operating permit authorizes only wastewater, including stormwater, discharges under the Law and the National Pollutant Discharge Elimination System. This operating permit does not apply to other regulated areas. This operating permit may be appealed in accordance with the Law, Sections 644.051.6., RSMo, and 621.250, RSMo, and Missouri Clean Water Commission regulations [10 CSR 20-6.020], Permits, Public Participation, Hearings and Notice to Governmental Agencies and [10 CSR 20-1.020], Organizations, Clean Water Commission Appeals and Requests for Hearings.

February 7, 2011
Effective Date

February 7, 2011
Renewal Date

Sara Parker Pauley, Acting Director, Department of Natural Resources

February 6, 2016
Expiration Date

Gary L. Gaines, P.E., Director, Southeast Regional Office

FACILITY DESCRIPTION (continued)

Outfall # 001 – Non-Publicly Owned Treatment Works – Sanitary Wastewater **Only** – Standard Industrial Classification (SIC) Code(s): # 4952 (Sewerage systems–domestic) – **Certified Wastewater Operator Not Required**
Extended aeration/Sock filtration/Chlorination disinfection/Sludge disposal by contract hauler
Design population equivalent = 60
Design flow = 6,000 gallons per day
Actual average flow = 3,500 gallons per day
Design sludge production = 0.61 dry tons per year
Legal Description: NW ¼, SW ¼, Sec. 8, T40N, R07W, Maries County
UTM Coordinates: (X = 0610794, Y = 4230923)
Receiving Stream: Unnamed tributary to Dry Fork Creek (U) (gaining)
First Classified Stream and ID: Dry Fork Creek (C) (02041) (gaining/losing)
USGS Basin and Sub-watershed No.: (07140103–040001)

Outfall # 002 – Discharge from Holding (Tertiary) Basin(s) – Industrial – Standard Industrial Classification (SIC) Code(s): # 2861 [Charcoal (Gum and Wood Chemicals) Manufacturing] – Discharging facility with land application – Process water (manufacturing facility wash down, firefighting, boiler blow down, retort furnace water seal and water cooled air-conditioning) and stormwater Two (2) each concrete settling basins/One (1) each earthen secondary basin/One (1) each tertiary earthen basin/One (1) each irrigation system
Raw materials recovered and recycled from concrete settling basins (process water and stormwater recycled from secondary and tertiary basins as needed)

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Design flow = 0.29 million gallons per day
Average flow = 0.083 million gallons per day
Legal Description: NW ¼, SW ¼, Sec. 8, T40N, R07W, Maries County
UTM Coordinates: (X = 0610609, Y = 4231044)
Receiving Stream: Unnamed tributary to Dry Fork Creek (U) (gaining)
First Classified Stream and ID: Dry Fork Creek (C) (02041) (gaining/losing)
USGS Basin and Sub-watershed No.: (07140103–040001)

Deleted: Irrigated water and storm water runoff are monitored in addition to the basin discharge.

Outfall # 003 – Stormwater Runoff – Industrial – Standard Industrial Classification (SIC) Code(s): # 2861 [Charcoal (Gum and Wood Chemicals) Manufacturing]

Stormwater conveyance terminates near sanitary wastewater treatment facility (samples shall be collected prior to where wastewater effluent discharge from sanitary wastewater treatment facility enters receiving stream)

Design flow = 13.28 million gallons per day
Actual flow dependent on precipitation
Legal Description: NW ¼, SW ¼, Sec. 8, T40N, R07W, Maries County
UTM Coordinates: (X = 0610803, Y = 4230915)
Receiving Stream: Unnamed tributary to Dry Fork Creek (U) (gaining)
First Classified Stream and ID: Dry Fork Creek (C) (02041) (gaining/losing)
USGS Basin & Sub-watershed No.: (07140103–040001)

Outfall # 004 – **Eliminated** (effective on February 7, 2011)

Outfall # 005 – **Eliminated** (effective on February 7, 2011)

Outfall # 006 – In-Stream Water Body Monitoring – Standard Industrial Classification (SIC) Code(s): Industrial {[Charcoal (Gum and Wood Chemicals) Manufacturing]} and Non-Publicly Owned Treatment Works [# 4952 (Sewerage systems–domestic)]
Outfall located below former Outfall # 004 at property line in receiving stream [Unnamed tributary to Dry Fork Creek (U) (gaining)]
Legal Description: SW ¼, NW ¼, Sec. 8, T40N, R07W, Maries County
UTM Coordinates: (X = 0610504, Y = 4231202)
Receiving Stream: Unnamed tributary to Dry Fork Creek (U) (gaining)
First Classified Stream and ID: Dry Fork Creek (C) (02041) (gaining/losing)
USGS Basin and Sub-watershed No.: (07140103–040001)

FACILITY DESCRIPTION (continued)

Irrigation System Design: Former Outfall # 005 (**eliminated** effective February 7, 2011) – Discharges and stormwater runoff from land application irrigation areas [effluent from Outfall # 002 – Holding (Tertiary) Basin(s)]

Receiving Water Body (Stream) Watershed: Gaining water body (stream) setting. Unnamed and unclassified receiving water body (stream) designated as gaining that reaches a classified water body (stream) designated as gaining with a Whole Body Contact Recreation use designation within two (2) downstream miles that transforms into a classified water body (stream) designated as losing after two (2) downstream miles

Facility Type: Partial irrigation system when feasible and holding (tertiary) basin(s) discharge of excess flows

Primary Settling Basin(s) – Two (2) Each: Storage volume (minimum-to-maximum water levels): 209,440 gallons

Secondary Holding Basin(s): Storage volume (minimum-to-maximum water levels): 1,800,000 gallons

Holding (Tertiary) Basin(s):

Freeboard: 1.5 feet

Storage volume (minimum-to-maximum water levels): 800,000 gallons

Land Application:

Irrigation volume per year: 8,133,000 gallons

Irrigation area(s): Six (6) acres

Application rates per acre: 0.2 inch per hour; 0.75 inches per day; three (3) inches per week; 50 inches per year

Equipment type: Sprinklers

Vegetation: Grass land

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 Basin Dimensions:
 Surface Area
 Depth from Bottom 7.0
 feet depthEmergency
 Spillway:
 1.0 feet depth.

Deleted: Lagoon Dimensions:
 Surface Area Depth from
 Bottom Pump down depth
 (from spillway)¶
 Inside Top Berm: 415 x 91 = 37,765
 sq.ft. by 8.5 feet depth¶
 Emergency Spillway:
 6.5 feet depth ¶
 Maximum operating level 6.5
 feet depth 1.0 feet¶
 Minimum operating level 2.0 feet
 depth 6.5 feet¶

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Deleted: Lagoon Dimensions:
 Surface Area Depth from Bottom
 Pump down depth (from spillway)¶
 Inside Top Berm: 225 x 105 =
 23,625 sq.ft. by 8.0 feet depth¶

Deleted: (top berm to spillway)

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 Emergency Spillway: 6.5 feet
 depth ¶
 Maximum operating level
 6.5 feet depth 4.5 feet¶
 Minimum operating level 2.0 feet
 depth 6.5 feet¶

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A. INTERIM EFFLUENT LIMITATIONS and MONITORING REQUIREMENTS					Page 4 of 16	
					Permit No.: MO0000931	
Permittee authorized to discharge from outfall(s) with serial number(s) as specified in the application for this operating permit. Interim effluent limitations shall become effective upon issuance (renewal) date of this operating permit and shall remain in effect until December 30, 2013. Such discharges shall be controlled, limited and monitored by permittee as specified below:						
OUTFALL NUMBER(S) and EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall # 001 – Sanitary Wastewater						
Flow	MGD	*		*	Once per quarter***	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		45	30	Once per quarter***	grab
Total Suspended Solids	mg/L		45	30	Once per quarter***	grab
pH – Units	SU	**		**	Once per quarter***	grab
Ammonia as N	mg/L	*		*	Once per quarter***	grab
Temperature	°C	*		*	Once per quarter***	grab
Outfall # 002 – Discharge(s) from Holding (Tertiary) Basin(s) – (Process Waters and Stormwater)						
Flow	MGD	*		*	Once per month	24 hr. estimate
Total Suspended Solids	mg/L	110		70	Once per month	grab
pH – Units	SU	**		**	Once per month	grab
Chloride + Sulfate	mg/L	*		*	Once per month	grab
Phenol	µg/L	*		*	Once per month	grab
Rainfall	inches	*		*	Daily	total
Oil and Grease	mg/L	15		10	Once per month	grab
Outfall # 003 – Stormwater Runoff						
Flow	MGD	*		*	Once per quarter***	grab
Total Suspended Solids	mg/L	*		*	Once per quarter***	grab
pH – Units	SU	**		**	Once per quarter***	grab
Oil and Grease	mg/L	15		10	Once per quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>Quarterly</u> . FIRST REPORT DUE: <u>April 28, 2011</u> . THERE SHALL BE <u>NO</u> DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Irrigation System – Land Application Operational Monitoring from Holding (Tertiary) Basin(s) (Note 1 and Note 2)						
Basin(s) Freeboard	feet	*			Once per month	measured
Irrigation Period	hours	*			Daily	total
Volume Irrigated	gallons	*			Daily	total
Application Area	acres	*			Daily	total
Application Rate	gallons/acre	*			Daily	total
MONITORING REPORTS SHALL BE SUBMITTED <u>Annually</u> . FIRST REPORT DUE: <u>January 28, 2012</u> .						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS OPERATING PERMIT SUBJECT TO ATTACHED <u>Part I and Part III</u> STANDARD CONDITIONS DATED <u>October 1, 1980, and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. <u>INTERIM EFFLUENT LIMITATIONS and MONITORING REQUIREMENTS</u> (continued)					Page 5 of 16	
					Permit No.: MO0000931	
OUTFALL NUMBER(S) and EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall # 006 – In-Stream Monitoring</u>						
Flow	MGD	*		*	Once per quarter***	grab
Biochemical Oxygen Demand ₅	mg/L	*		*	Once per quarter***	grab
Total Suspended Solids	mg/L	*		*	Once per quarter***	grab
pH	SU	**		**	Once per quarter***	grab
Ammonia Nitrogen as N	mg/L	*		*	Once per quarter***	grab
Temperature	°C	*		*	Once per quarter***	grab
Phenol	µg/L	*		*	Once per quarter***	grab
Oil and Grease	mg/L	*		*	Once per quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>Quarterly</u> . FIRST REPORT DUE: <u>April 28, 2011</u> . THERE SHALL BE <u>NO</u> DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. <u>STANDARD CONDITIONS</u>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS OPERATING PERMIT SUBJECT TO ATTACHED <u>Part I and Part III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. INTERIM EFFLUENT LIMITATIONS and MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only
- ** pH measured in pH standard units (SUs) and is not to be averaged. pH limited to range of 6.0-9.0 pH SUs
- *** See table below for quarterly sampling and reporting:

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

Note 1 – Records shall be maintained and summarized into an annual operating report which shall be submitted annually to the Department by January 28th of each calendar year for the previous calendar year period. Said annual operating report shall include the following:

- (a) A record of maintenance and repairs performed at subject facility during the previous calendar year, average number of times per month facility was inspected during the previous calendar year to determine if facility was operating properly, and a description of any unusual operating conditions encountered during the previous calendar year; and
- (b) A summary of the irrigation operations including freeboard at the start and end of irrigation season, number of days of irrigation for each month, total gallons irrigated, total acres used, crops grown, application rate in inches per acre per day and for the previous calendar year, monthly and annual precipitation amounts received at facility for the previous calendar year and summary of analytical results.

Note 2 – Basin(s) freeboard shall be reported as basin(s) water level in feet below overflow level [see SPECIAL CONDITIONS below for Wastewater Irrigation System from Holding (Tertiary) Basin(s) requirements]

A. FINAL EFFLUENT LIMITATIONS and MONITORING REQUIREMENTS

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

OUTFALL NUMBER(S) and EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall # 001 – Sanitary Wastewater						
Flow	MGD	*		*	Once per quarter***	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		45	30	Once per quarter***	24 hr. composite
Total Suspended Solids	mg/L		45	30	Once per quarter***	24 hr. composite
pH – Units	SU	**		**	Once per quarter***	grab
Ammonia as N	mg/L	*		*	Once per quarter***	grab
Temperature	°C	*		*	Once per quarter***	grab
<i>Escherichia coli</i> (<i>E. coli</i>) (Note 1)	Colonies/100 mL	1,030		206	Once per quarter***	grab
Total Residual Chlorine (Note 2)	mg/L	0.016 (0.13 ML)		0.008 (0.13 ML)	Once per quarter***	grab
Outfall # 002 – Discharge(s) from Holding (Tertiary) Basin(s) – (Process Waters and Stormwater)						
Flow	MGD	*		*	Once per month	24 hr. estimate
Total Suspended Solids	mg/L	110		70	Once per month	grab
pH – Units	SU	**		**	Once per month	grab
Chloride + Sulfate	mg/L	1,000		1,000	Once per month	grab
Phenol	µg/L	*		*	Once per month	grab
Rainfall	inches	*		*	Daily	total
Oil and Grease	mg/L	15		10	Once per month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>Quarterly</u> . FIRST REPORT DUE: <u>April 28, 2014</u> . THERE SHALL BE <u>NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.</u>						
Whole Effluent Toxicity (WET) testing	% Survival	See Special Conditions			Once per permit cycle	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>Once per permit cycle</u> . FIRST REPORT DUE: <u>January 28, 2015</u> .						
Outfall # 003 – Stormwater Runoff						
Flow	MGD	*		*	Once per quarter***	grab
Total Suspended Solids	mg/L	*		*	Once per quarter***	grab
pH – Units	SU	**		**	Once per quarter***	grab
Oil and Grease	mg/L	15		10	Once per quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>Quarterly</u> . FIRST REPORT DUE: <u>April 28, 2014</u> . THERE SHALL BE <u>NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.</u>						
Irrigation System – Land Application Operational Monitoring from Holding (Tertiary) Basin(s) (Note 3 and Note 4)						
Basin(s) Freeboard	feet	*			Once per month	measured
Irrigation Period	hours	*			Daily	total
Volume Irrigated	gallons	*			Daily	total
Application Area	acres	*			Daily	total
Application Rate	gallons/acre	*			Daily	total
MONITORING REPORTS SHALL BE SUBMITTED <u>Annually</u> . FIRST REPORT DUE: <u>January 28, 2015</u> .						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS OPERATING PERMIT SUBJECT TO ATTACHED <u>Part I and Part III</u> . STANDARD CONDITIONS DATED <u>October 1, 1980, and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. FINAL EFFLUENT LIMITATIONS and MONITORING REQUIREMENTS (continued)					Page 7 of 16	
					Permit No.: MO0000931	
OUTFALL NUMBER(S) and EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall # 006 – In-Stream Monitoring						
Flow	MGD	*		*	Once per quarter***	grab
Biochemical Oxygen Demand ₅	mg/L	*		*	Once per quarter***	grab
Total Suspended Solids	mg/L	*		*	Once per quarter***	grab
pH	SU	**		**	Once per quarter***	grab
Ammonia Nitrogen as N	mg/L	*		*	Once per quarter***	grab
Temperature	°C	*		*	Once per quarter***	grab
Phenol	µg/L	*		*	Once per quarter***	grab
Oil and Grease	mg/L	*		*	Once per quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>Quarterly</u> . FIRST REPORT DUE: <u>January 28, 2014</u> . THERE SHALL BE <u>NO</u> DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS OPERATING PERMIT SUBJECT TO ATTACHED <u>Part I and Part III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. **FINAL EFFLUENT LIMITATIONS and MONITORING REQUIREMENTS** (continued)

- * Monitoring requirement only
- ** pH measured in pH standard units (SUs) and is not to be averaged. pH limited to range of 6.5-9.0 pH SUs
- *** See table below for quarterly sampling and reporting:

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

Note 1 – Final effluent limitations and monitoring requirements for the *Escherichia coliform* (*E. coli*) effluent parameter are applicable only during the recreational season from April 1 through October 31. The maximum monthly average final effluent limitation for the *Escherichia coliform* (*E. coli*) effluent parameter is expressed as a geometric mean

Note 2 – This operating permit contains final effluent limitations for the Total Residual Chlorine (TRC) effluent parameter

- (a) This final effluent limitation is below the minimum quantification level (ML) of the most common and practical United States Environmental Protection Agency (US EPA) approved CLTRC methods. The Department has determined the current acceptable ML for the TRC parameter to be 0.13 mg/L when using the DPD Colorimetric Method #4500 – CL G. from the *Standard Methods for the Examination of Waters and Wastewater*. Permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to (\geq) the ML of 0.13 mg/L will be considered in violation of this operating permit and values less than ($<$) the ML of 0.13 mg/L will be considered to be in compliance with this operating permit. The ML does not authorize discharge of chlorine in excess of the final effluent limitations stated in this operating permit.

A. FINAL EFFLUENT LIMITATIONS and MONITORING REQUIREMENTS (continued)

Note 2 (continued)

- (b) Disinfection required year-round unless this operating permit specifically states that: "Final effluent limitations and monitoring requirements for the *Escherichia coli* (*E. coli*) effluent parameter are applicable only during the recreational season from April 1 through October 31." If this operating permit does not require disinfection during non-recreational months, do not chlorinate in those months.
- (c) Do not chemically de-chlorinate if it is not needed to meet the final effluent limitations in this operating 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 3 – Records shall be maintained and summarized into an annual operating report which shall be submitted annually to the Department by January 28th of each calendar year for the previous calendar year period. Said annual operating report shall include the following:

- (a) A record of maintenance and repairs performed at subject facility during the previous calendar year, average number of times per month facility was inspected during the previous calendar year to determine if facility was operating properly, and a description of any unusual operating conditions encountered during the previous calendar year; and
- (b) A summary of the irrigation operations including freeboard at the start and end of irrigation season, number of days of irrigation for each month, total gallons irrigated, total acres used, crops grown, application rate in inches per acre per day and for the previous calendar year, monthly and annual precipitation amounts received at facility for the previous calendar year and summary of analytical results.

Note 4 – Basin(s) freeboard shall be reported as basin(s) water level in feet below overflow level [see SPECIAL CONDITIONS below for Wastewater Irrigation System from Holding (Tertiary) Basin(s) requirements]

C. SPECIAL CONDITIONS

1. This operating permit may be reopened and modified, or alternatively revoked and reissued, to:

- (a) Comply with any applicable effluent standard(s) or limitation(s) 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 limitations in the operating permit; or
 - (2) Controls any pollutant not limited in the operating 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 operating 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. Permittee will cease discharge by connection to an area wide wastewater treatment system within 90 calendar days of notice of its availability.

4. Changes in Discharges of Toxic Substances

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

C. SPECIAL CONDITIONS (continued)

4. Changes in Discharges of Toxic Substances (continued)

- (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 operating 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 operating permit application;
 - (4) The level established in Part A of the operating permit by the Director.
- (b) That permittee has begun or expects to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the operating permit application.

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

6. Water Quality Standards

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

7. All paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) shall be stored so that these materials are not exposed to stormwater. Spill prevention, control, countermeasures, and/or management shall be provided sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with substances contained and shall also prevent groundwater contamination.

C. SPECIAL CONDITIONS (continued)

8. Permittee responsible for the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP shall be prepared within 180 calendar days of the issuance (renewal) date of this operating permit and implemented within 360 calendar days of the issuance (renewal) date of this operating permit. The SWPPP shall be kept onsite and a copy shall be sent to Department for review and approval upon request. Permittee shall select, install, use, operate, and maintain the Best Management Practices (BMPs) prescribed in the SWPPP in accordance with concepts and methods described in the following document:

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

The Stormwater Pollution Prevention Plan (SWPPP) must include the following:

- (a) An assessment of all stormwater discharges on site. This must include a list of potential contaminants and an annual estimate of amounts that will be used in the described activities;
 - (b) A listing of Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter stormwater;
 - (c) A narrative explaining how Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requirements for this type of operation are being met.
 - (d) A schedule for implementing the Best Management Practices (BMPs) within 360 calendar days of the issuance (renewal) date of this operating permit;
 - (e) The Stormwater Pollution Prevention Plan (SWPPP) shall include a schedule for monthly site inspections and a brief written report detailing the inspection findings. Said inspections must include observation and evaluation of Best Management Practices (BMPs) effectiveness, deficiencies, and corrective measures that will be taken. Deficiencies must be corrected within seven (7) calendar days. Said inspection reports must be kept onsite with the SWPPP. Said inspection shall be made available to the Department personnel upon request;
 - (f) A provision for designating an individual to be responsible for environmental matters; and
 - (g) A provision for providing stormwater training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted the Department upon request.
9. All fueling facilities present onsite shall adhere to applicable federal and state regulations concerning underground storage, aboveground storage, and dispensers, including spill prevention, control and countermeasures.
10. Substances regulated by federal law under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) that are transported, stored, or used for maintenance, cleaning or repair shall be managed according to the provision of the RCRA and the CERCLA.
11. Wastewater Irrigation System from Holding (Tertiary) Basin(s)
- (a) Irrigation Design. Design and operation shall be in accordance with Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-8.020(15)], Design Guides, Design of Small Sewage Works, Land Application of Wastewater. Permittee shall operate said land application system in accordance with design parameters listed in above FACILITY DESCRIPTION section of this operating permit (intended to minimize discharges from said land application site(s) to the extent practicable). Wastewater shall be land applied in a manner that shall not cause a runoff of irrigated effluent;
 - (c) Basin(s) Operating Levels. The minimum and maximum operating water levels for said storage basin(s) shall be clearly marked. A minimum of one-and-one-half (1-½) feet of water shall be kept in the earthen basin(s) at all times. Wastewater shall be land applied whenever feasible based on soil and weather conditions, operating permit requirements, and in a manner that shall not cause a runoff of irrigated effluent.

C. SPECIAL CONDITIONS (continued)

11. Wastewater Irrigation System from Holding (Tertiary) Basin(s) (continued)

- (d) Emergency Spillway. Earthen storage basin(s) shall have an emergency spillway to protect structural integrity of earthen structures during operation at near full water levels and in the event of overflow conditions. Said emergency spillway shall be at least one foot (1') below top of berm. The Department may waive requirement for overflow structures on small existing basin(s).
- (e) General Irrigation Requirements. Said wastewater irrigation system shall be operated so as to provide uniform distribution of irrigated wastewater over entire irrigation site(s). A complete ground cover of vegetation shall be maintained on irrigation site(s) unless system is Department approved for row crop irrigation. Wastewater shall be land applied only during daylight hours to the extent practicable. Wastewater shall be land applied in a manner that shall not cause a runoff of irrigated effluent.
- (f) Saturated/Frozen Conditions. There shall be no irrigation during frozen, snow covered or saturated soil conditions. There shall be no irrigation on days when more than 0.2 inch of precipitation is received or when there is observation by operator of an imminent or impending rainfall event. Wastewater shall be land applied in a manner that shall not cause a runoff of irrigated effluent.

12. Whole Effluent Toxicity (WET) Testing shall be conducted as follows:

SUMMARY OF ACUTE WHOLE EFFLUENT TOXICITY (WET) TESTING FOR THIS OPERATING PERMIT					
OUTFALL	AEC*	LC ₅₀ **	FREQUENCY	SAMPLE TYPE	MONTH
001	100%	100%	Once per permit cycle	24 hr. composite*	Any Month in 2014 (Report by January 28, 2015)

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

Dilution Series							
AEC%	100% effluent	50% effluent	25% effluent	12.5% effluent	6.25% effluent	(Control) 100% upstream, if available	(Control) 100% laboratory water, also called synthetic water

(a) WET Test Schedule and Follow-Up Requirements

- (1) Permittee shall perform a MULTIPLE-dilution acute WET test in the calendar month(s) and at the frequency specified above. For WET tests which are successfully passed, permittee shall submit test results using the Department's WET test report form # MO-780-1899, along with complete copies of the WET test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability, to the Department's Division of Environmental Quality's Water Protection Program, PO Box 176, Jefferson City, MO 65102-0176. If effluent passes the WET test, do not repeat the WET test until the next WET testing period.
 - (a) For stormwater discharges, samples shall be collected within three (3) hours from when discharge first occurs.
 - (b) Samples submitted for stormwater discharges analysis shall be collected as a grab.
 - (c) For non-stormwater discharges, samples shall be collected only when precipitation has not occurred for a period of 48 hours prior to sample collection. In no event shall sample collection occur simultaneously with the precipitation occurrence excepting for stormwater samples.
 - (d) A 24-hour composite sample shall be submitted non-stormwater discharges analysis.
 - (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 24-hour composite as appropriate to the nature of the discharge.

C. SPECIAL CONDITIONS (continued)

12. Whole Effluent Toxicity (WET) Testing (continued):

(a) WET Test Schedule and Follow-Up Requirements (continued)

(1) (continued)

- (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 Department's 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, samples shall be composited at the laboratory where the WET test is to be performed.
 - (k) Where in stream WET 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.
 - (l) Samples submitted for analysis of downstream receiving water may be collected as either a grab or 24-hour composite as appropriate to the nature of the discharge.
 - (m) All instream samples, including downstream samples, shall be tested for toxicity at the 100% concentration in addition to any other assigned Allowable Effluent Concentration (AEC) for in-stream samples.
- (2) All failing WET test results along with complete copies of the WET test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the Department's Division of Environmental Quality's Water Protection Program, PO Box 176, Jefferson City, MO 65102-0176, within 14 calendar days of the availability of the results.
- (3) If the effluent fails the WET test, a MULTIPLE-dilution acute WET test shall be performed for BOTH species within 30 calendar days and biweekly thereafter [for stormwater, WET tests shall be performed on the next and subsequent stormwater discharges as they occur, but not less than seven (7) calendar days apart], until one (1) of the following conditions are met:
- (a) THREE (3) CONSECUTIVE MULTIPLE-DILUTION ACUTE WET TESTS PASS. No further WET tests need to be performed until next regularly scheduled WET testing period; or
 - (b) A TOTAL OF THREE (3) MULTIPLE-DILUTION ACUTE WET TESTS FAIL.
- (4) Failure of a MULTIPLE-dilution acute WET test is a violation of this operating permit.
- (5) Permittee shall submit a summary of WET test results for the WET testing series along with complete copies of the WET test reports received from the laboratory to the Department's Division of Environmental Quality's Water Protection Program, PO Box 176, Jefferson City, MO 65102-0176, within 14 calendar days of the failed WET test.

C. SPECIAL CONDITIONS (continued)

12. Whole Effluent Toxicity (WET) Testing (continued):

(a) WET Test Schedule and Follow-Up Requirements (continued)

- (6) Additionally, the following shall apply upon failure of the MULTIPLE-DILUTION WET test: A toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. Permittee shall contact the Department's Division of Environmental Quality's Water Protection Program, PO Box 176, Jefferson City, MO 65102-0176, within 14 calendar days from availability of the WET test results to ascertain as to whether a TIE or TRE is appropriate. Permittee shall submit a plan for conducting a TIE or TRE to the Department's Division of Environmental Quality's Water Protection Program, PO Box 176, Jefferson City, MO 65102-0176, within 60 calendar days of the date of the Department's direction to perform either a TIE or TRE. This plan must be approved by the Department before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.
- (7) Upon the Department's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET testing schedule may be established by the Department for this period.
- (8) 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 permittee is proceeding according to a Department approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the operating 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 acute WET test:

- (a) For facilities with a computed percent effluent at the edge of the Zone of Initial Dilution (ZID), Allowable Effluent Concentration (AEC) OF 30% OR LESS, the AEC must be less than three-tenths (0.3) of the LC₅₀ concentration for the most sensitive of the test organisms; **OR**
- (b) For facilities with an AEC greater than 30%, the LC₅₀ concentration must be greater than 100%; **AND**
- (c) All effluent concentrations less than or equal to (\leq) the AEC must be nontoxic. Mortality observed in all effluent concentrations less than or equal to (\leq) 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. 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.

(c) WET Test Conditions

- (1) WET test type: Acute Static non-renewal.
- (2) All WET tests, including repeat WET tests for previous failures, shall include both WET testing species listed below:
- (3) WET testing 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 United States Environmental Protection Agency (US EPA) 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) WET testing period: 48 hours at the "Acceptable Effluent Concentration" (AEC) specified above.

C. SPECIAL CONDITIONS (continued)

12. Whole Effluent Toxicity (WET) Testing (continued):

(c) WET Test Conditions (continued)

- (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 Department upon request.
- (6) Unless otherwise specified above, MULTIPLE-dilution acute WET tests will be run with:
 - (a) 100%, 50%, 25%, 12.5%, and 6.25% effluent, unless the Allowable Effluent Concentration (AEC) is less than ($<$) 25% effluent, then dilutions will be four (4) times the AEC, two (2) times the AEC, AEC, $\frac{1}{2}$ the AEC and $\frac{1}{4}$ the AEC, respectively;
 - (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 WET test species exceeds 10%, the entire WET test will be rerun.
- (8) If upstream control mortality exceeds 10%, the entire WET test will be rerun using reconstituted water as the dilutant.

C. SPECIAL CONDITIONS (continued)

12. Whole Effluent Toxicity (WET) Testing (continued):

SUMMARY OF TEST METHODOLOGY FOR WHOLE-EFFLUENT TOXICITY TESTS

Whole-effluent-toxicity (WET) testing required in National Pollutant Discharge Elimination System (NPDES) operating permits shall use the following test conditions when performing single or multiple dilution methods. Any future changes in methodology will be supplied to permittee by the Department. Unless more stringent methods are specified by the Department, 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

C. SPECIAL CONDITIONS (continued)

13. Permittee shall comply with any applicable requirements listed in Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-8], Design Guides, and [10 CSR 20-9], Treatment Plant Operations, unless facility has received written notification that the Department has approved a modification to the requirements. Monitoring frequencies contained in this operating permit shall not be construed by permittee as a modification of the monitoring frequencies listed in MCWC regulation [10 CSR 20-9], Treatment Plant Operations. If a modification of the monitoring frequencies listed in MCWC regulation [10 CSR 20-9], Treatment Plant Operations, is needed, permittee shall submit a written request to the Department for review and, if deemed necessary, approval.

D. SCHEDULE OF COMPLIANCE

Final effluent limitations (maximum monthly average) for the *Escherichia coliform (E. coli)* effluent parameter of 206 colony forming units (CFUs) per 100 milliliters (mL) shall become effective on December 31, 2013, in accordance with the terms and conditions below:

1. On or before November 30, 2011, permittee shall submit, to the Department at the address listed on the cover letter that accompanies this operating permit, a preliminary engineering report (PER) prepared by a licensed professional engineer registered in the State of Missouri. Said PER shall make recommendations concerning a potential upgrade to this permitted wastewater treatment facility so that effluent discharges may meet Department disinfection requirements and final effluent limitations for the *Escherichia coliform (E. coli)* and Total Residual Chlorine (TRC) effluent parameters. Since facility utilizes disinfection by chlorine, facility may be required to de-chlorinate the effluent discharge to meet final effluent limitations for the TRC effluent parameter.
2. On or before November 30, 2012, and after Department approval of the submitted preliminary engineering report (PER) mentioned above, permittee shall submit, to the Department at the address listed on the cover letter that accompanies this operating permit, a construction permit application. Said application shall include applicable fees, construction activity schedule, plans and specifications in accordance with the Department approved PER.
3. No later than December 30, 2013, and/or upon completion of construction activities of the Department approved potential wastewater treatment facility upgrades, permittee shall submit, to the Department at the address listed on the cover letter that accompanies this operating permit, a letter of authorization or statement of work complete signed by the owner and a licensed professional engineer registered in the State of Missouri.
4. If permittee fails to meet any of the interim dates above, permittee shall notify the Department in writing, at the address listed on the cover letter that accompanies this operating permit, of the reason(s) for non-compliance, no later than 14 calendar days following each interim date mentioned above.

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF MODIFYING AND RENEWING
MISSOURI STATE OPERATING PERMIT # MO0000931
KINGSFORD MANUFACTURING COMPANY
BELLE, MARIES COUNTY

The Federal Water Pollution Control Act ("Clean Water Act", Section 402, Public Law 92-500, as amended) established the National Pollutant Discharge Elimination System (NPDES) operating permit program. This program regulates pollutant(s) discharges from point sources into the waters of the United States, and stormwater releases from certain point sources. All such discharges are unlawful without an operating permit ("Clean Water Act", Section 301). After an operating permit is obtained, a discharge not in compliance with all operating 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 the "Missouri Clean Water Law", Section 644, as amended). MSOPs (operating permits) are issued for a period of five (5) calendar years unless otherwise specified.

As per [40 CFR Part 124.8(a)], Protection of Environment, Environmental Protection Agency, Water Programs, Procedures for Decisionmaking, General Program Requirements, Fact sheet, and Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-6.020(1)(A)2.], Permits, Public Participation, Hearings and Notice to Governmental Agencies, Public Participation, a Fact Sheet shall be prepared to give pertinent information regarding the applicable regulations, development rationale of effluent limitations and conditions, and the public participation process for the MSOP (operating permit) listed below.

A Fact sheet is not an enforceable part of a Missouri State Operating Permit (MSOP).

This Fact Sheet is for a(n):

Major ; Minor ; Industrial Facility ; Variance ; Master General Permit ;
General Permit Covered Facility ; Operating permit with widespread public interest

Part I – Facility Information

Facility Address: 21200 Maries Rd. 314, Belle, MO 65013
Facility Type: Industrial with a Non-Publicly Owned Treatment Works
Facility Standard Industrial Classification (SIC) Code(s): # 2861 [Charcoal (Gum and Wood Chemicals) Manufacturing] and # 4952 (Sewerage systems–domestic)

Outfall # 001 – Non-Publicly Owned Treatment Works – Sanitary Wastewater **Only**
Extended aeration/Sock filtration/Chlorination disinfection/Sludge disposal by contract hauler
Design population equivalent = 60
Design flow = 6,000 gallons per day
Actual average flow = 3,500 gallons per day
Design sludge production = 0.61 dry tons per year

Outfall # 002 – Discharge from Holding (Tertiary) Basin(s) – Industrial
Discharging facility with land application – Process water (manufacturing facility wash down, firefighting, boiler blow down, retort furnace water seal and water cooled air-conditioning) and stormwater; Two (2) each concrete settling basins/One (1) each earthen secondary basin/One (1) each tertiary earthen basin/One (1) each irrigation system; Raw materials recovered and recycled from concrete settling basins (process water and stormwater recycled from secondary and tertiary basins as needed)

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Design flow = 0.29 million gallons per day
Average flow = 0.083 million gallons per day

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Outfall # 003 – Stormwater Runoff – Industrial
Stormwater conveyance terminates near sanitary wastewater treatment facility (samples shall be collected prior to where wastewater effluent discharge from sanitary wastewater treatment facility enters receiving stream)
Design flow = 13.28 million gallons per day
Actual flow dependent on precipitation

Outfall # 004 – **Eliminated** (effective on February 7, 2011)

Outfall # 005 – **Eliminated** (effective on February 7, 2011)

Outfall # 006 – In-Stream Water Body Monitoring – Industrial and Treated Domestic Sanitary Sewage
Outfall located below former Outfall # 004 at property line in receiving stream [Unnamed tributary to Dry Fork Creek (U) (gaining)]

Irrigation System Design: Former Outfall # 005 (**eliminated** effective February 7, 2011) – Discharges and stormwater runoff from land application irrigation areas [effluent from Outfall # 002 – Holding (Tertiary) Basin(s)]

Receiving Water Body (Stream) Watershed: Gaining water body (stream) setting. Unnamed and unclassified receiving water body (stream) designated as gaining that reaches a classified water body (stream) designated as gaining with a Whole Body Contact Recreation use designation within two (2) downstream miles that transforms into a classified water body (stream) designated as losing after two (2) downstream miles

Facility Type: Partial irrigation system when feasible and holding (tertiary) basin(s) discharge of excess flows

Primary Settling Basin(s) – Two (2) Each: Storage volume (minimum-to-maximum water levels): 209,440 gallons

Secondary Holding Basin(s): Storage volume (minimum-to-maximum water levels): 1,800,000 gallons

Holding (Tertiary) Basin(s):

Freeboard: 1.5 feet

Storage volume (minimum-to-maximum water levels): 800,000 gallons

Land Application:

Irrigation volume per year: 8,133,000 gallons

Irrigation area(s): Six (6) acres

Application rates per acre: 0.2 inch per hour; 0.75 inches per day; three (3) inches per week; 50 inches per year

Equipment type: Sprinklers

Vegetation: Grass land

Have any changes occurred at this facility or in the receiving water body (stream) that effects interim and/or final effluent limitations derivation? Yes ; Facility discharges treated domestic sanitary wastewater effluent and stormwater [to include discharges and stormwater runoff from land applications areas (process waters and stormwater)] to an unnamed and unclassified receiving water body (stream) that has been determined to be gaining by the Department’s Division of Geology and Land Survey’s Environmental Geology Section. Said discharges eventually reach a classified water body (stream) identified and designated as Class C (water body that may cease flow in dry periods but maintain permanent pools which support aquatic life), identified and designated as losing, and with a Whole Body Contact Recreation [WBC(B)] use designation per Missouri Clean Water Commission (MCWC) regulations [10 CSR 20-7.031(1)(F)6.], Water Quality, Water Quality Standards, Definitions, Classified waters, Class C, [10 CSR 20-7.031, Table J], Water Quality, Water Quality Standards, Losing Streams, and [10 CSR 20-7.031, Table H], Water Quality, Water Quality Standards, Stream Classifications and Use Designations. Facility’s outfalls discharge within two (2) upstream miles of said classified water body (stream). Said classified water body (stream) has been determined by the Department’s Division of Geology and Land Survey’s Environmental Geology Section to be gaining for greater than two (2) downstream miles from facility’s outfalls and transforms into a classified water body (stream) designated as losing after two (2) downstream miles from facility’s outfalls; No

Application Date: December 28, 2007

Expiration Date: April 17, 2008

Last Inspection: July 19, 2007

In Compliance ; From the August 8, 2007, environmental compliance inspection report narrative: “No bypasses were observed [by the inspector] during [this] inspection. [Apparently] because of the large amounts of charcoal residue [observed by the inspector] around facility, influent to facility’s wastewater treatment plant (Outfall # 001) [was] black [in color apparently] due to wind blown particles and some [assumed] minor inflow and infiltration (I&I) issues. Although it appears [to the inspector that it may be] close to impossible to eliminate the wind blown particles from entering the system, facility routinely checks for possible sources of I&I and fixes them as necessary. Sludge tank and aerators possessed [an observed] black color [apparently] due to charcoal residues. Analyses performed on [effluent] samples taken [by the inspector during this inspection] at Outfall #001 demonstrate that facility is adequately meeting [permitted final effluent limitations]. Earthen settling basins (Outfall # 002) containing wash, cooling and stormwater from facility appear [to the inspector] to be well maintained. Dykes were [observed by the inspector to have been] mowed and appeared [to the inspector] to be free of burrowing animals. These basins were not [observed by the inspector to be] discharging at the time of [this] inspection. Water [that was held] in basins was [observed by the inspector as] being irrigated on fields around the facility (Outfall # 005). Very little flow was observed [by the inspector] at

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 Basin Dimensions:
 Surface Area
 Depth from Bottom 7.0
 feet depthEmergency
 Spillway: 1.0 feet depth.

Deleted: Lagoon Dimensions:
 Surface Area Depth from
 Bottom Pump down depth
 (from spillway)¶
 Inside Top Berm: 415 x 91 = 37,765
 sq.ft. by 8.5 feet depth¶
 Emergency Spillway:
 6.5 feet depth
 Maximum operating level 6.5
 feet depth 1.0 feet¶
 Minimum operating level 2.0 feet
 depth 6.5 feet¶

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Deleted: Lagoon Dimensions:
 Surface Area Depth from
 Bottom Pump down depth (from spillway)¶
 Inside Top Berm: 225 x 105 =
 23,625 sq.ft. by 8.0 feet depth¶

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 Emergency Spillway: 6.5 feet
 depth
 Maximum operating level
 6.5 feet depth 4.5 feet¶
 Minimum operating level 2.0 feet
 depth 6.5 feet¶

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Outfall # 003 and there was no discharge [observed by the inspector] at Outfall # 004 during [this] inspection. At the point where the receiving stream leaves facility's property (Outfall # 006), stream appeared [to the inspector to be] clean with no discoloration [observed by the inspector during this inspection]. No bottom deposits were observed [in the receiving stream by the inspector]. Overall, it appears [to the inspector] that facility is being well operated and maintained.”; Non-compliance ;

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)*	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.0093	Advanced	Treated Domestic Sewage	0.91
002	0.4487	Primary Settling/Land Application	Process Waters/Stormwater Runoff	0.77
003	20.55	Best Management Practices (BMPs)	Stormwater Runoff	0.93
004	Eliminated (effective February 7, 2011)			
005	Eliminated (effective February 7, 2011)			
006	In stream Monitoring	None	Treated Domestic Sewage/Process Waters/Stormwater Runoff	0.64

* - Cubic feet per second (CFS)

Outfall # 001

Legal Description: NW ¼, SW ¼, Sec. 8, T40N, R07W, Maries County
 UTM Coordinates: (X = 0610794, Y = 4230923)
 Receiving Stream: Unnamed tributary to Dry Fork Creek (U) (gaining)
 First Classified Stream and ID: Dry Fork Creek (C) (02041) (gaining/losing)
 USGS Basin and Sub-watershed No.: (07140103-040001)

Outfall # 002

Legal Description: NW ¼, SW ¼, Sec. 8, T40N, R07W, Maries County
 UTM Coordinates: (X = 0610609, Y = 4231044)
 Receiving Stream: Unnamed tributary to Dry Fork Creek (U) (gaining)
 First Classified Stream and ID: Dry Fork Creek (C) (02041) (gaining/losing)
 USGS Basin and Sub-watershed No.: (07140103-040001)

Outfall # 003

Legal Description: NW ¼, SW ¼, Sec. 8, T40N, R07W, Maries County
 UTM Coordinates: (X = 0610803, Y = 4230915)
 Receiving Stream: Unnamed tributary to Dry Fork Creek (U) (gaining)
 First Classified Stream and ID: Dry Fork Creek (C) (02041) (gaining/losing)
 USGS Basin & Sub-watershed No.: (07140103-040001)

Outfall # 006

Legal Description: SW ¼, NW ¼, Sec. 8, T40N, R07W, Maries County
 UTM Coordinates: (X = 0610504, Y = 4231202)
 Receiving Stream: Unnamed tributary to Dry Fork Creek (U) (gaining)
 First Classified Stream and ID: Dry Fork Creek (C) (02041) (gaining/losing)
 USGS Basin and Sub-watershed No.: (07140103-040001)

Receiving Water Body's Water Quality and Facility Performance History: No impacts noted by the inspection during the last environmental compliance inspection conducted on July 19, 2007. Facility discharges treated domestic sanitary wastewater effluent and stormwater [to include discharges and stormwater runoff from land applications areas (process waters and stormwater)] to an unnamed and unclassified receiving water body (stream) that has been determined to be gaining by the Department's Division of Geology and Land Survey's Environmental Geology Section. Said discharges eventually reach a classified water body (stream) identified and designated as Class C (water body that may cease flow in dry periods but maintain permanent pools which support aquatic life), identified and designated as losing, and with a Whole Body Contact Recreation [WBC(B)] use designation per Missouri Clean Water Commission (MCWC) regulations [10 CSR 20-7.031(1)(F)6.], Water Quality, Water Quality Standards, Definitions, Classified waters, Class C, [10 CSR 20-7.031, Table J], Water Quality, Water Quality Standards, Losing Streams, and [10 CSR 20-7.031, Table H], Water Quality, Water Quality Standards, Stream Classifications and Use Designations. Facility's outfalls discharge within two (2) upstream miles of said classified water body (stream). Said classified water body (stream) has been determined by the Department's Division of Geology and Land Survey's Environmental Geology Section to be gaining for greater than two (2) downstream miles from facility's outfalls and transforms into a classified water body (stream) designated as losing after two (2) downstream miles from facility's outfalls.

Comments: On June 30, 2010, Missouri Clean Water Commission (MCWC) regulations [10 CSR 20-7.015], Water Quality, Effluent Regulations, and [10 CSR 20-7.031], Water Quality, Water Quality Standards, revisions became effective. Said revisions included changing the minimum value of effluent limitations for the pH effluent parameter to six-point-five (6.5) pH standard units. The MCWC approved an Order of Rulemaking Amendment for MCWC regulation [10 CSR 20-7.031(4)(C)], Water Quality, Water Quality Standards, Specific Criteria, Bacteria, effective October 30, 2009. Said amendment revised state numeric water quality criteria for bacteria for protection of water bodies with Whole Body Contact Recreation (WBC) use designations. The *E. coli* count shall not exceed criterion listed in MCWC regulation [10 CSR 20-7.031, Table A], Criteria for Designated Uses, as a geometric mean in WBC designated water bodies. Said *E. coli* count shall not exceed 206 colony forming units (CFUs) per 100 milliliters (mL) at any time in WBC(B) designated water bodies. Facility discharges treated domestic sanitary wastewater effluent and stormwater [to include discharges and stormwater runoff from land applications areas (process waters and stormwater)] to an unnamed and unclassified receiving water body (stream) that eventually reaches a classified water body (stream) and with a WBC(B) use designation per MCWC regulation [10 CSR 20-7.031, Table H], Water Quality, Water Quality Standards, Stream Classifications and Use Designations. Facility's outfalls discharge within two (2) upstream miles of said classified water body (stream). The MCWC approved an Order of Rulemaking Amendment for MCWC regulation [10 CSR 20-7.031(4)(C)], mentioned above, on March 3, 2010. Said proposed rulemaking provided a mechanism to place final effluent limitations, monitoring and reporting requirements for the *E. coli* effluent parameter in conformance with the federal water quality standard for indicator bacteria. Final effluent limitations and monitoring requirements for the *E. coli* parameter effluent have been placed in this Missouri State Operating Permit (MSOP) so as to replace the Fecal coliform effluent parameter monitoring requirements effective June 30, 2010.

Part II – Operator Certification Requirements

As per Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-6.010(8)], Permits, Construction and Operating Permits, Terms and Conditions of a Permit, permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law (MCWL) and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with MCWC regulation [10 CSR 20-9.020(2)], Treatment Plant Operations, Classification of Wastewater Treatment Systems, Wastewater Treatment Systems Requirements, and any other applicable state law or regulation. As per MCWC regulation [10 CSR 20-9.010(2)(A)], Treatment Plant Operations, Classification of Wastewater Treatment Systems, Wastewater Treatment Systems Requirements, requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Owned or operated by or for:

Municipalities ; Public Sewer District ; County ; Public Water Supply Districts ;
Private sewer company regulated by the Public Service Commission ; State of Federal Agencies

Each of the above entities are only applicable if they have a Population Equivalent greater than two hundred (200) and/or fifty (50) or more service connections.

Department required: Yes ; No

Facility does not currently retain an operator with the correct level of certification required to operate the wastewater treatment facility. The Missouri Clean Water Law (MCWL) and its implementing Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-9.020(2)(F)], Treatment Plant Operations, Classification of Wastewater Treatment Systems, Wastewater Treatment Systems Requirements, allows the Department to develop a schedule of activities including the date by which compliance shall be obtained. This schedule of activities may be established in this operating permit as a Schedule of Compliance (SOC) or following Department consultation with permittee

Facility not required to retain a certified operator

Part III – Receiving Water Body Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE: As per Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.015], Water Quality, Effluent Regulations, the waters of the state are divided into the below listed seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's **EFFLUENT TABLE** listed in **Part V – Interim and/or Final Effluent Limits Determinations** below and further discussed in the **DERIVATION AND DISCUSSIONS OF INTERIM AND/OR FINAL EFFLUENT LIMITATIONS** in **Part V – Interim and/or Final Effluent Limits Determinations** section below.

Missouri or Mississippi River [10 CSR 20-7.015(2)]
Lake or Reservoir [10 CSR 20-7.015(3)]
Losing [10 CSR 20-7.015(4)]
Metropolitan No-Discharge [10 CSR 20-7.015(5)]

Special Stream [10 CSR 20-7.015(6)]
 Subsurface Water [10 CSR 20-7.015(7)]
 All Other Waters [10 CSR 20-7.015(8)]

As per Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.031], Water Quality, Water Quality Standards, the Department defines the MCWC water quality objectives in terms of “water uses to be maintained and the criteria to protect those uses”. The receiving water body (stream) and/or first classified receiving water body’s (stream’s) beneficial water uses to be maintained are located in the **RECEIVING WATER BODY (STREAM) TABLE** located below in accordance with MCWC regulation [10 CSR 20-7.031(3)], Water Quality, Water Quality Standards, General Criteria.

RECEIVING WATER BODY (STREAM) TABLE:

WATER BODY NAME	CLASS	WBID*	DESIGNATED USES**	8-DIGIT HUC***	EDU***
Unnamed tributary to Dry Fork Creek (gaining)	U	---	General Criteria	07140103	Bourbeuse–Dry Fork–Headwaters Dry Fork
Dry Fork Creek (gaining)*****	C	02041	LWW; AQL; WBC (B)****; SCR		
Dry Fork Creek (losing)*****					

* - Water Body Identification (WBID) Number

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

*** - Hydrologic Unit Code (HUC); Ecological Drainage Unit (EDU)

**** - Use Attainability Analysis (UAA) for above stated water body conducted September 10, 2007. The Whole Body Contact Recreation (WBC) Committee recommended removing WBC use designation December 4, 2007. Comments on stream use were received during public comment period and said use designation proposed to be retained during next rulemaking revision. The MCWC has not reviewed determinations. Details can be viewed at:

http://www.dnr.mo.gov/env/wpp/wqstandards/uaa/uaa_maries.htm

***** - Use Attainability Analysis (UAA) has not been conducted for above stated water body

***** - As determined by the Department’s Division of Geology and Land Survey’s Environmental Geology Section

RECEIVING WATER BODY LOW-FLOW VALUES TABLE:

RECEIVING WATER BODY (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q ₁₀ *	7Q ₁₀ *	30Q ₁₀ *
Unnamed tributary to Dry Fork Creek (U)	---	---	---
Dry Fork Creek (C) (02041) (gaining)**	0.1	0.1	1.0
Dry Fork Creek (C) (02041) (losing)**			

* - Average minimum flow for one (1) consecutive calendar day that has a probable recurrence interval of once-in-ten (10) calendar years (1Q₁₀); Average minimum flow for seven (7) consecutive calendar days that has a probable recurrence interval of once-in-ten (10) calendar years (7Q₁₀); Average minimum flow for 30 consecutive calendar days that has a probable recurrence interval of once-in-ten (10) calendar years (30Q₁₀)

** - As determined by the Department’s Division of Geology and Land Survey’s Environmental Geology Section

MIXING CONSIDERATIONS: Not allowed per Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.031(4)(A)4.B.(I)(a)], Water Quality, Water Quality Standards, Specific Criteria, For mixing zones, Streams with 7Q₁₀ low flows of less than 0.1 cfs, Mixing zone–not allowed, and per MCWC regulation [10 CSR 20-7.031(4)(A)4.B.(I)(b)], Water Quality, Water Quality Standards, Specific Criteria, For mixing zones, Zone of initial dilution–not allowed

RECEIVING WATER BODY (STREAM) MONITORING REQUIREMENTS: Requirement for receiving water body (stream) monitoring reassessed and in-stream monitoring requirement retained from previous Missouri State Operating Permit (MSOP).

Part IV – Rationale and Derivation of Interim and/or Final Effluent Limitations, and Permit Conditions

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

: Applicable. Facility discharges to a Losing Stream as defined by Missouri Clean Water Commission (MCWC) regulations [10 CSR 20-2.010(36)], Definitions, Definitions, Losing stream, [10 CSR 20-7.031(1)(N)], Water Quality, Water Quality Standards, Definitions, Losing Stream, and [10 CSR 20-7.031, Table J], Water Quality, Water Quality Standards, Losing Streams

; Not applicable. Facility discharges to a Losing Stream as defined by Missouri Clean Water Commission (MCWC) regulations [10 CSR 20-2.010(36)], Definitions, Definitions, Losing Streams, [10 CSR 20-7.031(1)(N)], Water Quality, Water Quality Standards, Definitions, Losing stream, and [10 CSR 20-7.031, Table J], Water Quality, Water Quality Standards, Losing Streams. Facility discharges treated domestic sanitary wastewater effluent and stormwater [to include discharges and stormwater runoff from land applications areas (process waters and stormwater)] to an unnamed and unclassified receiving water body (stream) that has been determined to be gaining by the Department's Division of Geology and Land Survey's Environmental Geology Section. Said discharges eventually reach a classified water body (stream) identified and designated as losing per MCWC regulation [10 CSR 20-7.031, Table J], referenced above. Facility's outfalls discharge within two (2) upstream miles of said classified water body (stream). Said classified water body (stream) has been determined by the Department's Division of Geology and Land Survey's Environmental Geology Section to be gaining for greater than two (2) downstream miles from facility's outfalls and transforms into a classified water body (stream) designated as losing after two (2) downstream miles from facility's outfalls

ANTI-BACKSLIDING: A provision in the Federal Regulations, {Clean Water Act (CWA) [§ 303(d)(4)]}, Water Quality Standards and Implementation Plans, Limitations on Revision of Certain Effluent Limitations; the CWA [§ 402(c)], National Pollutant Discharge Elimination System (*NPDES*), Suspension of Federal program upon submission of State program; withdrawal of approval of State program; return of State program to Administrator}; and [40 CFR Part 122.44(l)], Protection of Environment, Establishing limitations, requires a that a reissued operating permit to be as stringent as the previous operating permit with some exceptions:

; New facility. Backsliding does not apply

; All interim and/or final effluent limitations in this Fact sheet are at least as protective as those established in the previous operating permit; therefore, backsliding does not apply

; Interim and/or final effluent limitations in this operating permit for the issuance (renewal) of this operating permit conform to anti-backsliding provisions of Section 402(o) of the Clean Water Act, and [40 CFR Part 122.44], Protection of Environment, Establishing limitations, standards, and other permit conditions (applicable to State National Pollutant Discharge Elimination System programs. The Department has removed the measurement (sampling), and monitoring and reporting requirements for the Total Petroleum Hydrocarbons (TPH) effluent parameter from this Missouri State Operating Permit (MSOP) for specified outfalls since the analytical method to administer said analyses via Freon extraction is no longer used due to environmental concerns. Other analytical methods may be available to administer said analyses; however, said analyses were typically specified as an indicator for loss of fuel products such as diesel. The Department has removed measurement (sampling), and monitoring and reporting requirements for the Total Organic Carbon (TOC) effluent parameter for specified outfalls from this MSOP since said TOC effluent parameter does not have a water quality standard listed in MCWC regulations. The Department has removed the separate Chloride and Sodium effluent parameters for specified outfalls from this MSOP and has replaced said measurement (sampling), and monitoring and reporting requirements with the Chloride + Sulfate effluent parameter with appropriate interim and/or final effluent limitations, measurement (sampling) and monitoring and reporting requirements as outlined in MCWC regulation [10 CSR 20-7.031(4)(L)1.], Water Quality, Water Quality Standards, Specific Criteria, Sulfate and Chloride Limit for Protection of Aquatic Life (*AQL*) (1,000 mg/L maximum monthly average, 1,000 mg/L daily maximum). The Department has removed measurement (sampling), and monitoring and reporting requirements for the Nitrate/Nitrite as N effluent parameter for specified outfalls in this MSOP, since the Ammonia as N effluent measurement (sampling), and monitoring and reporting requirements has been retained in this MSOP. The Department considers two (2) independent forms of nitrogen analyses redundant

ANTIDEGRADATION: In accordance with Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.031(2)], Water Quality, Water Quality Standards, Antidegradation, the Department shall document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

; Renewal and/or modification. No degradation proposed and no further review necessary

; New and/or expanded discharge. As per Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.031(2)(D)], Water Quality, Water Quality Standards, Antidegradation, the three (3) levels of protection provided by the antidegradation policy in subsections (A), (B) and (C) of this section shall be implemented according to procedures developed by the Department. On April 20, 2007, the MCWC approved the *Missouri Antidegradation Rule and Implementation Procedure* (Antidegradation Rule), which is applicable to new or upgraded/expanded facilities. The implementation of the Antidegradation Rule occurred on August 31, 2008. Any construction permit application or other applicable permit applications submitted prior to August 31, 2008, will not be required to have an Antidegradation Review

; Master General Permit Antidegradation Review conducted during template development

APPLICABLE PERMIT PARAMETERS: Interim and/or final effluent parameters contained in a Fact Sheet and Missouri State Operating Permits (MSOPs) are obtained from a Technology Based Effluent Limit (TBEL), Missouri Clean Water Commission (MCWC) regulations [10 CSR 20-7.015], Water Quality, Effluent Regulations, and [10 CSR 20-7.031], Water Quality, Water Quality Standards, previous Missouri State Operating Permits (MSOPs) and from operating permit applications.

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

BIO-SOLIDS, SLUDGE AND SEWAGE SLUDGE: Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e., fertilizer). Sludge is any solid, semi-solid or liquid waste generated from a municipal, commercial or industrial wastewater treatment plant; water supply treatment plant; air pollution control facility; or any other such waste having similar characteristics and effect. Sewage sludge is solids, semi-solids or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to: domestic septage; scum or solids removed in primary, secondary or advanced wastewater treatment process(es); and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works.

: Applicable (renewal and/or modification to existing operating permit). Permittee has proposed to land apply sludge and bio-solids. Facility approved to land apply per Missouri State Operating Permit (MSOP), Part B., Standard Conditions, Part III, Sludge and Biosolids from Domestic Wastewater Treatment Facilities, and a Department-approved bio-solids management plan

: Applicable (renewal and/or modification to existing operating permit). Permittee has proposed that sludge and bio-solids are to be removed by a contract hauler for this facility

: Applicable (renewal and/or modification to existing operating permit). Permittee has proposed that sludge and bio-solids are to be retained and not to be removed by contract hauler for this facility

: Applicable (new operating permit). Permittee has proposed that sludge and bio-solids are not to be removed by a contract hauler for this facility. Permittee has proposed to land apply the sludge and bio-solids as per Missouri State Operating Permit (MSOP), Part B., Standard Conditions, Part III, Sludge and Biosolids from Domestic Wastewater Treatment Facilities. The Department has reviewed and approved permittee's bio-solids management plan, and therefore, permittee and/ or facility is approved to land apply said sludge and bio-solids as a means of treatment or disposal.

: Not applicable. This term and/or condition not applicable to permittee for this specific facility

COMPLIANCE AND ENFORCEMENT: Enforcement is the action taken by the Department's Division of Environmental Quality's Water Protection Program's Water Pollution Control Branch's Compliance and Enforcement Section to bring an entity into compliance with the Missouri Clean Water Law (MCWL); it's implementing Missouri Clean Water Commission (MCWC) regulations; and/or any terms and conditions of a Missouri State Operating Permit (MSOP). The primary purpose of the enforcement activity in the Department's Division of Environmental Quality's Water Protection Program's Water Pollution Control Branch's Compliance and Enforcement Section is to resolve violations and return the entity to compliance.

Applicable ; Not applicable ; Permittee and/or facility not currently under the Department's Division of Environmental Quality's Water Protection Program's Water Control Pollution Branch's Compliance and Enforcement Section enforcement action

PRETREATMENT PROGRAM: The reduction of the amount of pollutants, the elimination of pollutants or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works (POTW) per [40 CFR Part 403.3(q)], Protection of Environment, General Pretreatment Regulations for Existing and New Sources of Pollution, Definitions. Pretreatment programs are required at any POTW, or combination of POTW, operated by the same authority and/or municipality, with a total design flow greater than (>) five-point-zero (5.0) million gallons per day (MGD) and receiving industrial wastes that interfere with or pass through the POTW or are otherwise subject to the pretreatment standards. Pretreatment programs can also be required at a POTW/municipality with a design flow less than (<) 5.0 MGD if needed to prevent interference with operations or pass through. Several special conditions pertaining to permittee's and/or facility's pretreatment program may be included in an operating permit, and are as follows:

- Implementation and enforcement of the pretreatment program;
- Annual pretreatment report submittal;

- Submittal of list of industrial users;
- Technical evaluation of need to establish local limitations; and
- Submittal of the results of the evaluation

; Applicable. This permittee and/or facility have an approved pretreatment program in accordance with the requirements of [40 CFR Part 403], Protection of Environment, General Pretreatment Regulations for Existing and New Sources of Pollution, and Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-6.100], Permits, General Pretreatment Regulation, and said permittee and/or facility is expected to implement and enforce its approved pretreatment program

; Not applicable. Permittee and/or facility, at this time, not required to have a pretreatment program or do not have a Department-approved pretreatment program

REASONABLE POTENTIAL ANALYSIS (RPA): Federal regulation [40 CFR Part 122.44(d)(1)(i)], Protection of Environment, EPA Administered Permit Programs: The National Pollutant Discharge Elimination System, Permit Conditions, Establishing limitations, standards, and other permit conditions, Water quality standards and State requirements, requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard. In accordance with [40 CFR Part 122.44(d)(iii)], referenced above, if the Department permit writer determines that any give pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the Water Quality Standard, the operating permit must contain effluent limitations for that pollutant.

; Applicable. Reasonable Potential Analyses (RPA) conducted for appropriate effluent parameters (Ammonia, and Oil and Grease) for this facility (please see **Part VII – Appendices** – Reasonable Potential Analysis (RPA) Results below for specified outfalls)

; Not applicable. A Reasonable Potential Analysis (RPA) not conducted on appropriate effluent parameters for this facility

REMOVAL EFFICIENCY: Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand–Five (5)-day (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTW)/municipalities (see the United States Environmental Protection Agency’s (US EPA’s) Web site for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage at: www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm.)

; Applicable. Secondary Treatment (85% removal) per [40 CFR Part 133.102(a)(3) and (b)(3)], Protection of Environment, Secondary Treatment Regulation, Secondary treatment, BOD₅ and SS. Facility is a Publicly Owned Treatment Works (POTW)

; Applicable. Equivalent to Secondary Treatment (65% removal) per [40 CFR Part 133.105(a)(3) and (b)(3)], Protection of Environment, Secondary Treatment Regulation Treatment equivalent to secondary treatment, BOD₅ and SS

; Applicable. Facility not a Publicly Owned Treatment Works (POTW); however, influent monitoring is being required to determine percent removal

; Not applicable. Influent monitoring not being required for this facility to determine percent removal

SANITARY SEWER OVERFLOWS (SSOs), BYPASSES, INFLOW AND INFILTRATION (I&I) – PREVENTION/REDUCTION: Sanitary Sewer Systems (SSSs) are municipal wastewater collection systems that convey domestic, commercial and industrial wastewater, and limited amounts of infiltrated groundwater and stormwater (i.e., inflow and infiltration (I&I)) to a Publicly Owned Treatment Works (POTW). SSSs are not designed to collect large amounts of stormwater runoff from precipitation events. Untreated or partially treated discharges from SSSs are commonly referred to as Sanitary Sewer Overflows (SSOs). SSOs have a variety of causes including: blockages; line breaks; sewer defects that allow excess stormwater and ground water to overload SSS; lapses in sewer system operation and maintenance; inadequate sewer design and construction; power failures; and vandalism. A SSO is defined as an untreated or partially treated sewage release from a SSS. SSOs can occur at any point in an SSS, during dry weather or wet weather. SSOs include overflows that reach waters of the state. SSOs also include overflows out of manholes and onto city streets, sidewalks and other terrestrial locations. SSSs can back up into buildings including private residences. When sewage backups are caused by problems in the publicly-owned portion of an SSS, said sewage backups are considered SSOs.

; Applicable. Permittee and/or facility required to develop or implement a program for maintenance and repair of the collection system and shall be required in this Missouri State Operating Permit (MSOP) by either means of a Special Condition or Schedule of Compliance (SOC). In addition, the Department considers the development of this program as an implementation of this condition. At this time, the Department recommends the United States Environmental Protection Agency’s (US EPA’s) *Guide for Evaluating Capacity, Management, Operation and Maintenance (CMOM) Programs At Sanitary Sewer Collection Systems* (Document # EPA 305-B-05-002). The *CMOM* identifies some of the criteria used by the US EPA to evaluate a

collection system's management, operation and maintenance, and was intended for use by the US EPA, state, regulated community and/or third party entities. The *CMOM* is applicable to small, medium and large systems; both public and privately owned; and both regional and satellite collection systems. The *CMOM* does not substitute for the Federal Clean Water Act, the Missouri Clean Water Law (MCWL), Missouri Clean Water Commission (MCWC) regulations, and both federal and state regulations, as said *CMOM* is not a regulation

; Not applicable. Permittee and/or facility not required to develop and/or implement a program for maintenance and repair of the collection system; however, it is a violation of the Missouri Clean Water Law (MCWL) and associated Missouri Clean Water Commission (MCWC) regulations to allow untreated wastewater to discharge to waters of the state

SCHEDULE OF COMPLIANCE (SOC): A schedule of remedial measures included in an operating permit, including an enforceable sequence of interim requirements (actions, operations or milestone events) leading to compliance with the Missouri Clean Water Law (MCWL), and implementing Missouri Clean Water Commission (MCWC) regulations, and/or the terms and conditions of a Missouri State Operating Permit (MSOP).

; Applicable. The time given for compliance with effluent limitations of this Missouri State Operating Permit (MSOP) listed under Part A., Effluent Limitations and Monitoring Requirements, via Interim and/or Final Effluent Limitations, were established in accordance with Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.031(10)], Water Quality, Water Quality Standards

; Not applicable. This Missouri State Operating Permit (MSOP) does not contain a Schedule of Compliance (SOC)

STORMWATER POLLUTION PREVENTION PLAN (SWPPP): In accordance with [40 CFR 122.44(k)], Protection of Environment, EPA Administered Permit Programs: The National Pollutant Discharge Elimination System [*NPDES*], Permit Conditions, Establishing limitations, standards, and other permit conditions, Best Management Practices [*BMPs*], BMPs are required to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under Section 402(p) of the CWA for the control of stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) The practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. In accordance with the United States Environmental Protection Agency's (US EPA's) *Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* [EPA 832-R-92-006] (Storm Water Management), Best Management Practices (BMPs) are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process(es), activity(ies), or physical structure(s). Additionally, in accordance with the Storm Water Management document reference above, a Stormwater Pollution Prevention Plan (SWPPP) is a series of steps and activities to: (1) Identify sources of pollution or contamination; and (2) Select and carry out actions which prevent or control the pollution of stormwater discharges.

; Applicable. A Stormwater Pollution Prevention Plan (SWPPP) shall be developed and implemented for each site, and shall incorporate required practices identified by the Department with jurisdiction; incorporate erosion control practices specific to site conditions; and provide for maintenance and adherence to the SWPPP

; Not applicable. At this time, permittee and/or facility not required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP)

VARIANCE: As per the Missouri Clean Water Law (MCWL), Section 644.061.4, RSMo, variances shall be granted for such period of time and under such terms and/or conditions as shall be specified by the Missouri Clean Water Commission (MCWC) in its order. Said variance(s) may be extended by affirmative action of the MCWC. In no event shall the variance(s) be granted for a period of time greater than is reasonably necessary for complying with the MCWL, Sections 644.006-644.141, RSMo, or any standard, rule or MCWC regulation promulgated pursuant to the MCWL, Sections 644.006-644.141, RSMo.

Applicable ; Not applicable ; This Missouri State Operating Permit (MSOP) not drafted under premises of a petition for variance(s)

WASTELOAD ALLOCATIONS (WLA) FOR INTERIM AND/OR FINAL EFFLUENT LIMITATIONS: As per Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-2.010(78)], Definitions, Waste load allocation, the amount of pollutant each discharger is allowed by the Department to release into a given water body (stream) after the Department has determined total amount of pollutant that may be discharged into that water body (stream) without endangering said water body's (stream's) water quality.

; Applicable. Wasteload allocations (WLAs) calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

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

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

Chronic wasteload allocations (WLAs) were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute WLAs were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID). Water quality based maximum daily and average monthly interim and/or final effluent limitations were calculated using methods and procedures outlined in the United States Environmental Protection Agency's (US EPA's) "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

; Not applicable. Wasteload allocations (WLAs) not calculated

WASTELOAD ALLOCATIONS (WLA) MODELING: There are two (2) general types of effluent limitations: technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBELs must be used.

; Applicable. A wasteload allocations (WLA) study including modeling was submitted to the Department by _____. The wasteload allocations (WLA) study determined that the (parameter) for _____.

; Not applicable. A wasteload allocations (WLA) study was either not submitted or determined not applicable by Department staff

WATER QUALITY STANDARDS: Per Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.031(3)], Water Quality, Water Quality Standards, General Criteria, shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR Part 122.44(d)(1)], Protection of Environment, EPA Administered Permit Programs: The National Pollutant Discharge Elimination System [NPDES], Permit Conditions, Establishing limitations, standards, and other permit conditions, Water quality standards and State requirements, directs the Department to establish, in each NPDES operating permit, conditions to achieve water quality established under the Clean Water Act (CWA) [§ 303], Water Quality Standards and Implementation Plans, including State narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TESTING: A Whole Effluent Toxicity (WET) test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

; Applicable. In accordance with the Clean Water Act (CWA) [§101(a)(3)], requiring Whole Effluent Toxicity (WET) testing is reasonably appropriate for site-specific Missouri State Operating Permits (MSOPs) for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). Furthermore, WET testing is a means by which the Department determines that Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.031(3)(D), (F) and (G)], Water Quality, Water Quality Standards, General Criteria, are being met by the permitted facility. In addition to justification for WET testing, WET tests are required under MCWC regulation [10 CSR 20-6.010(8)(A)4.], Permits, Construction and Operating Permits, Terms and Conditions of Permits, to be performed by specialists who are properly trained in conducting WET testing according to the methods prescribed by the Federal Government as referenced in [40 CFR Part 136], Protection of Environment, Water Programs, Guidelines Establishing Test Procedures for the Analysis of Pollutants. WET testing shall be required by all facilities meeting the following criteria:

- ; Facility designated Major
- ; Facility continuously or routinely exceeds its design flow
- ; Industrial facility that alters production processes throughout the year
- ; Facility handles large quantities of toxic substances, or substances that are toxic in large amounts
- ; Facility has interim and/or final effluent Water Quality-Based Effluent Limitations (WQBELs) for toxic substances (such as Total Residual Chlorine) [other than ammonia (NH₃)]
- ; Facility is a Public Owned Treatment Works (POTW), municipality or domestic discharger with a design flow greater than or equal to (≥) twenty-two-thousand-five-hundred (22,500) gallons per day (gpd)
- ; Facility is a Public Owned Treatment Works (POTW), municipality or domestic discharger with a design flow less than (<) twenty-two-thousand-five-hundred (22,500) gallons per day (gpd)
- ; Other

; Not applicable. At this time, permittee and/or facility not required to conduct Whole Effluent Toxicity (WET) testing for this facility

303(d) LIST AND TOTAL MAXIMUM DAILY LOAD (TMDL): Section 303(d) of the federal Clean Water Act, Water Quality Standards and Implementation Plans, requires that each state identify water bodies that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water bodies as Whole Body Contact Recreation (WBC) (such as swimming), maintaining fish and other aquatic life (AQL), providing drinking water for people (DWS), and livestock and wildlife watering (LWW). The 303(d) list helps state and federal agencies keep track of water bodies that are impaired but not addressed by normal water pollution control programs. A Total Maximum Daily Load (TMDL) is a calculation of the maximum amount of a given pollutant that a water body can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation.

; Applicable. [Receiving water body's name] or [first classified water body's name] is listed on the (YEAR) Missouri 303(d) List for (pollutant) (source: _____).

; Facility not considered to be a source of the above listed pollutant(s) or not considered to contribute to the impairment of the above referenced water body

; Facility considered to be a source of the above listed pollutant(s), considered to contribute to the above listed pollutant(s), considered to contribute or has the potential to contribute to the impairment of the above referenced water body

; Not applicable. Facility does not discharge to a 303(d) listed water body

Part V – Interim and/or Final Effluent Limitations Determinations

FINAL EFFLUENT LIMITATIONS TABLE:

PARAMETER(S)	UNITS	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS OPERATING PERMIT EFFLUENT LIMITATIONS	
OUTFALL #001 – SANITARY WASTEWATER								
FLOW	MGD	1	*	N/A	*	NO	S	
BIOCHEMICAL OXYGEN DEMAND-FIVE (5) DAY	MG/L	1	N/A	45	30	NO	S	
TOTAL SUSPENDED SOLIDS	MG/L	1	N/A	45	30	NO	S	
pH	SU	1	6.5-9.0	N/A	6.5-9.0	YES	6.0-9.0	
AMMONIA AS N	MG/L	5/9	*	N/A	*	YES	***	
TEMPERATURE	°C	5/9	*	N/A	*	YES	***	
<i>ESCHERICHIA COLI (E. COLI)</i>	**	1/2	1,030	N/A	206	YES	*** (WQS)	
TOTAL RESIDUAL CHLORINE	MG/L	1/3	0.016 (0.13 ML)	N/A	0.008 (0.13 ML)	YES	***	
MONITORING FREQUENCY	PLEASE SEE THE MINIMUM MEASUREMENT (SAMPLING), MONITORING AND REPORTING FREQUENCY REQUIREMENTS IN THE DERIVATION AND DISCUSSION OF INTERIM AND/OR FINAL EFFLUENT LIMITATIONS SECTION BELOW							
OUTFALL #002 – DISCHARGE(S) FROM HOLDING (TERTIARY) BASIN(S)								
FLOW	MGD	1	*	N/A	*	NO	S	
TOTAL SUSPENDED SOLIDS	MG/L	1/9	110	N/A	70	NO	S	
pH	SU	1	6.5-9.0	N/A	6.5-9.0	YES	6.0-9.0	
CHLORIDE+SULFATE	MG/L	1/9	1000	N/A	1000	YES	* (PARAMETERS COMBINED)	
PHENOL	µG/L	9	*	N/A	*	YES	***	
RAINFALL	INCHES	9	*	N/A	*	YES	***	
OIL AND GREASE	MG/L	1	15	N/A	10	NO	S	
WHOLE EFFLUENT TOXICITY	% SURVIVAL	11	PLEASE SEE WHOLE EFFLUENT TOXICITY (WET) TESTING REQUIREMENTS IN THE DERIVATION AND DISCUSSION OF INTERIM AND/OR FINAL EFFLUENT LIMITATIONS SECTION BELOW					***
MONITORING FREQUENCY	PLEASE SEE THE MINIMUM MEASUREMENT (SAMPLING), MONITORING AND REPORTING FREQUENCY REQUIREMENTS IN THE DERIVATION AND DISCUSSION OF INTERIM AND/OR FINAL EFFLUENT LIMITATIONS SECTION BELOW							

OUTFALL # 003 – STORMWATER RUNOFF							
FLOW	MGD	1	*	N/A	*	NO	S
TOTAL SUSPENDED SOLIDS	MG/L	1/9	*	N/A	*	NO	S
pH	SU	1	6.5-9.0	N/A	6.5-9.0	YES	6.0-9.0
OIL AND GREASE	MG/L	1	15	N/A	10	NO	S
MONITORING FREQUENCY	PLEASE SEE THE MINIMUM MEASUREMENT (SAMPLING), MONITORING AND REPORTING FREQUENCY REQUIREMENTS IN THE DERIVATION AND DISCUSSION OF INTERIM AND/OR FINAL EFFLUENT LIMITATIONS SECTION BELOW						
IRRIGATION SYSTEM – LAND APPLICATION OPERATIONAL MONITORING							
BASIN(S) FREEBOARD	FEET	4/9	*	N/A	N/A	NO	S
IRRIGATION PERIOD	HOURS	9	*	N/A	N/A	NO	S
VOLUME IRRIGATED	GALLONS	9	*	N/A	N/A	NO	S
APPLICATION AREA	ACRES	9	*	N/A	N/A	NO	S
APPLICATION RATE	GALLONS/ACRE	9	*	N/A	N/A	NO	S
MONITORING FREQUENCY	PLEASE SEE THE MINIMUM MEASUREMENT (SAMPLING), MONITORING AND REPORTING FREQUENCY REQUIREMENTS IN THE DERIVATION AND DISCUSSION OF INTERIM AND/OR FINAL EFFLUENT LIMITATIONS SECTION BELOW						
OUTFALL # 006 – IN-STREAM MONITORING							
FLOW	MGD	1/9	*	N/A	*	NO	S
BIOCHEMICAL OXYGEN DEMAND-FIVE (5) DAY	MG/L	9	*	N/A	*	NO	S
TOTAL SUSPENDED SOLIDS	MG/L	9	*	N/A	*	NO	S
pH	SU	2/9	6.0–9.0	N/A	6.0–9.0	NO	6.5-9.0
AMMONIA AS N	MG/L	5/9	*	N/A	*	YES	S (NITRATE/ NITRITE AS N REMOVED)
TEMPERATURE	°C	5/9	*	N/A	*	NO	S
PHENOL	µG/L	9	*	N/A	*	YES	***
OIL AND GREASE	MG/L	2/9	*	N/A	*	NO	S
MONITORING FREQUENCY	PLEASE SEE THE MINIMUM MEASUREMENT (SAMPLING), MONITORING AND REPORTING FREQUENCY REQUIREMENTS IN THE DERIVATION AND DISCUSSION OF INTERIM AND/OR FINAL EFFLUENT LIMITATIONS SECTION BELOW						

* - Monitoring requirement only

** - # of colonies forming units (CFUs) per 100 milliliters (mL); Final effluent limitations and monitoring requirements for the *Escherichia coliform (E. coli)* effluent parameter are applicable only during the recreational season from April 1 through October 31. The maximum monthly average final effluent limitation for the *Escherichia coliform (E. coli)* effluent parameter is expressed as a geometric mean

*** - Parameter not previously established in previous operating permit

N/A – Not applicable

S – Same as previous operating permit

WQS – Water Quality Standard

Basis for Limitations Codes:

- | | |
|--|--|
| 1. State or Federal Regulation/Law | 7. Antidegradation Policy |
| 2. Water Quality Standard [includes Reasonable Potential Analysis (RPA)] | 8. Water Quality Model |
| 3. Water Quality Based Effluent Limits (WQBELs) | 9. Best Professional Judgment |
| 4. Lagoon Policy | 10. Total Maximum Daily Load (TMDL)/Operating Permit in lieu of TMDL |
| 5. Ammonia Policy | 11. Whole Effluent Toxicity (WET) test Policy |
| 6. Dissolved Oxygen Policy | |

DERIVATION AND DISCUSSION OF INTERIM AND/OR FINAL EFFLUENT LIMITATIONS:

- Flow – All Outfalls.** Final effluent limitations for specified outfalls reassessed, verified to still be protective of receiving water body's water quality and retained from previous Missouri State Operating Permit (MSOP) as interim and/or final effluent limitations. Monitoring requirement only. In accordance with [40 CFR Part 122.44(i)(1)(ii)], Protection of Environment, EPA Administered Permit Programs: The National Pollutant Discharge Elimination System [NPDES], Permit Conditions, Establishing limitations, standards, and other permit conditions (applicable to state NPDES programs), Monitoring requirements, volume of effluent discharged from each outfall required to assure compliance with the MSOP's interim and/or final effluent limitations. If permittee is unable to obtain effluent flow, then it is permittee's responsibility to inform the Department, which may require an operating permit modification submittal.
- Biochemical Oxygen Demand (BOD₅) – Outfall # 001 and Outfall # 006.** Final effluent limitations for specified outfalls reassessed, verified to still be protective of receiving water body's water quality and retained from previous Missouri State Operating Permit (MSOP) as interim and/or final effluent limitations per Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.015(8)(A)1.], Water Quality, Water Quality Standards, Effluent Limitations for All Waters, (please see **Part III – Receiving Water Body (Stream) Information**, APPLICABLE DESIGNATION OF WATERS OF THE STATE section above).

- **Total Suspended Solids (TSS) – Outfall # 001 and Outfall # 006.** Final effluent limitations for specified outfalls reassessed, verified to still be protective of receiving water body’s water quality and retained from previous Missouri State Operating Permit (MSOP) as interim and/or final effluent limitations per Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.015(8)(A)1.], Water Quality, Water Quality Standards, Effluent Limitations for All Waters, (please see **Part III – Receiving Water Body (Stream) Information, APPLICABLE DESIGNATION OF WATERS OF THE STATE** section above).
- **pH – All Outfalls.** Final effluent limitations for specified outfalls reassessed, verified to still be protective of receiving water body’s water quality, and minimum limitation revised to 6.5 as interim and/or final effluent limitations per Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.015(8)(A)2.], referenced above (please see **Part III – Receiving Water Body (Stream) Information, APPLICABLE DESIGNATION OF WATERS OF THE STATE** section above).
- **Ammonia as N (Nitrogen) – Outfall # 001 and Outfall # 006.** Monitoring requirement only for specified outfalls. Monitoring for the Ammonia effluent parameter included in this Missouri State Operating Permit (MSOP) to determine whether “reasonable potential” to exceed water quality standards exists. The Department has removed the measurement (sampling), monitoring and reporting requirement for the previous (former) Nitrate/Nitrite as Nitrogen (N) effluent parameter in this MSOP for specified outfalls, since Total Ammonia Nitrogen (Ammonia as N) measurement (sampling), monitoring and reporting has been retained in this MSOP. The Department considers two (2) independent forms of nitrogen analyses redundant.
- **Temperature – Outfall # 001 and Outfall # 006.** Monitoring requirement only for specified outfalls. Monitoring for the Temperature effluent parameter included in this Missouri State Operating Permit (MSOP) due to that the toxicity of Ammonia varies by temperature.
- **Escherichia coli (E. coli) – Outfall # 001.** The Missouri Clean Water Commission (MCWC) approved an Order of Rulemaking Amendment for MCWC regulation [10 CSR 20-7.031(4)(C)], Water Quality, Water Quality Standards, Specific Criteria, Bacteria, effective October 30, 2009. Said amendment revised state numeric water quality criteria for bacteria for protection of water bodies with Whole Body Contact Recreation (WBC) use designations. The *E. coli* count shall not exceed criterion listed in MCWC regulation [10 CSR 20-7.031, Table A], Criteria for Designated Uses, as a geometric mean in WBC designated water bodies. Said *E. coli* count shall not exceed 206 colony forming units (CFUs) per 100 milliliters (mL) at any time in WBC(B) designated water bodies. Facility discharges treated domestic sanitary wastewater effluent and stormwater [to include discharges and stormwater runoff from land applications areas (process waters and stormwater)] to an unnamed and unclassified receiving water body (stream) that eventually reaches a classified water body (stream) and with a WBC(B) use designation per MCWC regulation [10 CSR 20-7.031, Table H], Water Quality, Water Quality Standards, Stream Classifications and Use Designations. Facility’s outfalls discharge within two (2) upstream miles of said classified water body (stream). The MCWC approved an Order of Rulemaking Amendment for MCWC regulation [10 CSR 20-7.031(4)(C)], mentioned above, on March 3, 2010. Said proposed rulemaking provided a mechanism to place final effluent limitations, monitoring and reporting requirements for the *E. coli* effluent parameter in conformance with the federal water quality standard for indicator bacteria. Final effluent limitations and monitoring requirements for the *E. coli* parameter effluent have been placed in this Missouri State Operating Permit (MSOP) so as to replace the Fecal coliform effluent parameter monitoring requirements effective June 30, 2010 (please see **Part III – Receiving Water Body Information, APPLICABLE DESIGNATION OF WATERS OF THE STATE** section above). In accordance with MCWC regulation [10 CSR 7.015(8)(A)(4)], Water Quality, Effluent Regulations, Effluent Limitations for All Waters, *E. coli*, standard final effluent limitations for the *E. coli* effluent parameter are required for specified outfall.
- **Total Residual Chlorine (TRC) – Outfall # 001.** Facility discharges treated domestic sanitary wastewater effluent and stormwater [to include discharges and stormwater runoff from land applications areas (process waters and stormwater)] to an unnamed and unclassified receiving water body (stream) that eventually reaches a classified water body (stream) and with a WBC(B) use designation per MCWC regulation [10 CSR 20-7.031, Table H], Water Quality, Water Quality Standards, Stream Classifications and Use Designations. Facility’s outfalls discharge within two (2) upstream miles of said classified water body (stream). Warm-water Protection of Aquatic Life (AQL); Criteria continuous concentration (CCC) = 10 µg/L; Criteria maximum concentration (CMC) = 19 µg/L per MCWC regulation [10 CSR 20-7.031 Table A], Water Quality, Water Quality Standards, Criteria for Designated Uses. Background Total Residual Chlorine (TRC) = 0.0 µg/L

$$C = \frac{(C_s \times Q_s) + (C_e \times Q_e)}{(Q_e + Q_s)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

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

Chronic Wasteload Allocation: (WLA): $C_c = (((0.0093 + 0.0) * (10)) - ((0.0) * (0.0))) / 0.0093$
 $C_c = 10 \mu\text{g/L}$

Acute WLA: $C_c = (((0.0093 + 0.0) * (19)) - ((0.0) * (0.0))) / 0.0093$
 $C_c = 19 \mu\text{g/L}$

Chronic Long Term Average (LTA_c) = $(10) * (0.527) = 5.27 \mu\text{g/L}$ [Coefficient of Variance (CV) = 0.6, 99th Percentile]
Acute Long Term (LTA_a) = $(19) * (0.321) = 6.10 \mu\text{g/L}$ [CV = 0.6, 99th Percentile]
Use most protective number of LTA_c or LTA_a.

Maximum Daily Load (MDL) = $(5.27 \mu\text{g/L}) * (3.11) = 16.39 \mu\text{g/L} = 0.016 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
Average Monthly Load (AML) = $(5.27 \mu\text{g/L}) * (1.55) = 8.17 \mu\text{g/L} = 0.008 \text{ mg/L}$ [CV = 0.6, 95th Percentile, n = 4]

Final effluent limitations for specified outfalls for the Total Residual Chlorine (TRC) parameter of 0.016 mg/L daily maximum and 0.008 mg/L maximum monthly average are recommended if chlorine is used as a disinfectant. Standard compliance language for TRC, including the minimum quantification level (ML) has been included in this Missouri State Operating Permit (MSOP).

- **Total Suspended Solids (TSS) – Outfall # 002.** Final effluent limitations reassessed for specified outfall, verified to still be protective of receiving water body's water quality and retained from previous Missouri State Operating Permit (MSOP) as interim and/or final effluent limitations per Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.015(8)(A)3.D(II)(a)], Water Quality, Water Quality Standards, Effluent Limitations for All Waters, (please see **Part III – Receiving Water Body (Stream) Information, APPLICABLE DESIGNATION OF WATERS OF THE STATE** section above).
- **Chlorides + Sulfate – Outfall # 002.** Final effluent limitations for specified outfall reassessed and verified to still be protective of receiving water body's water quality. Previous (former) Chloride and Sodium effluent parameters have been removed from this Missouri State Operating Permit (MSOP) for specified outfall and has been replaced with the Chloride + Sulfate effluent parameter with appropriate interim and/or final effluent limitations as outlined in Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.031(4)(L)1.], Water Quality, Water Quality Standards, Specific Criteria, Sulfate and Chloride Limit for Protection of Aquatic Life (1,000 mg/L maximum monthly average, 1,000 mg/L daily maximum).
- **Phenol – Outfall # 002 and Outfall # 006.** Monitoring and reporting requirement only for specified outfalls. The Department has included measurement (sampling), and monitoring and reporting requirements for the Phenol effluent parameter in this Missouri State Operating Permit (MSOP) for specified outfalls so that the Department may determine whether "reasonable potential" to exceed water quality standards exists after discharge begins. Wood products that breakdown are known to contain phenols and are referenced through similar subcategories found in [40 CFR 429], Protection of Environment, Environmental Protection Agency, Timber Products Processing Point Source Category. Wood products exposed to stormwater onsite and flows are contributory to Outfall # 002.
- **Rainfall – Outfall # 002.** Monitoring and reporting requirement only. The Department has included measurement (sampling), and monitoring and reporting requirements for the Rainfall parameter in this Missouri State Operating Permit (MSOP) for specified outfall. Daily precipitation data may be useful in correlating effectiveness of Best Management Practices (BMPs) associated with the Department required Stormwater Pollution Prevention Plan (SWPPP).
- **Oil and Grease – Outfall # 002, Outfall # 003 and Outfall # 006.** Federal regulations require control of conventional pollutants via operating permits. Oil and Grease is defined as a conventional pollutant in [40 CFR 401], Protection of Environment, Environmental Protection Agency, General Provisions. Final effluent limitations reassessed, verified to still be protective of receiving water body's water quality and retained from previous Missouri State Operating Permit (MSOP) as interim and/or final effluent limitations per Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.031, Table A], Water Quality, Water Quality Standards, Criteria for Designated Uses for specified outfalls (10 mg/L maximum monthly average; 15 mg/L daily maximum).
- **Irrigation System.** Land application from the Holding (Territory) Basin(s) system and associated operational monitoring and reporting requirements reassessed, verified to still be protective of receiving water body's water quality and retained from previous Missouri State Operating Permit (MSOP). Records shall be maintained and summarized into an annual operating report which shall be submitted annually to the Department by January 28th of each calendar year for the previous calendar year period. Said annual operating report shall include the following: A record of maintenance and repairs performed at subject facility during the previous calendar year, average number of times per month facility was inspected during the previous calendar year to determine if facility was operating properly, and a description of any unusual operating conditions encountered during the previous calendar year; and a summary of the irrigation operations including freeboard at the start and end of irrigation season, number of days of irrigation for each month, total gallons irrigated, total acres used, crops grown, application rate in inches per acre per day and for the previous calendar year, monthly and annual precipitation amounts received at facility for the previous calendar year and summary of analytical results. Basin(s) freeboard shall be reported as basin(s) water level in feet below

overflow level [see SPECIAL CONDITIONS of this MSOP for Wastewater Irrigation System from Holding (Tertiary) Basin(s) requirements]. Design and operation shall be in accordance with Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-8.020(15)], Design Guides, Design of Small Sewage Works, Land Application of Wastewater. Permittee shall operate said land application system in accordance with design parameters listed in the FACILITY DESCRIPTION section of this MSOP (intended to minimize discharges from said land application site(s) to the extent practicable). Wastewater shall be land applied whenever feasible based on soil and weather conditions, operating permit requirements, and in a manner that shall not cause a runoff of irrigated effluent. The minimum and maximum operating water levels for said storage basin(s) shall be clearly marked. A minimum of one-and-one-half (1-½) feet of water shall be kept in the earthen basin(s) at all times. Said wastewater irrigation system shall be operated so as to provide uniform distribution of irrigated wastewater over entire irrigation site(s). A complete ground cover of vegetation shall be maintained on irrigation site(s) unless system is Department approved for row crop irrigation. Wastewater shall be land applied only during daylight hours to the extent practicable. There shall be no irrigation during frozen, snow covered or saturated soil conditions. There shall be no irrigation on days when more than 0.2 inch of precipitation is received or when there is observation by operator of an imminent or impending rainfall event.

- **Whole Effluent Toxicity (WET) Testing – Outfall # 002.** The Department has removed the previous (former) Dissolved Oxygen effluent parameter from specified Outfall # 006 in this Missouri State Operating Permit (MSOP) as a result of the Whole Effluent Toxicity (WET) testing requirement inclusion in this MSOP. Once per permit cycle Whole Effluent Toxicity (WET) testing has been included in this MSOP for Outfall #002. The Department has included said WET testing for specified outfall in this MSOP to determine if additional toxic parameters exist that may need to be measured (sampled) and monitored or to determine if previous (former) effluent parameters removed from this MSOP are affecting discharge water quality. The Department required testing has been established and shall be conducted in accordance with the Department’s WET testing implementation policy for industrial discharges. Process waters and stormwater normally captured and land applied. Whole Effluent Toxicity (WET) testing shall be conducted as follows:

SUMMARY OF ACUTE WHOLE EFFLUENT TOXICITY (WET) TESTING FOR THIS OPERATING PERMIT					
OUTFALL	AEC*	LC ₅₀ **	FREQUENCY	SAMPLE TYPE	MONTH
001	100%	100%	Once per permit cycle	24 hr. composite*	Any Month in 2014 (Report by January 28, 2015)

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

Dilution Series							
AEC%	100% effluent	50% effluent	25% effluent	12.5% effluent	6.25% effluent	(Control) 100% upstream, if available	(Control) 100% laboratory water, also called synthetic water

- **Minimum Measurement (Sampling), Monitoring and Reporting Frequency Requirements – Outfall # 001.** Quarterly measurement (sampling), monitoring and reporting requirements for specified outfall reassessed and retained from previous Missouri State Operating Permit (MSOP). Said measurement (sampling), monitoring and reporting frequency will yield sufficient data points for the Department to perform a Reasonable Potential Analysis at the end of the operating permit cycle in calendar year 2016 for the Ammonia effluent parameter. All sampling data taken must be submitted to the Department even if sampling occurs more frequently than required and stated above. Permittee may collect samples on a more frequent basis than required and stated above and may be averaged (except for the pH effluent parameter) to show compliance with the monthly averages and/or maximum monthly averages listed in this MSOP. See table below for quarterly measurement (sampling), monitoring and reporting requirements:

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

Report as no-discharge when a discharge does not occur during reporting period

- **Minimum Measurement (Sampling), Monitoring and Reporting Frequency Requirements – Outfall # 002.** Monthly measurement (sampling) and monitoring with quarterly reporting requirements for specified effluent parameters of specified outfall reassessed and retained from previous Missouri State Operating Permit (MSOP). The Department has increased the measurement (sampling) and monitoring frequency for modified Chloride + Sulfate effluent parameter for specified outfall from the previous quarterly measurement (sampling) and monitoring frequency to monthly measurement (sampling) and monitoring with quarterly reporting to provide consistency in this MSOP (please see table above for quarterly reporting due dates). Daily precipitation data with quarterly reporting has been included for specified outfall in this MSOP. Whole Effluent Toxicity (WET) testing shall be conducted during any calendar month during the calendar year of 2014, with reporting due to the Department by

January 28, 2015. All sampling data taken must be submitted to the Department even if sampling occurs more frequently than required and stated above. Permittee may collect samples on a more frequent basis than required and stated above and may be averaged (except for the pH effluent parameter) to show compliance with the monthly averages and/or maximum monthly averages listed in this MSOP.

- Minimum Measurement (Sampling), Monitoring and Reporting Frequency Requirements – Outfall # 003.** Measurement (sampling), monitoring and reporting requirements reassessed. The Department has increased the measurement (sampling) and monitoring frequency for all effluent parameters for specified outfall from the previous annual measurement (sampling), monitoring and reporting frequency to quarterly measurement (sampling), monitoring and reporting to provide consistency in this MSOP (please see table above for quarterly reporting due dates). All sampling data taken must be submitted to the Department even if sampling occurs more frequently than required and stated above. Permittee may collect samples on a more frequent basis than required and stated above and may be averaged (except for the pH effluent parameter) to show compliance with the monthly averages and/or maximum monthly averages listed in this MSOP.
- Minimum Measurement (Sampling), Monitoring and Reporting Frequency Requirements – Outfall # 006.** Quarterly measurement (sampling), monitoring and reporting requirements for specified outfall reassessed and retained from previous Missouri State Operating Permit (MSOP). All sampling data taken must be submitted to the Department even if sampling occurs more frequently than required and stated above. Permittee may collect samples on a more frequent basis than required and stated above and may be averaged (except for the pH effluent parameter) to show compliance with the monthly averages and/or maximum monthly averages listed in this MSOP [see table above for quarterly measurement (sampling), monitoring and reporting requirements].

PARAMETER(S)	SAMPLING FREQUENCY	REPORTING FREQUENCY
OUTFALL # 001 – SANITARY WASTEWATER		
FLOW	ONCE PER QUARTER	ONCE PER QUARTER
BIOCHEMICAL OXYGEN DEMAND-FIVE (5) DAY	ONCE PER QUARTER	ONCE PER QUARTER
TOTAL SUSPENDED SOLIDS	ONCE PER QUARTER	ONCE PER QUARTER
pH	ONCE PER QUARTER	ONCE PER QUARTER
AMMONIA AS N	ONCE PER QUARTER	ONCE PER QUARTER
TEMPERATURE	ONCE PER QUARTER	ONCE PER QUARTER
<i>ESCHERICHIA COLI (E. COLI)</i>	ONCE PER QUARTER	ONCE PER QUARTER
TOTAL RESIDUAL CHLORINE	ONCE PER QUARTER	ONCE PER QUARTER
OUTFALL # 002 – DISCHARGE(S) FROM HOLDING (TERTIARY) BASIN(S)		
FLOW	ONCE PER MONTH	ONCE PER QUARTER
TOTAL SUSPENDED SOLIDS	ONCE PER MONTH	ONCE PER QUARTER
pH	ONCE PER MONTH	ONCE PER QUARTER
CHLORIDE+SULFATE	ONCE PER MONTH	ONCE PER QUARTER
PHENOL	ONCE PER MONTH	ONCE PER QUARTER
RAINFALL	DAILY	ONCE PER QUARTER
OIL AND GREASE	ONCE PER MONTH	ONCE PER QUARTER
WHOLE EFFLUENT TOXICITY	ONCE PER PERMIT CYCLE	ONCE PER PERMIT CYCLE
OUTFALL # 003 – STORMWATER RUNOFF		
FLOW	ONCE PER QUARTER	ONCE PER QUARTER
TOTAL SUSPENDED SOLIDS	ONCE PER QUARTER	ONCE PER QUARTER
pH	ONCE PER QUARTER	ONCE PER QUARTER
OIL AND GREASE	ONCE PER QUARTER	ONCE PER QUARTER
IRRIGATION SYSTEM – LAND APPLICATION OPERATIONAL MONITORING		
BASIN(S) FREEBOARD	ONCE PER MONTH	ONCE PER YEAR
IRRIGATION PERIOD	DAILY	ONCE PER YEAR
VOLUME IRRIGATED	DAILY	ONCE PER YEAR
APPLICATION AREA	DAILY	ONCE PER YEAR
APPLICATION RATE	DAILY	ONCE PER YEAR
OUTFALL # 006 – IN-STREAM MONITORING		
FLOW	ONCE PER QUARTER	ONCE PER QUARTER
BIOCHEMICAL OXYGEN DEMAND-FIVE (5) DAY	ONCE PER QUARTER	ONCE PER QUARTER
TOTAL SUSPENDED SOLIDS	ONCE PER QUARTER	ONCE PER QUARTER
pH	ONCE PER QUARTER	ONCE PER QUARTER
AMMONIA AS N	ONCE PER QUARTER	ONCE PER QUARTER
TEMPERATURE	ONCE PER QUARTER	ONCE PER QUARTER
PHENOL	ONCE PER QUARTER	ONCE PER QUARTER
OIL AND GREASE	ONCE PER QUARTER	ONCE PER QUARTER

Part VI – Administrative Requirements

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

PUBLIC NOTICE: As per the Missouri Clean Water Law, Missouri Clean Water Commission (MCWC) regulations, and the federal Clean Water Act, persons wishing to comment on Missouri State Operating Permits (MSOPs) are directed to do so by a department-approved Public Notice coversheet. This Public Notice coversheet is attached to a Missouri State Operating Permit during the Public Notice period.

: The initial Public Notice period for this draft Missouri State Operating Permit (MSOP) operating permit began on May 29, 2009.

: The initial Public Notice period for this draft Missouri State Operating Permit (MSOP) was from May 29, 2009, through June 28, 2009. One (1) response received from permittee for this draft MSOP that warranted further review by the Department and yielded modifications to interim and/or final effluent limitations, and modifications to the terms and conditions of this draft MSOP.

: The second Public Notice period for this draft Missouri State Operating Permits (MSOP) is tentatively scheduled to begin on October 8, 2010, or is in process.

: The second Public Notice period for this draft Missouri State Operating Permits (MSOP) was from October 8, 2010, through November 7, 2010. No responses received or responses to the Public Notice of this draft MSOP do not warrant the modification of interim and/or final effluent limitations and/or major modifications to the terms and conditions of this MSOP.

DATE OF INITIAL FACT SHEET: FEBRUARY 3, 2009

COMPLETED BY:

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DATE OF REVISED FACT SHEET: SEPTEMBER 8, 2009, DECEMBER 31, 2009, SEPTEMBER 23, 2010, NOVEMBER 18, 2010 AND FEBRUARY 7, 2011

COMPLETED BY:

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Part VII – Appendices

REASONABLE POTENTIAL ANALYSES (RPA) RESULTS:

PARAMETER(S)	CMC* ACUTE	RWC* ACUTE	N**	SAMPLE RANGE (MAX/MIN)	CV***	(MF)****	REASONABLE POTENTIAL EXISTS (YES/NO)
OUTFALL # 002 – OIL AND GREASE	15	14.70	15	0.1-1.0	0.302267	1.651352	NO
OUTFALL # 006 – AMMONIA	12.1	5.99	13	1.2-5.2	1.302613	5.988838	NO

N/A – Not applicable

* – Units are in milligrams per liter (mg/L) unless otherwise noted; CMC – Critical maximum concentration; RWC – Receiving Water Concentration – the concentration of a toxicant or parameter toxicity in the receiving water after mixing (if applicable)

** – If the number of samples is greater than ten (> 10), then the Coefficient of Variation (CV) value must be used in the Water Quality Based Effluent Limitation (WQBEL) for the applicable constituent

*** – Coefficient of Variation (CV) calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set

N – number of samples

**** Multiplying Factor (MF) – 99% Confidence Level and 99% Probability Basis

Reasonable Potential – where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, at a minimum, the four (4) factors listed in [40 CFR 122.44(d)(1)(ii)], Protection of Environment, EPA Administered Permit Programs: The National Pollutant Discharge Elimination System [NPDES], Permit Conditions, Establishing limitations, standards, and other permit conditions, Water quality standards and State requirements

Reasonable Potential Analyses (RPA) conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of these RPAs is available from the Department upon request.