

**STATE OF MISSOURI**  
**DEPARTMENT OF NATURAL RESOURCES**  
**MISSOURI CLEAN WATER COMMISSION**



**MISSOURI STATE OPERATING PERMIT**

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92<sup>nd</sup> Congress) as amended,

Permit No. MO-0109789

Owner: McCormick Distilling Company, Inc.  
Address: One McCormick Lane, Weston, MO 64098

Continuing Authority: Same as above  
Address: Same as above

Facility Name: McCormick Distilling Company  
Address: One McCormick Lane, Weston, MO 64098

Legal Description: Please see Page 2 of 13.

Receiving Stream: Unnamed Tributary to the Missouri River (U)  
First Classified Stream and ID: Missouri River (P) (00226)  
USGS Basin & Sub-watershed No.: (10240011-050006)

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

**FACILITY DESCRIPTION**

Please see Page 2 of 13.

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

March 14, 2008  
Effective Date

July 24, 2009  
Revised Date

  
Mark N. Templeton, Director, Department of Natural Resources

March 13, 2013  
Expiration Date  
MO 780-0041 (10-93)

  
Karl Fett, Director, Kansas City Regional Office

FACILITY DESCRIPTION (continued)

Outfall #003 – Industrial Wastewater - SIC #2085

Legal Description: SW ¼, SW ¼, Sec. 18, T53N, R35W, Platte County

Latitude/Longitude: +3923509/-09452446

Facility Description:

Cooling water/no treatment.

Design flow is 10,000 gallons per day.

Outfalls #004 - #008 – Groundwater - SIC #2085

Facility Description:

See page only/not monitored.

Outfall #009 – Industrial Wastewater - SIC #2085

Legal Description: SW ¼, SW ¼, Sec. 18, T53N, R35W, Platte County

Latitude/ Longitude: +3923525/-09452386

Facility Description:

Wastewater from reverse osmosis process/not chlorinated.

Design flow is 24,000 gallons per day.

Outfall #010 – Domestic & process wastewater - SIC #2085

Legal Description: SE ¼, SE ¼, Sec. 13, T53N, R35W, Platte County

Latitude/Longitude: +3923479/-09452532

Facility Description:

Single cell aerated lagoon/chemical feed/wastewater irrigation/stormwater runoff from irrigation site/sludge is retained in lagoon.

Design population equivalent is 607.

Design flow is 8,300 gallons per day (1-in-10 year design including net rainfall minus evaporation). Process flow occurs 260 days per year and is averaged over 365 days.

Average design flow is 6,800 gallons per day (dry weather flows).

Actual flow is 4,000 gallons per day.

Design sludge production is 9.1 dry tons per year.

Outfall #011 – Industrial Wastewater - SIC #2085

Legal Description: SW ¼, SW ¼, Sec. 18, T53N, R35W, Platte County

Latitude/ Longitude: +3924014/-09452432

Facility Description:

Wastewater from reverse osmosis process/not chlorinated.

FACILITY DESCRIPTION (continued)

Outfall #010 – Domestic and process wastewater

**Receiving Stream Watershed:** The Unnamed Tributary to the Missouri River is a gaining stream setting.

**Facility Type:** No-discharge Storage and Irrigation System for year seasonal flows.

<b>Design Basis:</b>	<b><u>Avg Annual</u></b>
Design dry weather flows	<u>6,800</u> gallons/day
Design with 1-in-10 year flows	<u>8,300</u> gallons/day
Design PE <u>607</u>	

<b>Storage Basin/Tank:</b>	
Freeboard for basin:	<u>7</u> feet
Maximum volume (minimum to maximum water levels)	<u>1,352,000</u> gallons

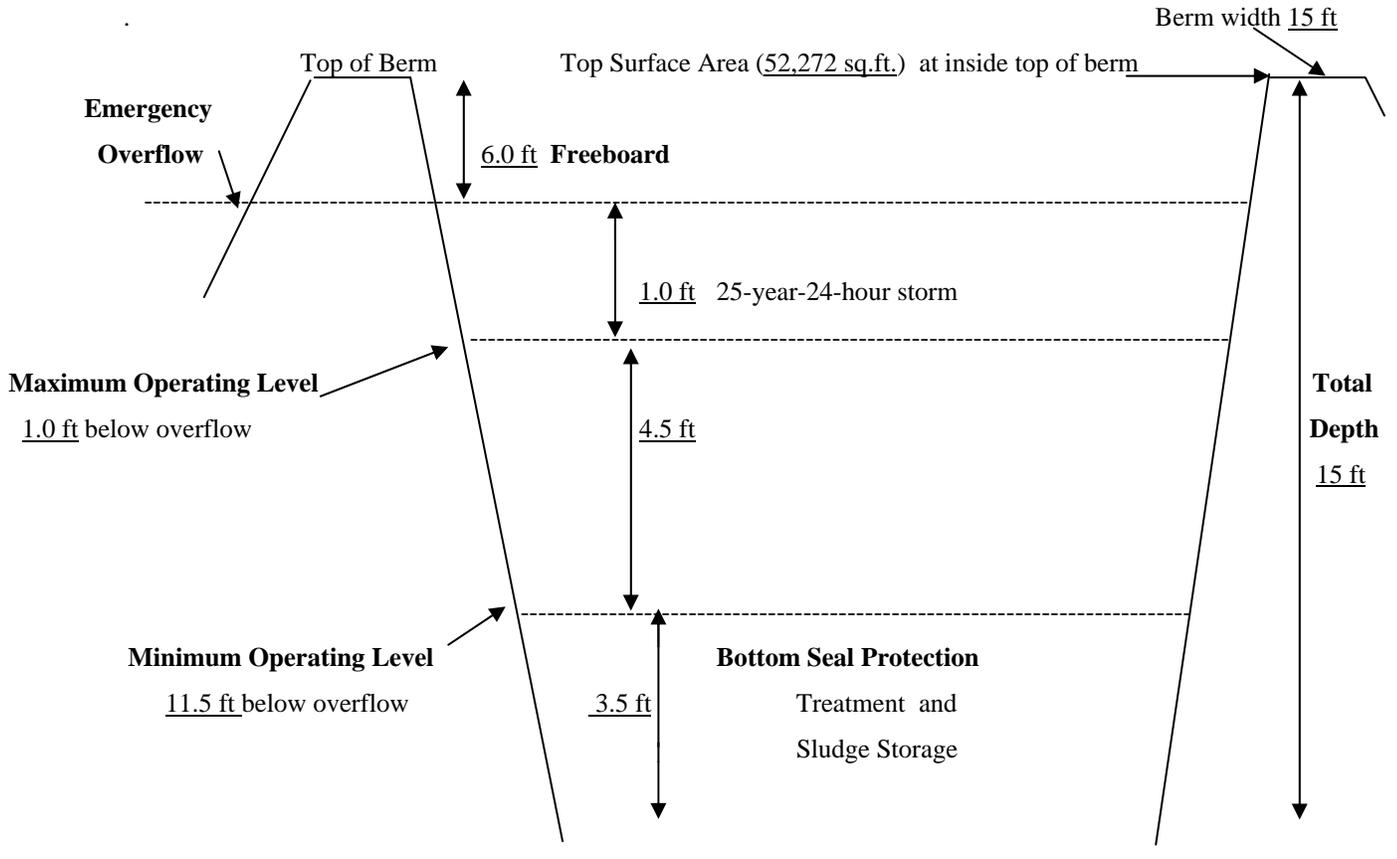
**Days of Storage**

<b>Storage Capacity:</b>	<b><u>Avg Annual</u></b>
Design for Dry weather Flows:	<u>200</u> days
Design with 1-in 10 year flows:	<u>160</u> days

**Land Application:**

Design Irrigation Volume/year: 3,024,000 gallons (including 1-in-10 year flows)  
 Irrigation areas: 5.8 acres at design loading (5.8 acres total available)  
 Application rates/acre: 0.15 inch/hour; 0.5 inch/day; 1.5 inches/week; 19 inches/year  
 Field slopes: less than 20 percent  
 Equipment type: sprinklers  
 Vegetation: grass land  
 Application rate is based on: hydraulic loading rate

**LAGOON PROFILE**



<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 4 of 13	
					PERMIT NUMBER MO-0109789	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #003 – Cooling Water (Note 6)</u>						
Flow	MGD	*		*	once/quarter	24 hr. estimate
Total Suspended Solids	mg/L	70		50	once/quarter	grab
pH – Units	SU	****		****	once/quarter	grab
Temperature	°F	90°			once/month	grab
<u>Outfall #009 and #011 – Discharge from reverse osmosis (Note 6)</u>						
Flow	MGD	*		*	once/quarter	24 hr. estimate
Fluoride	mg/L	4		4	once/quarter	grab
Barium	mg/L	2		2	once/quarter	grab
Sulfate & Chloride	mg/L	1000		1000	once/quarter	grab
Nitrate - N	mg/L	*		*	once/quarter	grab
<u>Outfall #010 - Emergency discharge from lagoon (Notes 1 &amp; 2)</u>						
Flow	MGD	*			once/day**	24 hr. estimate
Biochemical Oxygen Demand <sub>5</sub> ***	mg/L		65	45	once/week**	grab
Total Suspended Solids***	mg/L		110	70	once/week**	grab
pH – Units	SU	****		****	once/week**	grab
Ammonia as N	mg/L	*****		*****	once/week**	grab
Temperature	°F	*		*	once/week**	grab
Fecal Coliform (Note 7)	#/100mL	1000		400	once/week**	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE <u>July 28, 2008</u> .						
<u>Outfall #010 - Land Application Operational Monitoring (Notes 2 &amp; 3)</u>						
Lagoon Freeboard	feet	*			once/month	measured
Irrigation Period	hours	*			daily	total
Volume Irrigated	gallons	*			daily	total
Application Area	acres	*			daily	total
Application Rate	inches/ acre	*			daily	total
Rainfall	inches	*			daily	total
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE <u>January 28, 2009</u> .						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				PAGE NUMBER 5 of 13		
				PERMIT NUMBER MO-0109789		
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #010 - Irrigated Wastewater (Notes 4 &amp; 5)</u>						
Biochemical Oxygen Demand <sub>5</sub>	mg/L	*			once/quarter	grab
Total Suspended Solids	mg/L	*			once/quarter	grab
Total Kjeldahl Nitrogen as N	mg/L	*			once/quarter	grab
Ammonia Nitrogen as N	mg/L	*			once/quarter	grab
Nitrate/Nitrite as N	mg/L	*			once/quarter	grab
Total Sodium	mg/L	*			once/quarter	grab
Sodium Absorption Ratio (SAR)	mg/L	*			once/quarter	grab
pH - Units	SU	****			once/quarter	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>July 28, 2008</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<u>Outfall #010 – Soil Monitoring</u>						
Total Kjeldahl Nitrogen as N	mg/kg	*			once/year	composite
Ammonia Nitrogen as N	mg/kg	*			once/year	composite
Nitrate/Nitrite as N	mg/kg	*			once/year	composite
Chlorides	mg/kg	*			once/year	composite
Oil & Grease	mg/kg	*			once/year	composite
Available Phosphorus as P (Bray 1-P method)	mg/kg	*			once/3 years	composite
Total Sodium	mg/kg	*			once/3 years	composite
Exchangeable Sodium	%	10			once/3 years	composite
pH – Units	SU	6.0-7.5			once/3 years	composite
Cation Exchange Capacity	CEC	*			once/3 years	composite
Organic Matter	%	*			once/3 years	composite
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2008</u> .						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I &amp; III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- \* Monitoring requirement only.
- \*\* Monitor only when discharge occurs. Report as no-discharge when a discharge does not occur during the report period.
- \*\*\* This facility is required to meet a removal efficiency of 65% or more.
- \*\*\*\* pH is measured in pH units and is not to be averaged. The pH shall be maintained above 6.0 pH units.
- \*\*\*\*\* Comply with water quality standards per Special Condition #4.

Note 1 - No-discharge facility requirements. Wastewater shall be stored and land applied during suitable conditions so that there is no-discharge from the lagoon or irrigation site. An emergency discharge may occur when excess wastewater has accumulated above feasible irrigation rates due to precipitation exceeding the 1-in-10-year 365 day rainfall or the 25-year 24-hour storm event.

Note 2 - Records shall be maintained and summarized into an annual operating report, which shall be submitted by January 28th of each year for the previous calendar year period using report forms approved by the Department. The report shall include the following:

- (a) Record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;
- (b) The number of days the lagoon has discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed; and
- (c) A summary of the irrigation operations including freeboard at the start and end of the irrigation season, the number of days of irrigation for each month, the total gallons irrigated, the total acres used, crops grown, crop yields per acre, the application rate in inches/acre per day and for the year, the monthly and annual precipitation received at the facility and summary of testing results.

Note 3 - Lagoon freeboard shall be reported as lagoon water level in feet below the overflow level. See Special Conditions for Wastewater Irrigation System requirements.

Note 4 - Wastewater that is irrigated shall be sampled at the irrigation pump or wet well.

Note 5 - Monitor once per month during the months of March through November (9 months per year).

Note 6 - Monitor once per quarter in the months of March, May, July & October.

Note 7- The Monthly Average Limit for Fecal coliform is expressed as a geometric mean. Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.

C. SPECIAL CONDITIONS

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

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
2. All outfalls must be clearly marked in the field.
3. Report as no-discharge when a discharge does not occur during the report period.
4. Water Quality Standards
  - (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
  - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
    - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
    - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
    - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
    - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
    - (5) There shall be no significant human health hazard from incidental contact with the water;
    - (6) There shall be no acute toxicity to livestock or wildlife watering;
    - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
    - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
5. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities
  - (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
  - (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

C. SPECIAL CONDITIONS (continued)

6. Lagoons and earthen basins shall have a liner that is designed, constructed and maintained. If operating records indicate excessive percolation, the department may require corrective action as necessary to eliminate excess leakage.
7. Wastewater Irrigation System.
  - (a) Discharge Reporting. Any unauthorized discharge from the lagoon or irrigation system shall be reported to the department as soon as possible but always within 24 hours. Discharge is allowed only as described in the Facility Description and Effluent Limitations sections of this permit.
  - (b) Lagoon Operating Levels - No-discharge Systems. The minimum and maximum operating water levels for the storage lagoon shall be clearly marked. Each lagoon shall be operated so that the maximum water elevation does not exceed one foot below the overflow point except due to exceedances of the 1-in-10 year or 25-year-24 hour storm events. Wastewater shall be land applied whenever feasible based on soil and weather conditions and permit requirements. Storage lagoon(s) shall be lowered to the minimum operating level prior to each winter by November 30.
  - (c) Emergency Spillway. Lagoons and earthen storage basins should have an emergency spillway to protect the structural integrity of earthen structures during operation at near full water levels and in the event of overflow conditions. The spillway shall be at least one foot below top of berm. The department may waive the requirement for overflow structures on small existing basins.
  - (d) General Irrigation Requirements. The wastewater irrigation system shall be operated so as to provide uniform distribution of irrigated wastewater over the entire irrigation site. A complete ground cover of vegetation shall be maintained on the irrigation site unless the system is approved for row crop irrigation. Wastewater shall be land applied only during daylight hours. The wastewater irrigation system shall be capable of irrigating the annual design flow during an application period of less than 100 days or 800 hours per year.
  - (e) Saturated/Frozen Conditions. There shall be no irrigation during frozen, snow covered, or saturated soil conditions.
  - (f) Buffer Zones. There shall be no irrigation within 300 feet of any down gradient pond, lake, sinkhole, losing stream or water supply withdrawal; 100 feet of gaining streams or tributaries; 150 feet of dwelling or public use areas; or 50 feet of the property line.
  - (g) Public Access Restrictions. Public access shall not be allowed to the irrigation site(s).
  - (h) Operation and Maintenance Manual.

The permittee shall develop, maintain and implement an Operation and Maintenance (O&M) Manual that includes all necessary items to ensure the operation and integrity of the waste handling and land application systems. Copies of the O&M Manual and subsequent revisions shall be submitted to Regional Office for review and approval. The O&M Manual shall be reviewed and updated at least every five years.
  - (i) Nitrogen Loading Rates. Wastewater irrigation rates shall not exceed a nitrogen application rate of 150 pounds total nitrogen per acre per year. Hydraulic application rates exceeding 60 inches per acre per year shall calculate nitrogen loading rates and include results in the annual report. The calculation procedures are as follows:  $(\text{Total N}) \times (0.226) \times (\text{inches per acre irrigated}) = \text{pounds total N per acre}$ . Where  $\text{Total N} = [\text{Total Kjeldahl Nitrogen (TKN) as N}] + [\text{Nitrate Nitrogen as N}]$ . If the applied wastewater exceeds, 150 pounds total nitrogen per acre/year, the permittee must reduce the application rates or submit a revised permit application to request use of the Plant Available Nitrogen (PAN) method based on crop nitrogen requirements for harvested crops. PAN availability factors for surface application are:  $[\text{Ammonia N} \times 0.6] + [\text{Nitrate N} \times 0.9] + [\text{Organic N} \times 0.6] = \text{PAN}$ . The annual report shall include testing results for wastewater, soils and crop yields and calculations for nitrogen applied and crop removal of nitrogen.
  - (j) Equipment Checks during Irrigation. The irrigation system and application site shall be visually inspected at least once/day during wastewater irrigation to check for equipment malfunctions and runoff from the irrigation site.
8. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities
  - (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.

C. SPECIAL CONDITIONS (continued)

- (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.
9. Lagoons and earthen basins shall have a liner that is designed, constructed and maintained in accordance with 10 CSR 20-8.020(13)(A)4. If operating records indicate, excessive percolation, the department may require a water balance test in accordance with 10 CSR 20-8.020(16) or other investigations to evaluate adequacy of the lagoon seal. The department may require corrective action as necessary to eliminate excess leakage.
10. Annual Report.  
An annual report is required in addition to the quarterly reporting under Section A of this permit. The annual report shall be submitted by January 28 of each year for the previous growing season from October 1 through September 30 or an alternate 12 month period approved by the Department and listed in the Operation and Maintenance Manual. This report shall be submitted using report forms approved by the Department and shall include a summary of the monitoring and record keeping required by the Special Conditions and Standard Conditions of this permit.
11. Nutrient Management
- (a) Nitrogen. The permittee shall not exceed the plant available nitrogen management approach as listed in this permit.
- (b) Phosphorus. When soil test phosphorus (P) levels are above 120 pounds per acre using Bray P-1 test method, the sludge application rate shall not exceed the annual crop requirements for available phosphorus in accordance with state NRCS guidelines. When state NRCS standards and guidelines become available, the permit will be revised to include the Phosphorus Threshold and Phosphorus Index methods to be developed under the USDA, NRCS National Policy, General Manual, Part 402.06.
- (c) The actual application rates for a given year or growing season must be adjusted based on the approved management approach and the actual sludge and soil testing results and crop requirement. If crop yields are less than that predicted in the permit application, the application rates must be reduced or the yields increased through appropriate changes in management practice.
- (d) This permit will be modified to require a Nutrient Management Plan (NMP) after promulgation of applicable state, EPA and USDA rules and guidelines. The NMP will replace the current PAN and phosphorus methods.
12. Plant Available Nitrogen (PAN) Procedure
- (a) Wastewater, sludge and fertilizer nitrogen applications shall not exceed the crop nitrogen requirements based on realistic crop yield goals and the Plant Available Nitrogen (PAN) method. The wastewater application rate shall be calculated as follows:

$$\text{PAN} = \text{CNR} - \text{SRN} - \text{CFN}$$

WHERE: **CFN** = Commercial Fertilizer Nitrogen applied in pounds N/acre.

**CNR** = Crop Nitrogen Requirement in pounds N/acre

**PAN** = Plant Available Nitrogen in wastewater and sludge expressed as annual pounds N/acre.

**SRN** = Soil Residual Nitrogen in pounds N/acre.

- (b) Plant Available Nitrogen (PAN) is calculated as follows:

$$\text{PAN} = [\text{Ammonia Nitrogen}] \times [\text{Availability Factor}] + [\text{Organic Nitrogen}] \times [\text{Availability Factor}] \\ + [\text{Nitrate Nitrogen}] \times [\text{Availability Factor}]$$

For anaerobic treated wastewater and sludge, the nitrate nitrogen amounts will be negligible and can be ignored.

**C. SPECIAL CONDITIONS** (continued)

12. **Plant Available Nitrogen (PAN) Procedure** (continued)

(c) Plant Available Nitrogen (PAN) Availability factors are as follows:

(1) Average Availability factors for all fields:

<b>Type of Nitrogen</b>	<b>Surface</b>	<b>Immediate Incorporation</b>
	<b>Application</b>	<b>Subsurface Injection</b>
Organic	0.25 - 0.75*	0.25 - 0.75*
Ammonia	0.6**	0.9**
Nitrate	0.9**	0.9**

\* Organic Nitrogen = [Total Kjeldahl Nitrogen as N] - [Ammonia as N].  
 Availability Factors based on time after application and waste type are:

<b>Type of Wastewater and Sludge Treatment Methods</b>	<b>Availability Factor by Time Period</b>			
	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Cumulative Year 3+</b>
Aerobic wastewater lagoon & sludge	0.20	0.10	0.05	0.35
Anaerobic wastewater lagoon & sludge	0.40	0.20	0.10	0.70
Aerobic sludge-only storage basin/lagoon	0.40	0.20	0.10	0.70
Extended aeration plant & sludge	0.40	0.20	0.10	0.70
Waste activated treatment plant (liquids, primary/secondary sludges)	0.40	0.20	0.10	0.70
Lime Stabilized Sludge	0.40	0.20	0.10	0.70
Aerobic Sludge Digester	0.30	0.15	0.08	0.53
Anaerobic Sludge Digester	0.20	0.10	0.05	0.35
Composted Sludge (Class A)	0.10	0.05	0.03	0.18

NOTES: Year 1 is the current year of waste application; year 2 is the previous year of waste application; and year 3 is waste application two years ago. Nitrogen availability for years 1, 2 and 3 must be added when waste is applied in consecutive years. The cumulative factor is used when waste is applied at about the same rate for 3 consecutive years or longer.

\*\* Average inorganic nitrogen availability based on the typical soil and climate conditions when considering additions due to precipitation, dry deposition, and foliar absorption versus losses due to volatilization and denitrification (10% denitrification loss is included). The permittee may choose to use this average value for all fields or may adjust the N availability based on site specific soil conditions using the following tables under 'Field Specific Availability Factors for Inorganic Nitrogen'.

(2) Field Specific Availability Factors for Inorganic Nitrogen.

For ammonia and nitrate nitrogen factors, the permittee may choose to use the average value for all fields under paragraph C.1. above, or may use the alternate factors on a field specific basis using the tables below. The approved factors for each field will be included in the O&M Manual.

**C. SPECIAL CONDITIONS** (continued)

12. **Plant Available Nitrogen (PAN) Procedure** (continued)

(c) Plant Available Nitrogen (PAN) Availability factors are as follows: (continued)

<b>Table A. Alternate Field Specific Availability Factors for Surface Application</b>					
Soil Organic Matter %	Excessively well drained	Well drained	Moderately well drained	Somewhat poorly drained	Poorly drained
< 2	71	66	62	56	45
2-5	66	60	56	49	30
> 5	63	56	49	38	19

Adapted from USDA-NRCS, National Engineering Handbook, Part 651, Animal Waste Management Field Handbook (AWMFH), April 1992, Tables 11-6 and 11-8.

<b>Table B. Alternate Field Specific Availability Factors for Sub-Surface Injection or Immediate Incorporation.</b>					
Soil Organic Matter %	Excessively well drained	Well drained	Moderately well drained	Somewhat Poorly drained	Poorly drained
< 2	89	84	78	70	57
2-5	84	76	70	62	38
> 5	80	70	62	48	24

Adapted from USDA-NRCS, National Engineering Handbook, Part 651, Animal Waste Management Field Handbook (AWMFH), April 1992, Tables 11-6 and 11-8.

(d) Soil Residual Nitrogen (SRN).

(1) For Annual Crops, the nitrogen availability from soil organic matter must be included based on soil CEC and crop season as follows:

$$\text{SRN in pound N/acre}^* = [\text{percent organic mater}] \times \text{Soil Availability Factor}$$

**Soil Availability Factor by Soil CEC Ranges and Organic Matter**

<b><u>Growing Season</u></b>	<b><u>Organic Matter</u></b>	<b><u>CEC 10</u></b>	<b><u>CEC 10-18</u></b>	<b><u>CEC &gt;18</u></b>
<b>Summer</b>	1%	40*	20	10
<b>Winter</b>	1%	20*	10	5

\*Note: If CEC is less than 10 and organic matter is 1.5% or greater, the total SRN is constant at 60 pounds nitrogen for summer and 30 pounds for winter.

(2) For Perennial Crops the SRN is considered zero(0) for purposes of these calculations because the SRN has already been considered in the crop fertilization recommendations in the referenced publications.

(e) Crop nitrogen requirements shall be based on University of Missouri publication, Soil Test Interpretations and Recommendations Handbook, as revised or one of the other reference publications listed in this permit. Alternate reference publications may be used only upon prior approval by the department and shall be listed in the approved Operation and Maintenance Manual.

(f) If a crop is not harvested, the PAN rate shall not exceed 40 lbs/acre/year and grass vegetation must be maintained on the site.

(g) PAN calculations, application amounts, crop yields and crop removal rates shall be listed in the annual report.

C. SPECIAL CONDITIONS (continued)

12. Plant Available Nitrogen (PAN) Procedure (continued)

(h) Conversion Factors for laboratory testing results:

$$[\text{mg/L or mg/kg or ppm}] \times [\text{conversion factor}] = [\text{pounds per Unit Volume}]$$

<u>Unit Volume</u>	<u>Conversion Factors</u>
lbs/acre inch	0.226
lbs/1,000 gallons	0.0083
lbs/100 cubic feet	0.0062
lbs/ton (wet wt)	0.002

- (i) Alternate nitrogen availability factors may be considered based upon site specific conditions for each field and submittal of scientific justification. Alternate factors will be reviewed and approved by the department as part of the Operation and Maintenance Manual.
- (j) Supplemental nitrogen may be added to row crops when determined necessary for proper plant growth based on testing of plant vegetation or soil nitrate testing during the growing season. Procedures will be reviewed and approved by the department as part of the Operation and Maintenance Manual.
- (k) Primary reference publications used herein are:
- (1) Livestock Waste Facilities Handbook, Midwest Plan Service, MWPS-18, April 1993.
  - (2) National Engineering Handbook, Part 651, Agricultural Waste Management Field Book, USDA, Natural Resources Conservation Service (NRCS), April 1992 and current supplements.
  - (3) Managing Nitrogen for Groundwater Quality and Farm Profitability, Soil Science Society of America, Inc., 1991.
  - (4) Soil Test Interpretations and Recommendations Handbook, University of Missouri, Department of Agronomy, December, 1992.
  - (5) Land Application of Sewage Sludge, EPA/831-B-93-002b, U.S. Environmental Protection Agency, December, 1994.

13. Operation and Maintenance Manual: (Outfall #010)

The permittee shall develop, maintain and implement an Operation and Maintenance (O&M) Manual that includes all necessary items to ensure the operation and integrity of the waste handling and land application systems. Copies of the O&M Manual and subsequent revisions shall be submitted to the departments' Water Pollution Control Program and Regional Office for review and approval. The O&M Manual shall include, but not limited to, the following:

- (a) Detailed topographic maps of the property showing all land application fields including the identification numbers for each field and tract. For spray irrigation systems, each irrigation run shall also be shown. Each field, tract and irrigation run shall have an identification number for record keeping and tracking purposes. The maps shall also indicate separation distances from streams, ponds, wells, and property lines and shall indicate areas exceeding 10 percent slopes and other areas that are not suitable for land application. The maps shall also include the location of all buildings, pump stations, earthen storage basins, storage structures, containment structures, irrigation pipelines, irrigation riser connections, underground terrace outlets, composting areas, dead animal storage or disposal areas, domestic wastewater treatment systems and other waste handling units.
- (b) Start up procedures, field supervision during operation, and shutdown procedures of irrigation equipment.
- (c) Procedures for providing the separation distances required by this permit and as specified in 10 CSR 20-8.020(15)(B).
- (d) Sample collection, preservation, and testing procedures.
- (e) Procedures for determining Plant Available Nitrogen (PAN) loading rates.
- (f) Record keeping forms for tracking each field, tract and storage structure. This shall include testing results, crops, yields, and application rates for each field. Records for each field and tract shall include dates and amounts applied.

C. SPECIAL CONDITIONS (continued)

13. Operation and Maintenance Manual: (Outfall #010) (continued)

- (g) A procedure for promptly reporting spills or discharges to the permittee plant manager and to DNR.
- (h) A procedure for recording repair work on gravity sewer lines, recycle lines, and irrigation lines to include the reason for the repair work and the material used for the repair.
- (i) A program to eliminate debris and blockages of sewer lines and recycle lines and to keep debris out of storage structures.
- (j) A procedure for routine visual inspections of the storage and irrigation system for overflows or other operational problems.
- (k) A program for routine, unannounced inspections of land application sites and records to ensure that all directives for land application from the permittee's central office are being followed. Records of the inspections shall be maintained by the permittee and made available to the department upon request.
- (l) A procedure to assure that all appropriate employees are properly trained in operation of the waste systems and are familiar with the O&M Manual.
- (m) Procedure for adjusting application periods and rates based on soil infiltration capacity, soil moisture content, and percent of soil field (saturation) capacity.
- (n) List of number, size, and capacity of waste removal, hauling and land application equipment.
- (o) Number of suitable days each year when land application will occur based on historical one in ten year wettest precipitation and capacity of spreading equipment and personnel available.
- (p) Procedure to avoid application if there is a weather forecast for significant precipitation within 24 hours.
- (q) Nutrient Management Plan.

PERMIT TRANSFER

This permit may be transferred to a new owner by submitting an "Application for Transfer of Operating Permit" signed by the seller and buyer of the facility, along with the appropriate modification fee.

PERMIT RENEWAL REQUIREMENTS

Unless this permit is terminated, the permittee shall submit an application for the renewal of this permit no later than six (6) months prior to the permit's expiration date. Failure to apply for renewal may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.

TERMINATION

In order to terminate this permit, the permittee shall notify the department by submitting Form J, included with the State Operating Permit. The permittee shall complete Form J and mail it to the department at the address noted in the cover letter of this permit. Proper closure of any storage structure is required prior to permit termination. A closure plan shall be submitted to the department and approved prior to initiating closure activities.

DUTY OF COMPLIANCE

The permittee shall comply with all conditions of this permit. Any noncompliance with this permit constitutes a violation of Chapter 644, Missouri Clean Water Law, and 10 CSR 20-6. Noncompliance may result in enforcement action, termination of this authorization, or denial of the permittee's request for renewal.

**Missouri Department of Natural Resources**  
**FACT SHEET**  
**FOR THE PURPOSE OF MODIFICATION**  
**OF**  
**MO-0109789**  
**McCormick Distilling Company**

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

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

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

This Factsheet is for:

Industrial Facility

**Part I – Facility Information**

Facility Type: Industrial  
 Facility SIC Code(s): 2085

Facility Description: Please see the NPDES operating permit pages 2 through 3 of 13 for the facility description.

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

No

Application Date: December 28, 2008  
 Expiration Date: March 13, 2013

COMMENTS:

Facility has requested a modification to add a new outfall location, which has now been labeled as outfall 011. Outfall 009 is industrial wastewater following reverse osmosis treatment. The additional outfall 011 will contain the same waste stream as outfall 009. Currently the facility has approximately 1300 gallons per day of water that is treated by reverse osmosis and goes to outfall 010; however this water will now be diverted to outfall 009. The facility will have the ability to direct flow to either outfall 009 or outfall 011 as needed.

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (GPD)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001 – 002	----	Not active	Stormwater	Less than 1 mile
003	10,000	No treatment	Industrial	Less than 1 mile
004 – 008	----	Not monitored	Groundwater	Less than 1 mile
009	24,000	Secondary	Industrial	Less than 1 mile
010	8,300	Secondary	Domestic & Process Wastewater	Less than 1 mile
011	----	Secondary	Industrial	1.14

Water Quality History: Based upon Discharge Monitoring Reports (DMRs), the pH limit was exceeded in the year 2006 at Outfall #010 – Soil Monitoring. This facility has also failed to submit rainfall in inches in the Outfall #010 – Land Application Operational Monitoring reports.

**Part II – Operator Certification Requirements**

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

This facility is not required to have a certified operator.

**Part III – Receiving Stream Information**

Please mark the correct designated waters of the state categories of the receiving stream.

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

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

**RECEIVING STREAM(S) TABLE:**

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed Tributary to the Missouri River	U	----	----	10240011	Plains/MO Tributaries between Nishnabotna and Platte Drainages
Missouri River	P	00226	IRR, LWV, AQL, WBC***, SCR, DWS, IND		

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

\*\* - Ecological Drainage Unit

\*\*\* - UAA has not been conducted.

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

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed Tributary to the Missouri River (U)	0.000	0.000	0.000
Missouri River (P)	17088	18156	19542

**MIXING CONSIDERATIONS:**

Mixing Zone: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(a)].

Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(b)].

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

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

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

Not Applicable ;

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

### **ANTI-BACKSLIDING:**

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

- All limits in this statement are at least as protective as those previously established; therefore, backsliding does not apply.

### **ANTIDegradation:**

Policies which ensure protection of water quality for a particular water body where the water quality exceeds levels necessary to protect fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as outstanding natural resource waters. Antidegradation requirements are consistent with 40 CFR 131.12 that outlines methods used to assess activities that may impact the integrity of a water and protect existing uses. This policy may compel the state to maintain a level of water quality above those mandated by criteria.

Applicable, but deferred ;

As per [10 CSR 20-7.031(2)(D)], 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 Missouri Clean Water Commission approved *Missouri Antidegradation Rule and Implementation Procedure* (Antidegradation Rule), which is applicable to new or upgraded/expanded facilities. The implementation of the Antidegradation Rule will be implemented upon promulgation, which is tentatively scheduled for August 2008.

### **AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:**

As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the department.

### **BIO-SOLIDS, SLUDGE, & 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, or 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; 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 modifications to existing operating permits)

This facility has been approved to land apply as per Permit Standard Conditions III and a department approved bio-solids management plan.

### **COMPLIANCE AND ENFORCEMENT:**

Action taken by the department to resolve violations of the Missouri Clean Water Law, its implementing regulations, and/or any terms and condition of an operating permit.

Not Applicable ;

The permittee/facility is not under enforcement action and is considered to be in compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and condition of an operating permit.

**PRETREATMENT PROGRAM:**

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

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

Several special conditions pertaining to the permittee's pretreatment program may be included in the permit, and are as follows:

- Implementation and enforcement of the 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

Not Applicable ;

At this time, the permittee is not required to implement and enforce a Pretreatment Program.

**REASONABLE POTENTIAL ANALYSIS (RPA):**

Limitations must control all pollutants or pollutant parameters that are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above the Missouri Water Quality Standards.

Not Applicable ;

A RPA was not conducted for this facility.

**REMOVAL EFFICIENCY:**

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD<sub>5</sub>) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals. Please see the United States Environmental Protection Agency's (EPA) website 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 @ [www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm](http://www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm).

Applicable ;

Equivalent to Secondary Treatment is 65% removal [40 CFR 105(a)(3) & (b)(3)].

**SANITARY SEWER OVERFLOWS (SSOs), AND INFLOW & INFILTRATION (I&I):**

Sanitary Sewer Systems (SSSs) are municipal wastewater collection system that convey domestic, commercial, and industrial wastewater, and limited amounts of infiltrated groundwater and storm water (i.e. I&I), to a POTW. SSSs are not designed to collect large amounts of storm water runoff from precipitation events.

Untreated or partially treated discharges from SSSs are commonly referred to as SSOs. SSOs have a variety of causes including blockages, line breaks, sewer defects that allow excess storm water and ground water to overload the system, lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. A SSOs 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, they are considered SSOs.

Not Applicable ;

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

**SCHEDULE OF COMPLIANCE (SOC):**

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

Not Applicable ;

This permit does not contain a SOC.

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

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

In accordance with the EPA's *Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* [EPA 832-R-92-006] (Storm Water Management), BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

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

Not Applicable ;

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

**VARIANCE:**

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

Not Applicable

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

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

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

Not Applicable ;

Wasteload allocations were not calculated.

**WLA MODELING:**

Not Applicable ;

A WLA study was either not submitted or determined not applicable by department staff.

**WATER QUALITY STANDARDS:**

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

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

As per [10 CSR 20-7.031(1)(CC)], a toxicity test conducted under specified laboratory conditions on specific indicator organism; and as per [40 CFR §122.2], the aggregate toxic effect of an effluent measured directly by a toxicity test.

Not Applicable ;

At this time, the permittee is not required to conduct WET test for this facility.

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

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

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

Applicable ;

The receiving water body is listed on the 2002 Missouri 303(d) List for pollutants Chlordane and PCBs.

– This facility is not considered to be a source of the listed pollutant(s) or considered to contribute to the impairment of water body.

**Part V – Effluent Limits Determination**

**Outfall #003 – Cooling Water**

**EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	1	*		*	NO	S
TSS	MG/L	1	70		50	NO	S
pH	SU	1	> 6		> 6	NO	S
TEMPERATURE	°C	1/8	90		*	NO	S
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only

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

N/A – Not applicable

S – Same as previous operating permit

**Basis for Limitations Codes:**

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

**OUTFALL #003 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Total Suspended Solids (TSS).** Effluent limitations have been retained from previous state operating permit.
- **pH.** Effluent limitation has been retained from previous state operating permit.
- **Temperature.** Effluent limitation has been retained from previous state operating permit.
- **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/QUARTER	QUARTERLY
TSS		
pH		
TEMPERATURE	ONCE/MONTH	

**Outfall #009 and #011** – Discharge from reverse osmosis

**EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	1	*		*	NO	S
FLUORIDE	MG/L	8	4		4	NO	S
BARIUM	MG/L	8	2		2	NO	S
SULFATE & CHLORIDE	MG/L	8	1000		1000	NO	S
NITRATE - N	MG/L	8	*		*	NO	S
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only

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

N/A – Not applicable

S – Same as previous operating permit

Basis for Limitations Codes:

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

**OUTFALL #009 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Fluoride.** Effluent limitations have been retained from previous state operating permit.
- **Barium.** Effluent limitation has been retained from previous state operating permit.
- **Sulfate & Chloride.** Effluent limitation has been retained from previous state operating permit.
- **Nitrate - N.** Effluent limitation has been retained from previous state operating permit.
- **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/QUARTER	QUARTERLY
FLUORIDE		
BARIUM		
SULFATE & CHLORIDE		
NITRATE - N		

**Outfall #010** – Emergency discharge from lagoon

**EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	1	*		*	NO	S
BOD <sub>5</sub>	MG/L	1		65	45	NO	S
TSS	MG/L	1		110	70	NO	S
pH	SU	1	> 6		> 6	NO	S
AMMONIA AS N	MG/L	1	***			NO	S
TEMPERATURE	°F	1	*		*	YES	N/A
FECAL	#/ML	1	1000		400	YES	N/A
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only

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

\*\*\* - Comply with water quality standards.

N/A – Not applicable

S – Same as previous operating permit

Basis for Limitations Codes:

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

**OUTFALL #010 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Biochemical Oxygen Demand (BOD<sub>5</sub>)**. Effluent limitation has been retained from previous state operating permit.
- **Total Suspended Solids (TSS)**. Effluent limitation has been retained from previous state operating permit.
- **pH**. Effluent limitation has been retained from previous state operating permit.
- **Ammonia as N**. Effluent limitation has been retained from previous state operating permit.
- **Fecal Coliform**. Discharge shall not contain more than a monthly geometric mean of 400 colonies/100 mL and a daily maximum of 1000 colonies/100 mL during the recreational season (April 1 – October 31), please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information**. Future renewals of the facility operating permit will contain effluent limitations for E. coli, which will replace fecal coliform as the applicable bacteria criteria in Missouri’s water quality standards.
- **Temperature**. Monitoring requirement due to the toxicity of Ammonia varies by temperature
- **Minimum Sampling and Reporting Frequency Requirements**.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/DAY	QUARTERLY
BOD <sub>5</sub>	ONCE/WEEK	
TSS		
PH		
AMMONIA AS N		

**Outfall #010 – Land Application Operational Monitoring**

**EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
LAGOON FREEBOARD	FEET	8	*			NO	S
IRRIGATION PERIOD	HOURS	8	*			NO	S
VOLUME IRRIGATED	GALLONS	8	*			NO	S
APPLICATION AREA	ACRES	8	*			NO	S
APPLICATION RATE	IN/AC	8	*			NO	S
RAINFALL	INCHES	8	*			NO	S
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only

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

N/A – Not applicable

S – Same as previous operating permit

Basis for Limitations Codes:

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

**OUTFALL #010 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Lagoon Freeboard.** Effluent limitations have been retained from previous state operating permit.
- **Irrigation Period.** Effluent limitation has been retained from previous state operating permit.
- **Volume Irrigated.** Effluent limitation has been retained from previous state operating permit.
- **Application Area.** Effluent limitation has been retained from previous state operating permit.
- **Application Rate.** Effluent limitation has been retained from previous state operating permit.
- **Rainfall.** Effluent limitation has been retained from previous state operating permit.
- **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
LAGOON FREEBOARD	ONCE/MONTH	ANNUALLY
IRRIGATION PERIOD	ONCE/DAY	
VOLUME IRRIGATED		
APPLICATION AREA		
APPLICATION RATE		
RAINFALL		

**Outfall #010 – Irrigated Wastewater  
EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
BOD <sub>5</sub>	MG/L	8	*			NO	S
TSS	MG/L	8	*			NO	S
TOTAL KJELDAHL NITROGEN AS N	MG/L	8	*			NO	S
AMMONIA NITROGEN AS N	MG/L	8	*			NO	S
NITRATE/NITRITE AS N	MG/L	8	*			NO	S
TOTAL SODIUM	MG/L	8	*			NO	S
SODIUM ABSORPTION RATIO (SAR)	MG/L	8	*			NO	S
pH	SU	1/8	> 6			NO	S
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only

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

N/A – Not applicable

S – Same as previous operating permit

**Basis for Limitations Codes:**

- |   |                                   |
|---|-----------------------------------|
| 9. State or Federal Regulation/Law        | 6. Antidegradation Policy         |
| 10. Water Quality Standard (includes RPA) | 7. Water Quality Model            |
| 11. Water Quality Based Effluent Limits   | 8. Best Professional Judgment     |
| 12. Lagoon Policy                         | 9. TMDL or Permit in lieu of TMDL |
| 13. Ammonia Policy                        | 10. WET test Policy               |

**OUTFALL #010 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Biochemical Oxygen Demand (BOD<sub>5</sub>).** Effluent limitations have been retained from previous state operating permit.
- **Total Suspended Solids (TSS).** Effluent limitation has been retained from previous state operating permit.
- **Total Kjeldahl Nitrogen as N.** Effluent limitation has been retained from previous state operating permit.
- **Ammonia Nitrogen as N.** Effluent limitation has been retained from previous state operating permit.

- **Nitrate/Nitrite as N.** Effluent limitation has been retained from previous state operating permit.
- **Total Sodium.** Effluent limitation has been retained from previous state operating permit.
- **Sodium Absorption Ratio (SAR).** Effluent limitation has been retained from previous state operating permit.
- **pH.** Effluent limitation has been retained from previous state operating permit.
- **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
BOD <sub>5</sub>	ONCE/QUARTER	QUARTERLY
TSS		
TOTAL KJELDAHL NITROGEN AS N		
AMMONIA NITROGEN AS N		
NITRATE/NITRITE AS N		
TOTAL SODIUM		
SODIUM ABSORPTION RATIO (SAR)		
PH		

**Outfall #010 – Soil Monitoring  
EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
TOTAL KJELDAHL NITROGEN AS N	MG/KG	8	*			NO	S
AMMONIA NITROGEN AS N	MG/KG	8	*			NO	S
NITRATE/NITRITE AS N	MG/KG	8	*			NO	S
CHLORIDES	MG/KG	8	*			NO	S
OIL & GREASE	MG/KG	8	*			NO	S
AVAILABLE PHOSPHORUS AS P	MG/KG	8	*			NO	S
TOTAL SODIUM	MG/KG	8	*			NO	S
EXCHANGEABLE SODIUM	%	8	10			NO	S
PH	SU	8	6 - 7.5			NO	S
CATION EXCHANGE CAPACITY	CEC	8	*			NO	S
ORGANIC MATTER	%	8	*			NO	S
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only

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

N/A – Not applicable

S – Same as previous operating permit

**Basis for Limitations Codes:**

- |   |                                   |
|---|-----------------------------------|
| 14. State or Federal Regulation/Law       | 6. Antidegradation Policy         |
| 15. Water Quality Standard (includes RPA) | 7. Water Quality Model            |
| 16. Water Quality Based Effluent Limits   | 8. Best Professional Judgment     |
| 17. Lagoon Policy                         | 9. TMDL or Permit in lieu of TMDL |
| 18. Ammonia Policy                        | 10. WET test Policy               |

**OUTFALL #010 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Total Kjeldahl Nitrogen as N.** Effluent limitations have been retained from previous state operating permit.
- **Ammonia Nitrogen as N.** Effluent limitation has been retained from previous state operating permit.
- **Nitrate/Nitrite as N.** Effluent limitation has been retained from previous state operating permit.
- **Chlorides.** Effluent limitation has been retained from previous state operating permit.
- **Oil & Grease.** Effluent limitation has been retained from previous state operating permit.

- **Available Phosphorus as P.** Effluent limitation has been retained from previous state operating permit.
- **Total Sodium.** Effluent limitation has been retained from previous state operating permit.
- **Exchangeable Sodium.** Effluent limitation has been retained from previous state operating permit.
- **pH.** Effluent limitation has been retained from previous state operating permit.
- **Cation Exchange Capacity.** Effluent limitation has been retained from previous state operating permit.
- **Organic Matter.** Effluent limitation has been retained from previous state operating permit.
- **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
TOTAL KJELDAHL NITROGEN AS N	ONCE/YEAR	ANNUALLY
AMMONIA NITROGEN AS N		
NITRATE/NITRITE AS N		
CHLORIDES		
OIL & GREASE		
AVAILABLE PHOSPHORUS AS P	ONCE/3 YEARS	
TOTAL SODIUM		
EXCHANGEABLE SODIUM		
pH		
CATION EXCHANGE CAPACITY		
ORGANIC MATTER		

## **Part VI – Administrative Requirements**

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

### **PUBLIC NOTICE:**

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

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

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

**Date of Factsheet:** 10/24/07

Emily T. Lyon, EE-II  
 Kansas City Regional Office  
 Water Pollution Control  
 (816) 622-7000  
[emily.lyon@dnr.mo.gov](mailto:emily.lyon@dnr.mo.gov)

**Date of Factsheet Modification:** 5-7-09

Sunny Wellesley, ESIV  
 Kansas City Regional Office  
 Water Pollution Program-Permits

**Part VII – Appendices**

**APPENDIX #1- FACILITY OUTFALL LOCATIONAL MAP**

