

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, 92nd Congress) as amended.

Permit No. MO-0114804

Owner: Laclede Gas Company- Environmental Department
Address: 720 Olive Street, St. Louis, MO 63101

Continuing Authority: Superintendent of Gas Supply and Control
Address: 3950 Forest Park Avenue, St. Louis, MO 63108

Facility Name: Laclede Gas Company- Underground Storage
Facility Address: 14905 Sinks Road, St. Louis, MO 63034

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

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

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

FACILITY DESCRIPTION

See Page 2

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

October 24, 2011
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

October 23, 2016
Expiration Date

John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (continued):

Outfall #002 - Industrial- SIC # 4924

Emergency Discharge of Evaporation Basin containing purged propane cavern groundwater

Legal Description: Sec. 01, T47N, R6E, St. Louis County

UTM Coordinates: X= 736177 , Y= 4302663

Receiving Stream: Mill Creek (U)

First Classified Stream and ID: Missouri River (P) (01604) 303(d) List

USGS Basin & Sub-watershed No.: (103002000804)

Monitoring Point # MW1 Industrial- SIC # 4924

Monitoring Location

Legal Description: Landgrant 03023, St. Louis County

UTM Coordinates: X= 736316 , Y= 4302431

Receiving Stream: Mill Creek (U)

First Classified Stream and ID: Missouri River (P) (01604) 303(d) List

USGS Basin & Sub-watershed No.: (103002000804)

Monitoring Point # MW2 Industrial- SIC # 4924

Monitoring Location

Legal Description: Landgrant 03023, St. Louis County

UTM Coordinates: X= 736589 , Y= 4302461

Receiving Stream: Mill Creek (U)

First Classified Stream and ID: Missouri River (P) (01604) 303(d) List

USGS Basin & Sub-watershed No.: (103002000804)

Monitoring Point # MW3 Industrial- SIC # 4924

Monitoring Location

Legal Description: Landgrant 03023, St. Louis County

UTM Coordinates: X= 736518 , Y= 4302791

Receiving Stream: Mill Creek (U)

First Classified Stream and ID: Missouri River (P) (01604) 303(d) List

USGS Basin & Sub-watershed No.: (103002000804)

Monitoring Point # MW4 Industrial- SIC # 4924

Monitoring Location

Legal Description: Landgrant 03023, St. Louis County

UTM Coordinates: X= 736395 , Y= 4302876

Receiving Stream: Mill Creek (U)

First Classified Stream and ID: Missouri River (P) (01604) 303(d) List

USGS Basin & Sub-watershed No.: (103002000804)

Monitoring Point #MW5 Industrial- SIC # 4924

Monitoring Location

Legal Description: Sec. 01, T47N, R6E, St. Louis County

UTM Coordinates: X= 736225 , Y= 4302727

Receiving Stream: Mill Creek (U)

First Classified Stream and ID: Missouri River (P) (01604) 303(d) List

USGS Basin & Sub-watershed No.: (103002000804)

Monitoring Point #MW6 Industrial- SIC # 4924

Pond Well Propane Monitoring Location

Legal Description: Sec. 01, T47N, R6E, St. Louis County

UTM Coordinates: X= 736256 , Y= 4302584

Receiving Stream: Mill Creek (U)

First Classified Stream and ID: Missouri River (P) (01604) 303(d) List

USGS Basin & Sub-watershed No.: (103002000804)

FACILITY DESCRIPTION (continued):

Monitoring Point #MW7 Industrial- SIC # 4924
 Barteau Well Propane Monitoring Location
 Legal Description: Landgrant 03023, St. Louis County
 UTM Coordinates: X= 736631 , Y= 4302678
 Receiving Stream: Mill Creek (U)
 First Classified Stream and ID: Missouri River (P) (01604) 303(d) List
 USGS Basin & Sub-watershed No.: (103002000804)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PERMIT NUMBER MO-0114804	
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
Outfall #002 Emergency Discharge Evaporation Basin (Note 1)						
Flow	MGD	*		*	Once/discharge/day	24 hr. total
pH – Units	SU	**		**	Once/discharge/day	grab
Ammonia as N	mg/L	12.1		4.6	Once/discharge/day	grab
Oil & Grease	mg/L	15		10	Once/discharge/day	grab
Benzene	µg/L	5.0		2.5	Once/discharge/day	grab
Phenol	µg/L	100		50	Once/discharge/day	grab
Toluene	µg/L	*		*	Once/discharge/day	grab
Xylene	µg/L	*		*	Once/discharge/day	grab
Precipitation	Inches	*		*	Daily	24 hr. total
MONITORING REPORTS SHALL BE SUBMITTED <u>Quarterly***</u> ; THE FIRST REPORT IS DUE January 28, 2011. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

* Monitoring requirement only.
 ** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
 *****Depth of water table below ground surface.

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

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)					Page 4 of 7	
					PERMIT NUMBER MO-0114804	
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Monitoring Points # MW1, MW3, MW5- Groundwater Monitoring Wells</u>						
Groundwater depth	feet	*			Once/Quarter***	*****
Propane	mg/L	*			Once/Quarter***	grab
Ammonia as N	mg/L	*			Once/Quarter***	grab
Benzene	µg/L	*			Once/Quarter***	grab
Phenol	µg/L	*			Once/Quarter***	grab
Toluene	µg/L	*			Once/Quarter***	grab
Xylene	µg/L	*			Once/Quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ***; THE FIRST REPORT IS DUE January 28, 2012. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)					PERMIT NUMBER MO-0114804	
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Monitoring Points # MW2, MW4, MW6, MW7 Groundwater Monitoring Wells</u>						
Groundwater depth	feet	*			Once/Year	*****
Propane	mg/L	*			Once/Year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE October 28, 2012. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

*** See table below for quarterly sampling.

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

C. 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. Changes in Discharges of Toxic Substances

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

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

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.

C. SPECIAL CONDITIONS (continued)

5. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the Department for review and, if deemed necessary, approval.
6. The permittee shall conduct a year long hydrologic mass balance study to evaluate the amount of evaporation, leakage, and/or percolation within the evaporation basin. Within 90 days of issuance of this operating permit a work plan for the proposed study shall be submitted to the Department for approval. The results of the evaporation basin study shall be formally submitted to the Department two years from the date of issuance of this operating permit. This study shall determine the amount of leakage or percolation that occurs within the evaporation basin. The study shall be conducted for no less than one year. Measurement of percolation losses shall consider flow into and out of the basin, precipitation, evaporation, and changes in water level/storage capacity. If the study indicates that leakage or percolation exists, the Department shall require corrective action as necessary to reduce and/or control such leakage or percolation to be within acceptable limits.
7. Due to the karst geology and the presence of dry and water holding sinkholes, of which this facility is located, the risk of subsurface failure of the evaporation basin exists. Subsurface failure of the evaporation basin constitutes an unpermitted discharge and shall be reported to the Department within twenty-four hours of discharge. The permittee shall report to the Department any noncompliance which may endanger public health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided with five (5) days of the time the permittee becomes aware of the circumstances.
8. The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP) for the Laclede Gas Company Sinks Road Facility. The SWPPP must be prepared within 30 days and implemented within 90 days of permit issuance. The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

Storm Water Management For Industrial Activities, Developing Pollution Prevention Plans and Best Management Activities, (Document number EPA 832-R-92-006) published by the United States Environmental Protection Agency (USEPA) in September 1992.

The SWPPP must include the following:

- (a) An assessment of all storm water discharges associated with any activities or materials exposed to storm water, such as vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning, storage of empty product containers, etc. This must include a list of potential contaminants and an annual estimate of amounts that will be used in the described activities.
 - (b) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter storm water.
 - (c) The SWPPP must include a schedule for a monthly site inspection and a brief written report. The inspections must include observation and evaluation of BMP effectiveness, deficiencies, and corrective measures that will be taken. Deficiencies must be corrected within seven days. Inspection reports must be kept on site with the SWPPP. These must be made available to DNR personnel upon request.
 - (d) A provision for designating an individual to be responsible for environmental matters.
 - (e) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.
9. The purpose of the SWPPP and the BMPs listed therein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR20-2.010(56)] of waters of the state, or failed to ensure that the Benchmark limitations were achieved. Corrective action means the facility took steps to eliminate the deficiency.

C. SPECIAL CONDITIONS (continued)

10. Permittee shall adhere to the following minimum Best Management Practices:
 - (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
 - (b) Provide collection facilities and arrange for proper disposal of waste products.
 - (c) Store all raw materials, intermediate materials, products, and wastes (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water, or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
 - (d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.

11. Collection facilities shall be provided on-site, and arrangement made for proper disposal of waste products, including but not limited to, petroleum waste products and solvents. All fueling facilities present on-site shall adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures.

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF RENEWAL OF
MO-0114804
LACLEDE GAS COMPANY – UNDERGROUND STORAGE

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 a Industrial Facility

Part I – Facility Information

Facility Type: INDUSTRIAL
 Facility SIC Code(s): 4924

Facility Description:

Propane cavern groundwater purging system, which includes discharge into a no discharge evaporation basin.

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

- Yes; (please provide simple description or reference appropriate location in the Fact Sheet.
 - No.

Application Date: January 24, 2007
 Expiration Date: July 25, 2007
 Last Inspection: 4-1-2009

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
002	.046	None	Industrial	1.75 (stream miles)

Outfall #002 - Industrial- SIC # 4924

Emergency Discharge of Evaporation Basin containing purged propane cavern groundwater

Legal Description: Sec. 01, T47N, R6E, St. Louis County

UTM Coordinates: X= 736177 , Y= 4302663

Receiving Stream: Mill Creek (U)
 First Classified Stream and ID: Missouri River (P) (01604) 303(d) List
 USGS Basin & Sub-watershed No.: (103002000804)

Monitoring Point # MW1 Industrial- SIC # 4924

Monitoring Location

Legal Description: Landgrant 03023, St. Louis County

UTM Coordinates: X= 736316 , Y= 4302431

Receiving Stream: Mill Creek (U)

First Classified Stream and ID: Missouri River (P) (01604) 303(d) List

USGS Basin & Sub-watershed No.: (103002000804)

Monitoring Point # MW2 Industrial- SIC # 4924

Monitoring Location

Legal Description: Landgrant 03023, St. Louis County

UTM Coordinates: X= 736589 , Y= 4302461

Receiving Stream: Mill Creek (U)

First Classified Stream and ID: Missouri River (P) (01604) 303(d) List

USGS Basin & Sub-watershed No.: (103002000804)

Monitoring Point # MW3 Industrial- SIC # 4924

Monitoring Location

Legal Description: Landgrant 03023, St. Louis County

UTM Coordinates: X= 736518 , Y= 4302791

Receiving Stream: Mill Creek (U)

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Monitoring Location

Legal Description: Landgrant 03023, St. Louis County

UTM Coordinates: X= 736395 , Y= 4302876

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Monitoring Location

Legal Description: Sec. 01, T47N, R6E, St. Louis County

UTM Coordinates: X= 736225 , Y= 4302727

Receiving Stream: Mill Creek (U)

First Classified Stream and ID: Missouri River (P) (01604) 303(d) List

USGS Basin & Sub-watershed No.: (103002000804)

Monitoring Point #MW6 Industrial- SIC # 4924

Pond Well Propane Monitoring Location

Legal Description: Sec. 01, T47N, R6E, St. Louis County

UTM Coordinates: X= 736256 , Y= 4302584

Receiving Stream: Mill Creek (U)

First Classified Stream and ID: Missouri River (P) (01604) 303(d) List

USGS Basin & Sub-watershed No.: (103002000804)

Monitoring Point #MW7 Industrial- SIC # 4924

Bartean Well Propane Monitoring Location

Legal Description: Landgrant 03023, St. Louis County

UTM Coordinates: X= 736631 , Y= 4302678

Receiving Stream: Mill Creek (U)

First Classified Stream and ID: Missouri River (P) (01604) 303(d) List

USGS Basin & Sub-watershed No.: (103002000804)

Receiving Water Body's Water Quality & Facility Performance History:

The immediate receiving stream related to the facilities evaporation basin emergency discharge (Outfall 002) is the unclassified stream named Mill Creek which is a tributary of the Missouri River. The segment of the Missouri River, for which the receiving stream is a tributary, is 303(d) listed for bacteria. This facility is not the source of the documented 303(d) impairment. The evaporation basin at this facility is a natural depression most likely created by a sinkhole. This has been documented in a 2009 site visit conducted by the Departments Division of Geology and Land Survey Program.

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:

Not Applicable ; This facility is not required to have a certified operator.

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

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

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

10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st 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**
Mill Creek	U	NA	General Criteria	10300200	Ozark/Moreau/Loutre
Missouri River (303(d))	P	01604	IRR, LWW, AQL, DWS, IND, SCR, WBC_B***		

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

** - 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
Mill Creek (U)	0	0	0

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); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

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

ANTIDegradation:

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

- Renewal no degradation proposed and no further review necessary.

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.

BIOSOLIDS & SEWAGE SLUDGE:

Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: <http://dnr.mo.gov/env/wpp/pub/index.html>, items WQ422 through WQ449.

Not applicable;

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

COMPLIANCE AND ENFORCEMENT:

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

Not Applicable ;

The permittee/facility is not currently under Water Protection Program enforcement action.

REASONABLE POTENTIAL ANALYSIS (RPA):

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

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

Applicable ;

A RPA was conducted on appropriate parameters. Please see **APPENDIX # 1 – RPA RESULTS**.

SCHEDULE OF COMPLIANCE (SOC):

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

Not Applicable ;

This permit does not contain a SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

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

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

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

Applicable ;

A 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 plan.

VARIANCE:

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

Not Applicable ;

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

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

Not Applicable ;

Wasteload allocations were not calculated.

WLA MODELING:

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

Not Applicable ;

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

WATER QUALITY STANDARDS:

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

WHOLE EFFLUENT TOXICITY (WET) TEST:

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

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 Missouri River is listed on the Missouri 303(d) List for bacteria.

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

Part V – Effluent Limits Determination

Outfall #002 – Main Facility Outfall

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

**EFFLUENT LIMITATIONS TABLE:
 OUTFALL 002 EMERGENCY SPILLWAY DISCHARGE**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	*
PH	SU	1	6.5-9.0		6.5-9.0	YES	6.0/9.0
AMMONIA AS N	MG/L	2/3/5	12.1		4.6	YES	20/10
OIL & GREASE (MG/L)	MG/L	2	15		10	NO	15/10
BENZENE	µg/L	2	5.0		2.5	YES	*/*
PHENOL	µg/L	2	100		50	YES	*/*
TOLUENE	µg/L	9	*		*	NO	*/*
XYLENE	µg/L	9	*		*	NO	*/*
PRECIPITATION	Inches	9	*		*	YES	****

* - Monitoring requirement only.

** - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.

*** - # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean.

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

Basis for Limitations Codes:

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

OUTFALL #002 – DERIVATION AND DISCUSSION OF LIMITS:

- Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- pH.** Effluent limitations have been modified from previous state operating permit to comply with applicable regulations for the receiving stream.
- Total Ammonia Nitrogen.** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3] default pH 7.8 SU No mixing considerations allowed; therefore, WLA = appropriate criterion. Acute water quality criteria apply, 12.1 mg/L. Chronic criteria does not apply because chronic criteria is based on a 30-day average, which is unlikely to occur due to the evaporation basin being no-discharge.

Season	Temp (°C)	pH (SU)	Total Ammonia Nitrogen CMC (mg/L)
Summer	26	7.8	12.1
Winter	6	7.8	12.1

Summer: May 1 – October 31

$LTA_a = 12.1 \text{ mg/L} (0.321) = 3.9 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $MDL = 3.9 \text{ mg/L} (3.11) = 12.1 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $AML = 3.9 \text{ mg/L} (1.19) = 4.6 \text{ mg/L}$ [CV = 0.6, 95th Percentile, n=30]

Winter: November 1 – April 30

$LTA_a = 12.1 \text{ mg/L} (0.321) = 3.9 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $MDL = 3.9 \text{ mg/L} (3.11) = 12.1 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $AML = 3.9 \text{ mg/L} (1.19) = 4.6 \text{ mg/L}$ [CV = 0.6, 95th Percentile, n=30]

- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **Benzene.** Protection of Groundwater and Drinking Water Supply CCC = 5 µg/L, CMC = 5 µg/L, Background = 0 µg/L Benzene is a residual chemical resulting from propane storage.

Chronic WLA: $C_e = ((0.0 + 0.0)5 - (0.0 * 0.0))/0.0$
 $C_e = 5 \mu\text{g/L}$

Acute WLA: $C_e = ((0.0 + 0.0)5 - (0.0 * 0.0))/0.0$
 $C_e = 5 \mu\text{g/L}$

$LTA_c = 5 (0.527) = 2.6 \mu\text{g/L}$ [CV = 0.6, 99th Percentile]
 $LTA_a = 5 (0.321) = 1.6 \mu\text{g/L}$ [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

$MDL = 1.6 (3.11) = 5.0 \mu\text{g/L}$ [CV = 0.6, 99th Percentile]
 $AML = 1.6 (1.55) = 2.5 \mu\text{g/L}$ [CV = 0.6, 95th Percentile, n = 4]

- **Phenol.** Protection of Aquatic Life CCC = 100 µg/L, CMC = 100 µg/L, Background = 0 µg/L Phenol is a residual chemical resulting from propane storage.

Chronic WLA: $C_e = ((0.0 + 0.0)100 - (0.0 * 0.0))/0.0$
 $C_e = 100 \mu\text{g/L}$

Acute WLA: $C_e = ((0.0 + 0.0)100 - (0.0 * 0.0))/0.0$
 $C_e = 100 \mu\text{g/L}$

$LTA_c = 100 (0.527) = 52.7 \mu\text{g/L}$ [CV = 0.6, 99th Percentile]
 $LTA_a = 100 (0.321) = 32.1 \mu\text{g/L}$ [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

$MDL = 32.1 (3.11) = 100 \mu\text{g/L}$ [CV = 0.6, 99th Percentile]
 $AML = 32.1 (1.55) = 50 \mu\text{g/L}$ [CV = 0.6, 95th Percentile, n = 4]

- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **Toluene.** A monitoring only requirement has been retained from the previous permit. This requirement is to confirm that concentrations of Toluene are not discharged causing an excursion of the Missouri Water Quality Standard. Toluene is a residual chemical resulting from propane storage.
- **Xylene** A monitoring only requirement has been retained from the previous permit. This requirement is to confirm that concentrations of Xylene are not discharged causing an excursion of the Missouri Water Quality Standard. Xylene is a residual chemical resulting from propane storage.

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.

- The Public Notice period for this operating permit is tentatively schedule to begin in September 9, 2011.

DATE OF FACT SHEET: JULY 14, 2011

COMPLETED BY:

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Part VII – Appendices

APPENDIX # 1 – RPA RESULTS:

Parameter	CMC*	RWC Acute*	CCC*	RWC Chronic*	n**	Range max/min	CV***	MF	RP Yes/No
Benzene	5	8.5	5	8.5	17	4.1/0.7	.48	2.08	Yes
Phenol	100	840	100	840	18	210/4.4	1.07	4.00	Yes

N/A – Not Applicable

* - Units are (µg/L) unless otherwise noted.

** - If the number of samples is greater than 10, then the CV value must be used in the WQBEL for the applicable constituent.

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

RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).

n – Is the number of samples.

MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.

RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this RPA is available upon request.