

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-0111805

Owner: The Kiesel Company
Address: 4801 Fyler Avenue, St. Louis, MO 63116

Continuing Authority: Same as above
Address: Same as above

Facility Name: The Kiesel Company/Kiesel Marine
Address: #1 Branch Street, St. Louis, MO 63147

Legal Description: Land grant #3333, St. Louis City
UTM Coordinates: X = 744846, Y = 4282552

Receiving Stream: Mississippi River (mile 182) (P)
First Classified Stream and ID: Mississippi River (P) (01707)
USGS Basin & Sub-watershed No.: (07140101-070003)

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

FACILITY DESCRIPTION

Outfall #001 – Industrial - SIC #5172 & #9999
Storm water runoff.
Actual flow is 4,950 gallons per day.

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.

September 17, 2010
Effective Date


Kip Stetzler, Acting Director, Department of Natural Resources

September 16, 2015
Expiration Date


Mike Struckhoff, Director, St. Louis Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 2 of 5	
					PERMIT NUMBER MO-0111805	
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 #001</u>						
Flow	MGD	*			once/quarter**	24 hr. estimate
Total Dissolved Solids	mg/L	*		*	once/quarter**	grab
Biochemical Oxygen Demand ⁵	mg/L	45		30	once/quarter**	grab
Chemical Oxygen Demand ⁵	mg/L	90		60	once/quarter**	grab
Total Suspended Solids	mg/L	70		35	once/quarter**	grab
Settleable Solids	mL/L	0.5			once/quarter**	grab
Oil & Grease	mg/L	15		10	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
Antimony, Total Recoverable	µg/L	*		*	once/quarter**	grab
Chromium, Total Recoverable	µg/L	*		*	once/quarter**	grab
Copper, Total Recoverable	µg/L	*		*	once/quarter**	grab
Iron, Total Recoverable	µg/L	*		*	once/quarter**	grab
Lead, Total Recoverable	µg/L	*		*	once/quarter**	grab
Selenium, Total Recoverable	µg/L	*		*	once/quarter**	grab
Zinc, Total Recoverable	µg/L	*		*	once/quarter**	grab
Cyanide	µg/L	*		*	once/quarter**	grab
Phenols	µg/L	1102		408	once/quarter**	grab
BETX	µg/L	*		*	once/quarter**	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY ; THE FIRST REPORT IS DUE <u>January 28, 2011</u> .						
Total Toxic Organics (Note 1)	µg/L	*		*	once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY ; THE FIRST REPORT IS DUE <u>October 28, 2011</u> . 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>Part I</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

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

*** 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.

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. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.
4. Changes in Discharges of Toxic Substances
 The permittee shall notify the Director as soon as it knows or has reason to believe:
 - (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
 - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
5. Report as no-discharge when a discharge does not occur during the report period.
6. There will be no discharge of any process wastewater or process related water contaminants from this facility.
7. 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;

C. SPECIAL CONDITIONS (continued)

- (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.
8. 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.

D. Schedule of Compliance

The Kiesel Co.- Kiesel Marine Services has had numerous exceedances of the Total Suspended Solids limitation. A resolution to this problem needs to be determined.

- 1) By **September 17, 2011**, the permittee shall submit a Storm Water Pollution Prevention Plan with the goal of bringing the facility into compliance with the final effluent limitations described in Section A on page 2.
- 2) By **March 17, 2012**, the permittee shall implement the Storm Water Pollution Prevention Plan..

Total Toxic Organics (Note 1)

Acenaphthene
Acrolein
Acrylonitrile
Benzene
Benzidine
Carbon Tetrachloride (tetrachloromethane)
Chlorobenzene
1,2,4-trichlorobenzene
Hexachlorobenzene
1,2-dichloroethane
1,1,1-trichloroethane
Hexachloroethane
1,1-dichloroethane
1,1,2-trichloroethane
1,1,2,2-tetrachloroethane
Chloroethane
Bis (2-chloroethyl) ether
2-chloroethyl vinyl ether
N-nitrosodi-n-propylamine
Pentachlorophenol
Phenol
Bis (2-ethylhexyl) phthalate
Butyl benzyl phthalate
Di-n-butyl phthalate

Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate
1,2-benzanthracene (benzo(a)anthracene)
Benzo(a)pyrene (3,4-benzopyrene)
3,4-benzofluoranthene (benzo(b)fluoranthene)
1,1,2-benzofluoranthene (benzo(k)fluoranthene)
Chrysene
Anthracene
1,12-benzoperylene (benzo(ghi)perylene)
Fluorene
2-chloronaphthalene
2,4,6-trichlorophenol
Parachlorometa cresol
Chloroform (trichloromethane)
2-chlorophenol
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3-dichlorobenzidine
1,1-dichloroethylene
1,2-trans-dichloroethylene
2,4-dichlorophenol
1,2-dichloropropane (1,3-dichloropropane)
2,4-dimethylphenol
2,4-dinitrotoluene
2,6-dinitrotoluene
1,2-diphenylhydrazine
Ethylbenzene
Fluoranthene

4-chlorophenyl phenyl ether
4-bromophenyl phenyl ether
Bis (2-chloroisopropyl) ether
Bis (2-chloroethoxy) methane
Methylene Chloride (dichloromethane)
Methyl Chloride (chloromethane)
Methyl bromide (bromomethane)
Bromoform (tribromomethane)
Dichlorobromomethane
Chlorodibromomethane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
2-nitrophenol
4-nitrophenol
2,4-dinitrophenol
4,6-dinitro-o-cresol
N-nitrosodimethylamine
N-nitrosodiphenylamine
Phenanthrene
1,2,5,6-dibenzanthracene (dibenzo(a,h)anthracene)
Indeno (1,2,3-cd) pyrene
(2,3-o-phenylene pyrene)
Pyrene
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl Chloride (chloroethylene)
Aldrin
Dieldrin
Chlordane (technical mixture and metabolites)
4,4-DDT
4,4-DDE (p,p-DDX)
4,4-DDD (p,p-TDE)
Alpha-endosulfan
Beta-endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide (BHC hexachlorocyclohexane)
Alpha-BHC
Beta-BHC
Gamma-BHC
Delta-BHC (PCB polychlorinated biphenyls)
PCB-1242 (Arochlor 1242)
PCB-1254 (Arochlor 1254)
PCB-1221 (Arochlor 1221)
PCB-1232 (Arochlor 1232)
PCB-1248 (Arochlor 1248)
PCB-1260 (Arochlor 1260)
PCB-1016 (Arochlor 1016)
Toxaphene

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF (RENEWAL)
OF
MO-0111805
KIESEL MARINE SERVICES

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 Major , Minor , Industrial Facility ; Variance ;
 Master General Permit ; General Permit Covered Facility ; and/or permit with widespread public interest .

Part I – Facility Information

Facility Type: Industrial
 Facility SIC Code(s): 5712

Facility Description:

Storm water runoff

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: 02/05/2009
 Expiration Date: 06/10/2009
 Last Inspection: 08/01/2007 In Compliance ; Non-Compliance

(FACILITY EXCEEDED EFFLUENT LIMITATIONS FOR COD, TSS, AND IRON. FACILITY PAVED THE DRIVE TO REMEDY THE SITUATION. LIMITS HAVE BEEN ACHIEVED FOR COD AND TSS. IRON LIMITS OF 7.0 UG/L MDL AND 3.5 UG/L AML APPEAR TO HAVE BEEN A TYPOGRAPHICAL ERROR, THE UNITS SHOULD HAVE BEEN MG/L, NOT UG/L.)

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
#001	0.01	NONE	Storm water	0

Outfall #001

Legal Description: Land grant #3333, St. Louis City
 UTM Coordinates: X = 744846, Y = 4282552

Receiving Stream: Mississippi River (mile 182) (P)
 First Classified Stream and ID: Mississippi River (P) (01707)
 USGS Basin & Sub-watershed No.: (07140101-070003)

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

No stream surveys were found.

The past two years' of discharge monitoring reports were reviewed. For COD this facility exceeded the 60 mg/L Monthly Average one time. (This exceedance was below the 90 mg/L Daily Maximum.) For TSS, this facility exceeded both the 35mg/L monthly average and the 70 mg/L Daily Maximum six times. The iron limit in the existing permit is listed as 7.0 ug/L Daily Maximum and 3.5 ug/L Monthly Average. It is the permit writer's opinion that this was a typographical error and should have been mg/L instead of ug/L. As permitted, this facility exceeded the iron limit. However, if the limit had been 7000 ug/l and 3500 ug/l, then the facility would have been in compliance with the exception of one instance of 3130 ug/L.

Comments:

THE FACILITY WAS ISSUED A LETTER OF WARNING IN 2007 AS PART OF AN INSPECTION REPORT DUE TO EXCEEDANCES OF EFFLUENT LIMITATIONS FOR COD, TSS, AND IRON. IN JANUARY 2008 THE FACILITY RESPONDED IN A LETTER THAT THEY HAD PAVED THE DRIVE TO REMEDY THE SITUATION. THEIR LETTER INDICATED THAT LIMTS HAD BEEN ACHIEVED FOR COD AND TSS. A SUMMARY OF DMRs OVER THE PAST TWO YEARS HAS PROVED OTHERWISE FOR TSS. THE PERMITTEE SHOULD LOOK INTO OTHER SOLUTIONS TO THE SOLIDS ISSUE.

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:

Check boxes below that are applicable to the facility;

- Owned or operated by or for:
 - Municipalities
 - Public Sewer District:
 - County
 - Public Water Supply Districts:
 - Private sewer company regulated by the Public Service Commission:
 - State or Federal agencies:

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

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**
Mississippi River	P	01707	IRR,LWW,AQL, SCR,DWS,IND	07140101	Ozark/Mississippi Tributaries between Missouri and Ohio Rivers

* - 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

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Mississippi River (P)	52673	56425	63505

MIXING CONSIDERATIONS TABLE:

MIXING ZONE (CFS) [10 CSR 20-7.031(4)(B)(III)]	ZONE OF INITIAL DILUTION (CFS) [10 CSR 20-7.031(4)(B)(III)]
14106	1410.6, however ZID may not exceed 10X the effluent design flow. ZID = 10 * 0.01 = 0.1

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

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.

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

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.

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.

Not Applicable ;

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

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 ;

The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

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**.

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 (BOD₅) 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.

Not Applicable ;

Influent monitoring is not being required to determine percent removal.

SANITARY SEWER OVERFLOWS (SSOs), BYPASSES, INFLOW & INFILTRATION (I&I) – PREVENTION/REDUCTION:

Sanitary Sewer Systems (SSSs) are municipal wastewater collection systems that convey domestic, commercial, and industrial wastewater, and limited amounts of infiltrated groundwater and 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 SSO is defined as an untreated or partially treated sewage release from a SSS. SSOs can occur at any point in an SSS, during dry weather or wet weather. SSOs include overflows that reach waters of the state. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations. SSSs can back up into buildings, including private residences. When sewage backups are caused by problems in the publicly-owned portion of an SSS, 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.

Applicable ;

The time given for effluent limitations of this permit listed under Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(10)].

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.

Applicable ;

Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

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

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

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

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 ;

Mississippi River is listed on the 2008 Missouri 303(d) list for both Lead and Zinc.

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

Part V – Effluent Limits Determination

Outfall #001 – Main Facility Outfall

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	GPD	1				NO	SAME
Total Dissolved Solids	MG/L	9	*		*	NO	SAME
Biochemical Oxygen Demand ₅	MG/L	1	45		30	NO	SAME
Chemical Oxygen Demand ₅	SU	1	90		60	NO	SAME
Total Suspended Solids	°C	1	70		35	NO	SAME
Settleable Solids	MG/L	9	0.5			NO	SAME
Oil & Grease	MG/L	1	15		10	NO	6-9
pH – Units	MG/L	1	6.5-9		6.5-9	YES	SAME
Antimony, Total Recoverable	µg/L	2/3/9	*		*	NO	SAME
Chromium, Total Recoverable	µg/L	2/3/9	*		*	NO	SAME
Copper, Total Recoverable	µg/L	2/3/9	*		*	NO	SAME
Iron, Total Recoverable	µg/L	2/3/9	*		*	YES	7.0MG/L 3.5 MG/L
Lead, Total Recoverable	µg/L	2/3/9	*		*	NO	SAME
Selenium, Total Recoverable	µg/L	2/3/9	*		*	NO	SAME
Zinc, Total Recoverable	µg/L	2/3/9	*		*	NO	SAME
Cyanide	µg/L	2/3/9	*		*	NO	SAME
Phenols	µg/L	2/3/9	1102		408	YES	*
BETX	µg/L	2/3/9	*		*	NO	SAME
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

* - Monitoring requirement only.

Basis for Limitations Codes:

- | | |
|---|------------------------------------|
| 1. State or Federal Regulation/Law | 7. Antidegradation Policy |
| 2. Water Quality Standard (may include 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. Dissolved Oxygen Policy | 12. Antidegradation Review |

OUTFALL #001 – 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.
- **Total Dissolved Solids** – monitoring only requirement has been maintained from the previous permit. Total dissolved solids is used as an aggregate indicator of the presence of a broad array of chemical contaminants
- **Biochemical Oxygen Demand (BOD₅).** Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **Chemical Oxygen Demand (COD)** Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, effluent limitations have been retained from previous state operating permit,

- **Total Suspended Solids (TSS)**. Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information**.
- **Settleable Solids** Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, effluent limitations have been retained from previous state operating permit,
- **Oil & Grease**. Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, effluent limitations have been retained from previous state operating permit, Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **pH**. Effluent limitations have been modified from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information**.

- **Metals**

Reasonable potential analyses(RPA) were calculated using the discharge monitoring data provided by the facility over the past five years. Based on their results and using best professional judgement, the permit writer removed the monitoring requirement for several metals, retained the monitoring requirement for others. See appendix #1 for the RPA results. Based on the RPA if the Receiving Water Concentration (RWC) calculated to be approximately 10% of the water quality standard(WQS), then it was retained in the permit with a monitoring only requirement. If the RWC was less than 10% of the WQS, then the pollutant was removed from the permit.

- **Antimony** monitoring requirement only. Previously established permitted parameter and is being retained.
- **Beryllium** removed from permit
- **Cadmium** removed from permit
- **Chromium** monitoring requirement only. Previously established permitted parameter and is being retained
- **Copper** monitoring requirement only. Previously established permitted parameter and is being retained
- **Iron** monitoring requirement only. Previously established permitted parameter and is being retained
- **Lead** monitoring requirement only. Previously established permitted parameter and is being retained
- **Mercury** removed from permit
- **Nickel** removed from permit
- **Selenium** monitoring requirement only. Previously established permitted parameter and is being retained
- **Zinc** monitoring requirement only. Previously established permitted parameter and is being retained
- **Cyanide** monitoring requirement only. Previously established permitted parameter and is being retained
- **Phenols** Effluent limitations are being established. RPA indicated that this effluent has the potential to violate WQS.

Protection of Aquatic Life Acute Criteria is 100 ug/L, no chronic criteria. Background Phenol is 0.0 ug/L

Acute

$$\frac{100 \text{ ug/L} * (0.01 \text{ cfs} + 0.1 \text{ cfs}) - (0 \text{ ug/L}) (0.1 \text{ cfs})}{0.01 \text{ cfs}} = (C_e)$$

$$C_{e(\text{acute})} = 1100 \text{ ug/L}$$

Acute Long Term Average: $LTA_a = WLA_a * LTA_a \text{ multiplier}$
 $1100 \text{ ug/L} * 0.174 = 191.4 \text{ ug/L} = LTA_a$

Maximum Daily Limit = LTA_{min} * MDL multiplier
 $191.4 \text{ ug/L} * 5.76 = 1102 \text{ ug/L} = MDL$

Average Monthly Limit = LTA_{min} * AML multiplier

$$191.4 \text{ ug/L} * 2.13 = 408 \text{ ug/L} = AML$$

- **BETX** monitoring requirement only. Previously established permitted parameter and is being retained
Total Toxic Organics. Monitoring only requirement –

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	ONCE/QUARTER	ONCE/QUARTER
Total Dissolved Solids	ONCE/QUARTER	ONCE/QUARTER
Biochemical Oxygen Demand ⁵	ONCE/QUARTER	ONCE/QUARTER
Chemical Oxygen Demand ⁵	ONCE/QUARTER	ONCE/QUARTER
Total Suspended Solids	ONCE/QUARTER	ONCE/QUARTER
Settleable Solids	ONCE/QUARTER	ONCE/QUARTER
Oil & Grease	ONCE/QUARTER	ONCE/QUARTER
pH – Units	ONCE/QUARTER	ONCE/QUARTER
Antimony, Total Recoverable	ONCE/QUARTER	ONCE/QUARTER
Chromium, Total Recoverable	ONCE/QUARTER	ONCE/QUARTER
Copper, Total Recoverable	ONCE/QUARTER	ONCE/QUARTER
Iron, Total Recoverable	ONCE/QUARTER	ONCE/QUARTER
Lead, Total Recoverable	ONCE/QUARTER	ONCE/QUARTER
Selenium, Total Recoverable	ONCE/QUARTER	ONCE/QUARTER
Zinc, Total Recoverable	ONCE/QUARTER	ONCE/QUARTER
Cyanide	ONCE/QUARTER	ONCE/QUARTER
Phenols	ONCE/QUARTER	ONCE/QUARTER
BETX	ONCE/QUARTER	ONCE/QUARTER

Part VI – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, 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 on June 25, 2010 or is in process.

DATE OF FACT SHEET: JUNE 18, 2010

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
Antimony, Total Recoverable	6.00	2.73	NA	0.00	19	30 30	0	99% CL	NO
Beryllium, Total Recoverable	4.00	0.09	NA	0.00	19	1 1	0	99% CL	NO
Cadmium, Total Recoverable	5.00	0.42	0.41	0.04	19	3 1	0.456	99% CL	NO
Chromium, Total Recoverable	15.00	2.60	10.00	0.14	19	19 5	0.442	99% CL	NO
Copper, Total Recoverable	26.79	8.37	13.95	1.90	19	47 3	0.622	99% CL	NO
Iron, Total Recoverable	1,000.00	640.74	NA	3.63	19	5320 218	0.685	99% CL	NO
Lead, Total Recoverable	15.00	10.28	5.53	0.07	19	78 10	0.501	99% CL	NO
Mercury, Total Recoverable	2.00	0.05	0.50	0.00	19	0.5 0.5	0	99% CL	NO
Nickel, Total Recoverable	100.00	3.73	96.69	2.40	19	14 5	0.256	99% CL	NO
Selenium, Total Recoverable	5.00	3.85	NA	0.00	19	40 30	0.075	99% CL	NO
Zinc, Total Recoverable	217.99	182.85	199.07	0.78	19	1230 128	0.702	99% CL	NO
Cyanide	22.00	4.55	5.00	0.00	19	50 50	0	99% CL	NO
Phenols	100.00	237.90	NA	0.00	19	640 50	1.166	99% CL	YES
Benzene	5.00	0.45	NA	0.00	19	5 5	0	99% CL	NO
Toluene	1,000.00	0.45	NA	0.00	19	5 5	0	99% CL	NO
Ethylbenzene	NA	0.45	NA	0.00	19	5 5	0	99% CL	NO
Xylene	10,000.00	0.91	NA	0.00	19	10 10	0	99% CL	NO

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.