

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-0054101

Owner: Schaeffler Group USA, Inc., DBA FAG Bearings, LLC  
Address: 308 Springhill Farm Road, Fort Mill SC 29715

Continuing Authority: same as above  
Address: same as above

Facility Name: FAG Bearings, LLC  
Facility Address: 3900 Rangeline Road, Joplin MO 64804

Legal Description: see page two  
UTM Coordinates: see page two

Receiving Stream: Tributary to 8-20-13 MUDD V1.0  
First Classified Stream and ID: 8-20-13 MUDD V1.0 (C) WBID # 3960  
USGS Basin & Sub-watershed No.: Thurman Creek-Shoal Creek 11070207-0805

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 two. A certified wastewater operator is not required.

This permit authorizes only wastewater and stormwater 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 Sections 640.013, 621.250, and 644.051.6 of the Law.

October 1, 2016  
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

December 31, 2017  
Expiration Date

John Madras, Director, Water Protection Program

## **FACILITY DESCRIPTION (CONTINUED)**

### INTERNAL MONITORING POINT #001

Internal Monitoring point; no NPDES compliance sampling required.

Legal Description: NW¼, SE¼, Sec.19, T27N, R32W, Newton County

UTM Coordinates: X = 369539, Y = 4100945

### OUTFALL #002 – Non-Contact Cooling Water; SIC # 3562; NAICS # 332991

Retention basin with dechlorination.

Legal Description: NW¼, SE¼, Sec.19, T27N, R32W, Newton County

UTM Coordinates: X = 369379, Y = 4100859

Receiving Stream: Tributary to Silver Creek

First Classified Stream and ID: 8-20-13 MUDD V1.0 (C) 3960

USGS Basin & Sub-watershed No.: Thurman Creek-Shoal Creek (11070207-0805)

Design Flow: 0.285 MGD

Average Flow: 0.162 MGD

### OUTFALL # 003 – Stormwater for the entire facility – SIC # 3562; NAICS # 332991

Legal Description: NW¼, SE¼, Sec.19, T27N, R32W, Newton County

UTM Coordinates: X = 369552, Y = 4100770

Receiving Stream: Tributary to Silver Creek

First Classified Stream and ID: 8-20-13 MUDD V1.0 (C) 3960

USGS Basin & Sub-watershed No.: Thurman Creek-Shoal Creek (11070207-0805)

Maximum flow: 0.64 MGD

Actual flow: Dependent upon precipitation

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

EFFLUENT PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<b>OUTFALL #002</b> <i>non-contact cooling water</i>						
<b>TABLE A-1</b> <b>FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>						
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 on <b>October 1, 2016</b> and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
PHYSICAL						
Flow	MGD	*		*	once/quarter ◊	24 hr. total
Temperature	°F	90		-	once/quarter ◊	measured
CONVENTIONAL						
Chlorine, Total Residual (Note 2)	µg/L	17 (130ML)		8 (130ML)	once/quarter ◊	grab
Dissolved Oxygen (Note 1)	mg/L	*		*	once/quarter ◊	grab
pH (Note A)	SU	6.5 to 9.0		6.5 to 9.0	once/quarter ◊	grab
NUTRIENTS:						
Ammonia as N	mg/L	*		*	once/quarter ◊	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE <b>JANUARY 28, 2017</b> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

EFFLUENT PARAMETERS	UNITS	FINAL LIMITATIONS		BENCH-MARKS	MONITORING REQUIREMENTS	
		DAILY MAXIMUM	MONTHLY AVERAGE		MEASUREMENT FREQUENCY	SAMPLE TYPE
<b>OUTFALL #003</b> <i>Stormwater Only</i>						
<b>TABLE A-2</b> <b>FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>						
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 on <b>October 1, 2016</b> and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
PHYSICAL						
Flow	MGD	*		-	once/quarter ◊	24 hr. estimate
Precipitation	inches	*		-	once/quarter ◊	measured
CONVENTIONAL						
Oil & Grease	mg/L	**		10	once/quarter ◊	grab ∞
pH (Note A)	SU	**		6.5 to 9.0	once/quarter ◊	grab ∞
Total Suspended Solids	mg/L	**		100	once/quarter ◊	grab ∞
METALS						
Aluminum, Total Recoverable	µg/L	**		750	once/quarter ◊	grab ∞
Copper, Total Recoverable	µg/L	**		21.2	once/quarter ◊	grab ∞
Iron, Total Recoverable	µg/L	**		1000	once/quarter ◊	grab ∞
Zinc, Total Recoverable	µg/L	**		176.7	once/quarter ◊	grab ∞
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE <b>JANUARY 28, 2017</b> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

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

- \* Monitoring requirement only.
- \*\* Monitoring requirement with associated benchmark. See Special Conditions #9 through #12
- ∞ All samples shall be collected from a discharge resulting from a precipitation event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable precipitation event. If a discharge does not occur within the reporting period, report as no discharge. The total amount of precipitation should be noted from the event from which the samples were collected.

Note A The facility will report the minimum and maximum values. pH is not to be averaged.

Note 1 Dissolved Oxygen is a minimum value. The facility will report the minimum value for the daily report.

Note 2 This permit contains a Total Residual Chlorine (TRC) limit. This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 130 µg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.

MINIMUM QUARTERLY SAMPLING REQUIREMENTS			
QUARTER	MONTHS	EFFLUENT PARAMETERS	REPORT IS DUE
First	January, February, March	Sample at least once during any month of the quarter	April 28 <sup>th</sup>
Second	April, May, June	Sample at least once during any month of the quarter	July 28 <sup>th</sup>
Third	July, August, September	Sample at least once during any month of the quarter	October 28 <sup>th</sup>
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 <sup>th</sup>

**B. STANDARD CONDITIONS**

In addition to specified conditions stated herein, this permit is subject to the attached Part I standard conditions dated August 1, 2014, and hereby incorporated as though fully set forth herein.

**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.

### C. SPECIAL CONDITIONS (CONTINUED)

#### 3. Water Quality Standards

- (a) To the extent required by law, 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.

#### 4. Changes in Discharges of Toxic Pollutant

In addition to the reporting requirements under §122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

- (a) That an activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, 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;
  - (3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
  - (4) One milligram per liter (1 mg/L) for antimony;
  - (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
  - (6) The notification level established by the department in accordance with 40 CFR 122.44(f).
- (b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
  - (1) Five hundred micrograms per liter (500 µg/l);
  - (2) One milligram per liter (1 mg/l) for antimony;
  - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with §122.21(g)(7).
  - (4) The level established by the Director in accordance with §122.44(f).

#### 5. Report as no-discharge when a discharge does not occur during the report period.

#### 6. Reporting of Non-Detects

- (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
- (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non-Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
- (c) The permittee shall report the "Non-Detect" result using the less than sign and the minimum detection limit (e.g. <10).
- (d) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for that parameter.
- (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
- (f) When calculating monthly averages, one-half of the minimum detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the "<MDL" shall be reported as indicated in item (C).

#### 7. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).

C. SPECIAL CONDITIONS (CONTINUED)

8. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 *et. seq.*) and the use of such pesticides shall be in a manner consistent with its label.
9. The purpose of the Stormwater Pollution Prevention Plan (SWPPP) and the Best Management Practices (BMPs) listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effectively preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.
10. Facility SIC codes found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2) shall implement a SWPPP and must be prepared and implemented upon permit issuance. The SWPPP must be kept on-site and should not be sent to the department unless specifically requested. The SWPPP must be reviewed and updated every five (5) years or as site conditions change (see Rationale and Derivation: antidegradation analysis and SWPPP in the fact sheet). 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: *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in February 2009 ([www.epa.gov/npdes/pubs/industrial\\_swppp\\_guide.pdf](http://www.epa.gov/npdes/pubs/industrial_swppp_guide.pdf)). The SWPPP must include:
  - (a) A listing of specific contaminants and their control measures (or BMPs) and a narrative explaining how BMPs are implemented to control and minimize the amount of contaminants potentially entering stormwater. The BMPs should be designed to treat the stormwater up to the 10 year, 24 hour rain event.
  - (b) For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. Failure to implement and maintain the chosen BMP is a permit violation. For further guidance, consult the antidegradation implementation procedure at <http://dnr.mo.gov/env/wpp/docs/AIP050212.pdf>.
  - (c) The SWPPP must include a schedule for once per month site inspections and brief written reports. The inspection report must include precipitation information for the entire period since last inspection, as well as observations and evaluations of BMP effectiveness. Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
    - i. Operational deficiencies must be corrected within seven (7) calendar days.
    - ii. Minor structural deficiencies must be corrected within fourteen (14) calendar days.
    - iii. Major structural deficiencies must be reported to the regional office within seven (7) days of discovery. The initial report shall consist of the deficiency noted, the proposed remedies, the interim or temporary remedies (including the general timing of the placement of the interim measures), and an estimate of the timeframe needed to wholly complete the repairs or construction. The permittee will work with the regional office to determine the best course of action, including but not limited to temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
    - iv. All actions taken to correct the deficiencies shall be included with the written report, including photographs.
    - v. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to department and EPA 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 the department.
11. This permit stipulates pollutant benchmarks applicable to your discharge. The benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation. Benchmark monitoring and visual inspections shall be used to determine the overall effectiveness of SWPPP and to assist you in knowing when additional corrective action may be necessary to protect water quality. If a sample exceeds a benchmark concentration you must review your SWPPP and your BMPs to determine what improvements or additional controls are needed to reduce that pollutant in your stormwater discharge(s).

Any time a benchmark exceedance occurs a Corrective Action Report (CAR) must be completed. A CAR is a document that records the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. CARs must be retained with the SWPPP and available to the department upon request. If the efforts taken by the facility are not sufficient and subsequent exceedances of a benchmark occur, the facility must contact the department if a benchmark value cannot be achieved. Failure to take corrective action to address a benchmark exceedance and failure to make measureable progress towards achieving the benchmarks is a permit violation.

C. SPECIAL CONDITIONS (CONTINUED)

12. Permittee shall adhere to the following minimum Best Management Practices (BMPs):
  - (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 stormwater from these substances.
  - (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
  - (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater 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.
  - (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property to comply with general water quality criteria, effluent limits, or benchmarks. This could include the use of straw bales, silt fences, or sediment basins, if needed.
  - (f) Ensure adequate provisions are provided to prevent surface water intrusion into the storage basin, to divert stormwater runoff around the storage basin, and to protect embankments from erosion.
13. To protect the general criteria found at 10 CSR 20-7.031(4), before releasing water accumulated in secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen. If the presence of odor or sheen is indicated, the water shall be treated using an appropriate method or disposed of in accordance with legally approved methods, such as being sent to a wastewater treatment facility. Following treatment, the water shall be tested for oil and grease, benzene, toluene, ethylbenzene, and xylene using 40 CFR part 136 methods. All pollutant levels must be below the most protective, applicable standards for the receiving stream, found in 10 CSR 20-7.031 Table A. Records of all testing and treatment of water accumulated in secondary containment shall be stored in the SWPPP to be available on demand to MDNR and EPA personnel.
14. Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the SWPPP and made available to the department upon request.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
**FACT SHEET**  
**FOR THE PURPOSE OF RENEWAL**  
**OF**  
**MO-0054101**  
**FAG BEARINGS**

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 stormwater 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 for less.

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 (MSOP or operating permit) listed below. A factsheet is not an enforceable part of an operating permit.

**Part I. FACILITY INFORMATION**

Facility Type:	Industrial	
Facility SIC Code(s):	3562	
Facility NAICS Code:	332991	
Application Date:	05/20/2014	
Modification Date:	05/08/2012	
Expiration Date:	09/20/2014	
Last Inspection:	11/15/2013	Not in Compliance

**FACILITY DESCRIPTION:**

This facility manufactures anti-friction bearings for construction equipment, power transfer equipment, locomotive engines, and other industrial equipment. The manufacturing process, including forging, heat treating, machining, assembly, and packaging, all occurs indoor with no exposure to stormwater. Ancillary operations include administration, quality control, engineering, facility and equipment maintenance, and wastewater treatment. Treated wastewater is piped to the POTW; once-through cooling water is potable water and is dechlorinated before discharging to waters of the state.

FAG Bearing, which was purchased in the summer of 2002 by INA, a German based company, no longer generates regulated quantities of hazardous waste at the Joplin facility. The last shipment of hazardous waste generated through processes at the facility was in 1999. FAG Bearing's last shipment of hazardous waste was made in 2002. Hazardous waste shipped in 2002 was a result of clean up activities. FAG Bearing is maintaining their large quantity generator status due to on going clean up activities.

Site Information for EPA MOD985798339 "Newton County Wells". The Newton County Wells Site is located in northern Newton County, Missouri. From 1972 to 1982, FAG Bearings used trichloroethylene (TCE) as a degreaser in its ball bearings manufacturing process. Operations at the 2.5-acre site contaminated soil and groundwater. Sampling in the area by the Missouri Department of Health discovered the presence of TCE and cis-1,2-dichloroethene in 9 wells located along FAG Bearings' southern property. Additional sampling by EPA and the Missouri Department of Natural Resources (DNR) found TCE contamination as far as two miles south of the FAG Bearings property. The TCE and TCE degradation products present in the soil and groundwater at the site are a result of the accidental cutting of a former TCE transfer pipeline.

In 1991, EPA initiated a Time-Critical Removal Action to provide bottled water to impacted residents. In January 1992, construction was initiated to connect residents to the public water supply system. In July 1992, additional residents were provided with bottled water. These residents were hooked up to the public water supply system in 1994.

From January 2002 to May 2003, under the oversight of MDNR, FAG Bearings performed multiple injections of potassium permanganate to treat the TCE source area.

The long-term remedy included institutional controls to prevent use of contaminated groundwater, monitored natural attenuation (MNA) and monitoring. Natural attenuation describes a variety of in-place processes that, under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume or concentration of contaminants in groundwater. Institutional controls to prevent contact with the groundwater are in place. Groundwater monitoring to evaluate natural attenuation at the site is ongoing.

**PERMITTED FEATURES TABLE:**

OUTFALL	AVERAGE FLOW (MGD)	DESIGN FLOW (MGD)	TREATMENT LEVEL	EFFLUENT TYPE
#002	0.162	0.285	dechlorination & retention	once-through cooling water
#003	dependent upon precipitation	0.64	none	stormwater

Outfall #001 was closed; the once-through cooling water is now routed through the basin at outfall #002. Internal monitoring points are not subject to NPDES permitting regulations per 40 CFR 122.45(h) for this permit.

At the last inspection, the facility was not in compliance for water quality violations as seen below.

**FACILITY PERFORMANCE HISTORY & COMMENTS:**

The electronic discharge monitoring reports were reviewed for the last five years. The following table shows the permit limit exceedances for the past five years. Limits were incorrectly applied to TSS on outfall #003.

<i>PF No</i>	<i>MPED</i>	<i>Parameter</i>	<i>Unit</i>	<i>limit</i>	<i>limit</i>	<i>reported</i>	<i>limit</i>	<i>limit</i>	<i>reported</i>
001	03/31/2011	Chlorine, total residual (TRC)	mg/L	0.1299ML	Monthly Avg.	2.5	0.1299ML	Daily Max.	2.5
001	09/30/2011	Total Suspended Solids (TSS)	mg/L	30	Monthly Avg.	52	60	Daily Max.	52
002	09/30/2015	Chlorine, total residual (TRC)	mg/L	0.008	Monthly Avg.	0.05	0.016	Daily Max.	0.05
002	03/31/2015	Chlorine, total residual (TRC)	mg/L	0.008	Monthly Avg.	0.12	0.016	Daily Max.	0.12
002	06/30/2014	Chlorine, total residual (TRC)	mg/L	0.008	Monthly Avg.	0.32	0.016	Daily Max.	0.32
002	09/30/2011	Chlorine, total residual (TRC)	mg/L	0.008	Monthly Avg.	0.28	0.016	Daily Max.	0.28
002	03/31/2011	Chlorine, total residual (TRC)	mg/L	0.008	Monthly Avg.	3.2	0.016	Daily Max.	3.2
003	12/31/2015	Total Suspended Solids (TSS)	mg/L	30	Monthly Avg.	117	60	Daily Max.	117
003	06/30/2015	Total Suspended Solids (TSS)	mg/L	30	Monthly Avg.	44	60	Daily Max.	44
003	03/31/2015	Total Suspended Solids (TSS)	mg/L	30	Monthly Avg.	59	60	Daily Max.	59
003	09/30/2013	Total Suspended Solids (TSS)	mg/L	30	Monthly Avg.	42	60	Daily Max.	42
003	03/31/2011	Total Suspended Solids (TSS)	mg/L	30	Monthly Avg.	33	60	Daily Max.	33

## **Part II. RECEIVING STREAM INFORMATION**

### **RECEIVING WATER BODY'S WATER QUALITY:**

The receiving stream has no concurrent water quality data available.

### **303(D) LIST:**

Section 303(d) of the federal Clean Water Act requires each state identify waters 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 impaired waters not addressed by normal water pollution control programs. <http://dnr.mo.gov/env/wpp/waterquality/303d/303d.htm>

✓ Not applicable; this facility does not discharge to an impaired segment of a 303(d) listed stream.

### **TOTAL MAXIMUM DAILY LOAD (TMDL):**

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; hence, the purpose of a TMDL is to determine the pollutant loading a specific waterbody can assimilate without exceeding water quality standards. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan or TMDL may be developed. The TMDL shall include the WLA calculation. <http://dnr.mo.gov/env/wpp/tmdl/>

✓ Not applicable; this facility is not associated with a TMDL.

### **APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:**

✓ As per Missouri's Effluent Regulations [10 CSR 20-7.015(1)(B)], the waters of the state are divided into the following seven 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:
- Lake or Reservoir:
- Losing:
- Metropolitan No-Discharge:
- Special Stream:
- Subsurface Water:
- All Other Waters:

### **MIXING CONSIDERATIONS:**

Mixing zone: not allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)].

Zone of initial dilution: not allowed [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

### **RECEIVING STREAM MONITORING REQUIREMENTS:**

No receiving water monitoring requirements are recommended at this time.

**RECEIVING STREAMS TABLE:**

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	DISTANCE TO SEGMENT (MILES)	12-DIGIT HUC
#002	Tributary to 8-20-13 MUDD V1.0 locally known as tributary to Silver Creek	n/a	n/a	GEN	0.0	Thurman Creek - Shoal Creek 11070207-0805
	8-20-13 MUDD V1.0 locally known as Silver Creek	C	3960	HHP, IRR, LWW, SCR, WBC-B, WWH (AQL)	1.3 mi	
#003	Tributary to 8-20-13 MUDD V1.0 locally known as tributary to Silver Creek	n/a	n/a	GEN	0.0	
	8-20-13 MUDD V1.0 locally known as Silver Creek	C	3960	HHP, IRR, LWW, SCR, WBC-B, WWH (AQL)	1.3 mi	

n/a not applicable

WBID = Waterbody Identification: Missouri Use Designation Dataset 8-20-13 MUDD V1.0 data can be found as an ArcGIS shapefile on MSDIS at [http://msdis.missouri.edu/pub/Inland\\_Water\\_Resources/MO\\_2014\\_WQS\\_Stream\\_Classifications\\_and\\_Use\\_shp.zip](http://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_shp.zip)

\* As per 10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission's water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and 1<sup>st</sup> classified receiving stream's beneficial water uses to be maintained are in the receiving stream table in accordance with [10 CSR 20-7.031(1)(C)].

Uses which may be found in the receiving streams table, above:

10 CSR 20-7.031(1)(C)1.:

**AQL** = Protection of aquatic life (Current narrative use(s) are defined to ensure the protection and propagation of fish shellfish and wildlife, which is further subcategorized as: WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat. This permit uses AQL effluent limitations in 10 CSR 20-7.031 Table A for all habitat designations unless otherwise specified.)

10 CSR 20-7.031(1)(C)2.:

- Recreation in and on the water
- WBC = Whole Body Contact recreation where the entire body is capable of being submerged;
- WBC-A = Whole body contact recreation supporting swimming uses and has public access;
- WBC-B = Whole body contact recreation supporting swimming;
- SCR = Secondary Contact Recreation (like fishing, wading, and boating).

10 CSR 20-7.031(1)(C)3. to 7.:

- HHP (formerly HHF) = Human Health Protection as it relates to the consumption of fish;
- IRR = Irrigation for use on crops utilized for human or livestock consumption;
- LWW = Livestock and wildlife watering (Current narrative use is defined as LWP = Livestock and Wildlife Protection);
- DWS = Drinking Water Supply;
- IND = Industrial water supply

10 CSR 20-7.031(1)(C)8-11.:

- Wetlands (10 CSR 20-7.031 Table A currently does not have corresponding habitat use criteria for these defined uses)
- WSA = Storm- and flood-water storage and attenuation; WHP = Habitat for resident and migratory wildlife species;
- WRC = Recreational, cultural, educational, scientific, and natural aesthetic values and uses; WHC = Hydrologic cycle maintenance.

10 CSR 20-7.031(6): GRW = Groundwater

### **Part III. 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:**

Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] require a reissued permit to be as stringent as the previous permit with some exceptions. Backsliding (a less stringent permit limitation) is only allowed under certain conditions.

- ✓ Limitations in this operating permit for the reissuance conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.
- ✓ The Department determined technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
  - At outfall #002, the previous permit had rounding errors for TRC. Rounding errors have been corrected and this permit reflects the corrected effluent limitations. 16 µg/L daily maximum changed to 17 µg/L. Regardless, a ML of 130 µg/L is still required.
  - The previous permit limits for outfall #002 and #003 were established in error, based on limits for domestic wastewater. However, outfall #002 is once-through cooling water and outfall #003 is a stormwater-only outfall. This renewal establishes limits appropriate for once-through cooling water and limits and benchmarks appropriate for stormwater-only discharges. There will be no changes to industrial activities onsite or the composition of the discharge as a result of this renewal. The new limitations remain protective of the receiving waters and the benchmark concentrations and required corrective actions within this permit are protective of the receiving stream's uses to be maintained.
    - Outfall #002: removed TSS technology-based limits for domestic wastewater.
    - Outfall #003: TSS changed from technology limits of 60 mg/L daily maximum and 30 mg/L monthly average to 100 mg/L benchmark. Oil and Grease limits changed from 15 mg/L daily maximum and 10 mg/L monthly average to a benchmark of 10 mg/L. BOD<sub>5</sub> removed. pH changed from 6.5-9.0 limits to benchmark.

#### **ANTIDegradation REVIEW:**

For process water discharge with new, altered, or expanding discharges, the department is to document, by means of antidegradation review, if the use of a water body's available assimilative capacity is justified. In accordance with Missouri's water quality regulations for antidegradation [10 CSR 20-7.031(3)], degradation may be justified by documenting the socio-economic importance of a discharge after determining the necessity of the discharge. Facilities must submit the antidegradation review request to the department prior to establishing, altering, or expanding discharges. See <http://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm>

- ✓ Not applicable; the facility has not submitted information proposing expanded or altered process water discharge; no further degradation proposed therefore no further review necessary.

For stormwater discharges with new, altered, or expanding discharges, the stormwater BMP chosen for the facility, through the antidegradation analysis performed by the facility, must be implemented and maintained at the facility. Failure to implement and maintain the chosen BMP alternative is a permit violation; see SWPPP.

- ✓ Applicable; the facility must review and maintain stormwater BMPs as appropriate.

#### **BENCHMARKS:**

When a permitted feature or outfall consists of only stormwater, a benchmark may be implemented at the discretion of the permit writer. Benchmarks require the facility to monitor, and if necessary, replace and update stormwater control measures. Benchmark concentrations are not effluent limitations. A benchmark exceedance, therefore, is not a permit violation; however, failure to take corrective action is a violation of the permit. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the permittee in knowing when additional corrective actions may be necessary to comply with the limitations of the permit.

Because of the fleeting nature of stormwater discharges, the department, under the direction of EPA guidance, has determined monthly averages are capricious measures of stormwater discharges. The *Technical Support Document for Water Quality Based Toxics Control* (EPA/505/2-90-001; 1991) Section 3.1 indicates most procedures within the document apply only to water quality based approaches, not end-of-pipe technology-based controls. Hence, stormwater only outfalls will generally only contain a maximum daily limit (MDL), benchmark, or monitoring requirement determined by the site specific conditions including the receiving water's current quality. While inspections of the stormwater BMPs occur monthly, facilities with no compliance issues are usually expected to sample stormwater quarterly.

Numeric benchmark values are based on water quality standards or other stormwater permits including guidance forming the basis of Environmental Protection Agency's (EPA's) *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* (MSGP). Because precipitation events are sudden and momentary, benchmarks based on state or federal standards or recommendations use the Criteria Maximum Concentration (CMC) value, or acute standard. The CMC is the estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed briefly without resulting in an unacceptable effect. The CMC for aquatic life is intended to be protective of the vast majority of the aquatic communities in the United States.

- ✓ Applicable; this facility has stormwater-only outfalls with benchmark constraints. The benchmarks listed are consistently achieved in stormwater discharges by a variety of other industries with SWPPPs and is deemed protective of instream water quality and aquatic life.

**BIOSOLIDS & SEWAGE SLUDGE:**

Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for beneficial use (i.e. fertilizer). Sewage sludge is solid, semi-solid, 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 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: <http://extension.missouri.edu/main/DisplayCategory.aspx?C=74> (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.

**GROUNDWATER MONITORING:**

Groundwater is a water of the state according to 10 CSR 20-7.015(7) and 10 CSR 20-7.031(6) and must be protected accordingly.

- ✓ This facility is not required to monitor groundwater for the water protection program.

**INDUSTRIAL SLUDGE:**

Industrial sludge is solid, semi-solid, or liquid residue generated during the treatment of industrial process wastewater in a treatment works; including but not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment process; scum and solids filtered from water supplies and backwashed; and a material derived from industrial sludge.

- ✓ Not applicable; sludge is not generated at this facility.

**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 causing or have the reasonable potential to cause (or contribute to) an in-stream excursion above narrative or numeric water quality standards. If the permit writer determines 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 [40 CFR Part 122.44(d)(1)(iii)].

- ✓ Applicable; a RPA was conducted on appropriate parameters and was 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.

	Analyte	CMC	RWC Acute	CCC	RWC Chronic	n	Range	CV	RP Acute	RP Chronic
TRC	Total Residual Chlorine	19.00	9388.84	10.00	9388.84	5	0-2500	0.6	YES	YES

N/A Not Applicable

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

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

CV 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: concentration of a toxicant or the parameter in the receiving water after mixing (if applicable).

RP Reasonable Potential: 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).

**SCHEDULE OF COMPLIANCE (SOC):**

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, effluent limits, 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. SOC's are allowed under 40 CFR 122.47 providing certain conditions are met.  
✓ Not applicable; this permit does not contain a SOC.

**SPILL REPORTING:**

Per 10 CSR 24-3.010, any emergency involving a hazardous substance must be reported to the department's 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. The department may require the submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply whether or not the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the noncompliance reporting requirement found in Standard Conditions Part I. <http://dnr.mo.gov/env/esp/spillbill.htm>

**STORMWATER PERMITTING:**

A standard mass-balance equation cannot be calculated for stormwater from this facility because the stormwater flow and flow in the receiving stream cannot be determined for conditions on any given day. The amount of stormwater discharged from the facility will vary based on previous rainfall, soil saturation, humidity, detention time, BMPs, surface permeability, etc. Flow in the receiving stream will vary based on climatic conditions, size of watershed, amount of surfaces with reduced permeability (houses, parking lots, and the like) in the watershed, hydrogeology, topography, etc. Decreased permeability increases the flash of the stream.

It is likely sufficient rainfall to cause a discharge for four continuous days from a facility will also cause some significant amount of flow in the receiving stream. Chronic WQSs are based on a four-day exposure (except ammonia, which is based on a thirty day exposure). In the event a discharge does occur from this facility for four continuous days, some amount of flow will occur in the receiving stream. This flow will dilute stormwater discharges from a facility. For these reasons, most industrial stormwater facilities have limited potential to cause a violation of chronic water quality standards in the receiving stream.

Sufficient rainfall to cause a discharge for one hour or more from a facility would not necessarily cause significant flow in a receiving stream. Acute WQSs are based on a one hour of exposure, and must be protected at all times in unclassified streams, and within mixing zones of class P streams [10 CSR 20-7.031(4) and (5)(4)4.B.]. Therefore, industrial stormwater facilities with toxic contaminants do have the potential to cause a violation of acute WQSs if those toxic contaminants occur in sufficient amounts.

It is due to the items stated above staff drafting this fact sheet are unable to perform statistical Reasonable Potential Analysis (RPA) and calculate Wasteload Allocations (WLA) via a site-specific mass-balance equation for effluent limit determination. However, staff will use their best professional judgment in determining if a facility has a potential to violate Missouri's Water Quality Standards.

**STORMWATER POLLUTION PREVENTION PLAN (SWPPP):**

In accordance with 40 CFR 122.44(k), Best Management Practices (BMPs) must be used to control or abate the discharge of pollutants when: 1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; 3) Numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. In accordance with the 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 waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Stormwater 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.

A SWPPP must be prepared by the permittee if the SIC code is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2). A SWPPP may be required of other facilities where stormwater has been identified as necessitating better management. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream pollution from stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures determined to be adequate to achieve the benchmark values

discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.

For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. Failure to implement and maintain the chosen BMP is a permit violation. For further guidance, consult the antidegradation implementation procedure (<http://dnr.mo.gov/env/wpp/docs/AIP050212.pdf>).

Alternative Analysis (AA) evaluation of the BMPs is a structured evaluation of BMPs that are reasonable and cost effective. The AA evaluation should include practices that are designed to be: 1) non-degrading; 2) less degrading; or 3) degrading water quality. The glossary of AIP defines these three terms. The chosen BMP will be the most reasonable and effective management strategy while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The AA evaluation must demonstrate why “no discharge” or “no exposure” is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and *Antidegradation Implementation Procedure* (AIP), Section II.B.

If parameter-specific numeric exceedances continue to occur and the permittee feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification; the application is found at: <http://dnr.mo.gov/forms/index.html>.

✓ Applicable; a SWPPP shall be developed and implemented for this facility.

**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; the operating permit is not drafted under premise of a petition for variance.

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

As per [10 CSR 20-2.010(78)], the WLA is the amount of pollutant each discharger is allowed to discharge into the receiving stream without endangering water quality. Two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs) are reviewed. If one limit does provide adequate protection for the receiving waters, then the other must be used.

- ✓ Applicable; wasteload allocations were calculated where relevant using water quality criteria or water quality model results and by applying 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

- Acute wasteload allocations (daily maximum limits; MDL) 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).
- Chronic wasteload allocations (monthly average limits; AML) 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).
- 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* or TSD EPA/505/2-90-001; March 1991.
- Number of Samples “n”: In accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance which should be, at a minimum, targeted to comply with the values dictated by the WLA. Therefore, it is recommended the actual planned frequency of monitoring normally be used to determine the value of “n” for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for “n” must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is “n = 4” at a minimum. For total ammonia as nitrogen, “n = 30” is used.

**WLA MODELING:**

Permittees may submit site specific studies to better determine the site specific wasteload allocations applied in permits.

- ✓ 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(4), 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 testing for this facility. The facility discharges stormwater and once-through cooling water. The facility uses chlorinated water and dechlorinates. The only toxic parameter in the effluent is chlorine and is being monitored with limitations. Per 40 CFR 122.44(d)(1)(v) the WET testing requirement may be waived.

**Part IV. EFFLUENT LIMITS DETERMINATION**

Effluent limitations derived and established in the below effluent limitations tables are based on current operations of the facility. Effluent means both process water and stormwater. Any flow through the outfall is considered a discharge and must be sampled and reported as provided below. 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. Daily maximums and monthly averages are required under 40 CFR 122.45(d)(1) for continuous discharges not from a POTW.

**OUTFALL #002 – ONCE-THROUGH COOLING WATER**

**EFFLUENT LIMITATIONS TABLE:**

PARAMETERS	UNIT	BASIS FOR LIMITS	DAILY MAX	MONTHLY AVG	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
<b>PHYSICAL</b>								
FLOW	MGD	1	*	*	*,*	ONCE/QUARTER	ONCE/QUARTER	24 HR. TOT
TEMPERATURE	°F	1	90	-	90,-	ONCE/QUARTER	ONCE/QUARTER	GRAB
<b>CONVENTIONAL</b>								
CHLORINE, TOTAL RESIDUAL	µg/L	1, 3	17 (130ML)	8 (130ML)	16,8.2 (130ML)	ONCE/QUARTER	ONCE/QUARTER	GRAB
DISSOLVED OXYGEN (DO) **	MG/L	1, 4, 6	*	*	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
pH †	SU	1, 3	6.5 TO 9.0	6.5 TO 9.0	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
<b>NUTRIENTS</b>								
AMMONIA AS N	mg/L	1, 4, 6	*	*	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB

\* - Monitoring requirement only

\*\* - DO is a minimum value; the facility will report the minimum value for “daily maximum”

† The facility will report the minimum and maximum pH values; pH is not to be averaged.

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

**Basis for Limitations Codes:**

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

**DERIVATION AND DISCUSSION OF LIMITS:**

**PHYSICAL:**

**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. The facility will report the total flow in millions of gallons per day (MGD).

**Temperature**

In accordance with 10 CSR 20-7.031(5)(D), water contaminant sources shall not cause or contribute to stream temperature in excess of ninety degrees Fahrenheit (90 °F) or thirty-two and two-ninths degrees Celsius (32 2/9 °C). The facility has monitored for this parameter in the past at outfall #002. Data show 17 to 74 °F for the last permit cycle. Limits retained.

**CONVENTIONAL:**

**Chlorine, Total Residual (TRC)**

Warm-water Protection of Aquatic Life CCC = 10 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background = 0 µg/L. Data range from 0 to 2500 µg/L (monitoring period ending date 3/31/2011).

Acute WLA:  $C_c = 19 \mu\text{g/L}$

Chronic WLA:  $C_c = 10 \mu\text{g/L}$

$LTA_a = 19 (0.321) = 6.1 \mu\text{g/L}$  [CV = 0.6, 99<sup>th</sup> Percentile]

$LTA_c = 10 (0.527) = 5.3 \mu\text{g/L}$  [CV = 0.6, 99<sup>th</sup> Percentile]

Use most protective number of  $LTA_a$  or  $LTA_c$ .

MDL = 5.3 (3.11) = 16.5 µg/L [CV = 0.6, 99<sup>th</sup> Percentile]

AML = 5.3 (1.55) = 8.2 µg/L [CV = 0.6, 95<sup>th</sup> Percentile, n = 4]

Total residual chlorine effluent limits of 17 µg/L daily maximum and 8 µg/L monthly average are recommended if chlorine is used as a disinfectant. There only five data points to perform a RPA. There is RP. Standard compliance language for TRC, including the minimum level (ML) of 130 µg/L, is described in the permit. The previous permit's limits were 16 µg/L daily maximum and 8.2 µg/L monthly average. Due to rounding errors in the previous permit, the limitations in this permit are slightly different but rounding has been standardized going forth in reissued permits and matches other permits with the same limitations. Backsliding is allowed to compensate for errors in previous permits. No SOC is allowed because the ML is the same. See [http://dnr.mo.gov/env/wpp/permits/manual/docs/11\\_5.pdf](http://dnr.mo.gov/env/wpp/permits/manual/docs/11_5.pdf) for additional information on SOCs.

**Dissolved Oxygen (DO)**

Monitoring requirement only; monitoring required when dechlorinating to determine whether reasonable potential exists to exceed water quality standards (<5 mg/L) for dissolved oxygen. The inspection in 2013 noted low DO in the discharge; new parameter this permit. See <https://www3.epa.gov/npdes/pubs/dechlorination.pdf> for additional information. The facility will report the minimum value recorded as the “daily maximum”.

**pH**

6.5 to 9.0 SU. The Water Quality Standard at 10 CSR 20-7.031(5)(E) states water contaminants shall not cause pH to be outside the range of 6.5 to 9.0 standard pH units. Continued from previous permit.

**Total Suspended Solids (TSS)**

Effluent limitations from the previous state operating permit have been reassessed and determined they were applied in error. The limits were based on 10 CSR 20-7.015(8)(A) effluent limitations for treatment works treating domestic sewage. These were technology based regulations which do not apply to once-through cooling water. Parameter removed.

## NUTRIENTS:

### Ammonia as N

During the inspection in 2013, the inspector noted the city of Joplin (source of cooling water) uses chlorine and ammonia to disinfect its drinking water resulting in chloramine residuals. Quarterly monitoring is required; new this permit.

On August 22, 2013, the U.S. Environmental Protection Agency (EPA) finalized new water quality criteria for ammonia, based on toxicity studies of mussels and gill breathing snails. Missouri's current ammonia criteria are based on toxicity testing of several species, but did not include data from mussels or gill breathing snails. Missouri is home to 69 of North America's mussel species, which are spread across the state. According to the Missouri Department of Conservation nearly two-thirds of the mussel species in Missouri are considered to be "of conservation concern". Nine species are listed as federally endangered, with an additional species currently proposed as endangered and another species proposed as threatened.

The adult forms of mussels that are seen in rivers, lakes, and streams are sensitive to pollutants because they are sedentary filter feeders. They vacuum up many pollutants with the food they bring in and cannot escape to new habitats, so they can accumulate toxins in their bodies and die. But very young mussels, called glochidia, are exceptionally sensitive to ammonia in water. As a result of a citizen suit, the EPA was compelled to conduct toxicity testing and develop ammonia water quality criteria that would be protective if young mussels may be present in a waterbody. These new criteria will apply to any discharge with ammonia levels that may pose a reasonable potential to violate the standards. Nearly all discharging domestic wastewater treatment facilities (cities, subdivisions, mobile home parks, etc.), as well as certain industrial and stormwater dischargers with ammonia in their effluent, will be affected by this change in the regulations.

When new water quality criteria are established by the EPA, states must adopt them into their regulations in order to keep their authorization to issue permits under the National Pollutant Discharge Elimination System (NPDES). States are required to review their water quality standards every three years, and if new criteria have been developed they must be adopted. States may be more protective than the Federal requirements, but not less protective. Missouri does not have the resources to conduct the studies necessary for developing new water quality standards, and therefore our standards mirror those developed by the EPA; however, we will utilize any available flexibility based on actual species of mussels that are native to Missouri and their sensitivity to ammonia.

Ammonia toxicity varies by temperature and by pH of the water. Assuming a stable pH value, but taking into account winter and summer temperatures, Missouri's standards include two seasons of ammonia effluent limitations. Under the new EPA criteria, where mussels of the family Unionidae are present or expected to be present, the estimated effluent limitations for a facility in a location such as this that discharges to a receiving stream with no mixing consideration will be: Summer – 1.7 mg/L daily maximum, 0.6 mg/L monthly average and Winter – 5.6 mg/L daily maximum, 2.1 mg/L monthly average. Actual effluent limits will depend in part on the actual performance of the facility and the adoption of the new criteria.

See [http://dnr.mo.gov/env/wpp/permits/manual/docs/11\\_3.pdf](http://dnr.mo.gov/env/wpp/permits/manual/docs/11_3.pdf) for more information.

**OUTFALL #003 – STORMWATER**

**EFFLUENT LIMITATIONS TABLE:**

PARAMETERS	UNIT	BASIS	DAILY MAXIMUM LIMIT	BENCH-MARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
<b>PHYSICAL</b>								
FLOW	MGD	1	*	-	NEW	ONCE/QUARTER	ONCE/QUARTER	24 HR. ESTIMATE
PRECIPITATION	INCHES	6	*	-	*,*	ONCE/QUARTER	ONCE/QUARTER	24 HR. TOT
<b>CONVENTIONAL</b>								
OIL & GREASE	MG/L	1, 3, 6	**	10	15, 10	ONCE/QUARTER	ONCE/QUARTER	GRAB
pH †	SU	1, 3	**	6.5 TO 9.0	SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
TSS	MG/L	6	**	100	60, 30	ONCE/QUARTER	ONCE/QUARTER	GRAB
<b>METALS</b>								
ALUMINUM, TOTAL REC.	µG/L	4, 6	**	750	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
COPPER, TOTAL RECOV.	µG/L	4, 6	**	21.2	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
IRON, TOTAL RECOV.	µG/L	4, 6	**	1000	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
ZINC, TOTAL RECOVER.	µG/L	4, 6	**	176.7	NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB

\* - Monitoring requirement only

\*\* - Monitoring with associated benchmark

† The facility will report the minimum and maximum pH values; pH is not to be averaged

NEW = Parameter not established in previous operating permit

**Basis for Limitations Codes:**

- |  |                                   |
|--|-----------------------------------|
| 1. State or Federal Regulation/Law       | 5. Water Quality Model            |
| 2. Water Quality Standard (includes RPA) | 6. Best Professional Judgment     |
| 3. Water Quality Based Effluent Limits   | 7. TMDL or Permit in lieu of TMDL |
| 4. Antidegradation Review/Policy         | 8. Benchmark based on MSGP        |

**DERIVATION AND DISCUSSION OF LIMITS:**

**PHYSICAL:**

**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. The facility will report the total flow in millions of gallons per day (MGD), changed from previous permit of gallons per day.

**Precipitation**

Monitoring only requirement; measuring the amount of precipitation [(10 CSR 20-6.200(2)(C)1.E(VI)] during an event is necessary to ensure adequate stormwater management exists at the site. Knowing the amount of potential stormwater runoff can provide the permittee a better understanding of specific control measure that should be employed to ensure protection of water quality. The facility will provide the 24 hour accumulation value of precipitation from the day of sampling the other parameters. It is not necessary to report all days of precipitation during the quarter because of the readily available on-line data.

**CONVENTIONAL:**

**Biochemical Oxygen Demand (BOD<sub>5</sub>)**

Effluent limitations from the previous state operating permit have been reassessed and determined they were applied in error. The limits were based on 10 CSR 20-7.015(8)(A) effluent limitations for treatment works treating domestic sewage. These were technology based regulations which do not apply to stormwater at this facility. Parameter removed.

### **Oil & Grease**

Conventional pollutant, in accordance with 10 CSR 20-7.031 Table A: *Criteria for Designated Uses*; 10 mg/L (chronic standard) will be applied as the benchmark. Previous permit limits were based on water quality limits; however, this outfall is stormwater only and therefore may receive a technology-based benchmark value. The permit writer has determined the benchmark and accompanying SWPPP requirements are protective of the receiving stream. This benchmark value is consistent with MO-R203 general permit. Quarterly sampling continued from previous permit.

### **pH**

6.5 to 9.0 SU. The Water Quality Standard at 10 CSR 20-7.031(5)(E) states water contaminants shall not cause pH to be outside the range of 6.5 to 9.0 standard pH units. Limits changed to benchmarks in accordance with MO-R203. Continued from previous permit, quarterly sampling continued from previous permit.

### **Total Suspended Solids (TSS)**

There is no water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the permittee to identify increases in TSS that may indicate uncontrolled materials leaving the site. Effluent limitations from the previous state operating permit have been reassessed and determined they were applied in error. The limits were based on 10 CSR 20-7.015 effluent limitations for treatment works treating domestic sewage. These were technology based regulations which do not apply to stormwater. However, a benchmark value will be implemented for this parameter. The benchmark value will be set at 100 mg/L. This value is achievable and falls within the range of values implemented in other stormwater permits including MO-R203. During the last permit cycle, the facility reported one value (117 mg/L) above the proposed benchmark. Because this is a benchmark value and not a limit, the facility is not allowed a schedule of compliance. See section on developing and implementing the stormwater pollution prevention plan (SWPPP) in PART III. RATIONALE AND DERIVATION OF PERMIT LIMITATIONS AND CONDITIONS.

## **METALS:**

### **Aluminum, Total Recoverable**

Monitoring is required as this facility would be subject to MO-R203 if there was no discharge of once-through cooling water. Benchmark of 750 µg/L in accordance with MO-R203. New parameter this permit, quarterly sampling and reporting.

### **Copper, Total Recoverable**

Monitoring is required as this facility would be subject to MO-R203 if there was no discharge of once-through cooling water. Benchmark of 21.2 µg/L in accordance with MO-R203. New parameter this permit, quarterly sampling and reporting.

### **Iron, Total Recoverable**

Monitoring is required as this facility would be subject to MO-R203 if there was no discharge of once-through cooling water. Benchmark of 1000 µg/L in accordance with MO-R203. New parameter this permit, quarterly sampling and reporting.

### **Zinc, Total Recoverable**

Monitoring is required as this facility would be subject to MO-R203 if there was no discharge of once-through cooling water. Benchmark of 176.7 µg/L in accordance with MO-R203. New parameter this permit, quarterly sampling and reporting.

## **Part V. SAMPLING AND REPORTING REQUIREMENTS:**

Refer to each outfall's derivation and discussion of limits section to review individual sampling and reporting frequencies and sampling type.

### **ELECTRONIC DISCHARGE MONITORING REPORTING:**

Due to new federal regulations, all facilities must begin submitting their discharge monitoring reports electronically, called the eDMR system. To begin the process, please visit <http://dnr.mo.gov/env/wpp/edmr.htm>. This process is expected to save time, lessen paperwork, and reduce operating costs for both the facilities and the water protection program. Additional information may also be found at <http://dnr.mo.gov/pubs/pub2474.pdf>.

### **SAMPLING FREQUENCY JUSTIFICATION:**

Sampling and reporting frequency was generally retained from previous permit. 40 CFR 122.45(d)(1) indicates all continuous discharges shall be permitted with daily maximum and monthly average limits. The department has determined in most cases sampling stormwater quarterly is protective of the receiving waters. This facility may continue to sample quarterly although BMP inspection occurs monthly. The facility may increase sampling frequency to evaluate BMP effectiveness.

### **SAMPLING TYPE JUSTIFICATION:**

Sampling type was continued from the previous permit. The sampling types are representative of the discharges, and are protective of water quality. Discharges with altering effluent should have composite sampling; discharges with uniform effluent can have grab samples. Grab samples are usually appropriate for stormwater. Parameters which must have grab sampling are: pH, ammonia, *E. coli*, total residual chlorine, free available chlorine, hexavalent chromium, dissolved oxygen, total phosphorus, and volatile organic samples.

## **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.

### **PERMIT SYNCHRONIZATION:**

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. <http://dnr.mo.gov/env/wpp/cpp/docs/watershed-based-management.pdf>. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than three years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit. *This permit will become synchronized by expiring the end of the 4<sup>th</sup> Quarter 2017.*

### **PUBLIC NOTICE:**

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. <http://dnr.mo.gov/env/wpp/permits/pn/index.html> 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 was from 8/5/2016 to 9/5/2016. No comments were received. The permit writer edited the receiving stream names from "Tributary to 8-20-13 MUDD V1.0" to the correct name of "Tributary to Silver Creek". The receiving stream is the same. The Y coordinate of outfall #003 was changed from 410070 to 4100770; typographical error. The outfall remains in the same location.

**DATE OF FACT SHEET:** SEPTEMBER 6, 2016

### **COMPLETED BY:**

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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
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STANDARD CONDITIONS FOR NPDES PERMITS  
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MISSOURI CLEAN WATER COMMISSION  
REVISED  
AUGUST 1, 2014

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

## Part I – General Conditions

### Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
  - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
  - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
  - a. Records of monitoring information shall include:
    - i. The date, exact place, and time of sampling or measurements;
    - ii. The individual(s) who performed the sampling or measurements;
    - iii. The date(s) analyses were performed;
    - iv. The individual(s) who performed the analyses;
    - v. The analytical techniques or methods used; and
    - vi. The results of such analyses.
  - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee’s sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
  - a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
  - b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

### Section B – Reporting Requirements

1. **Planned Changes.**
  - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
    - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
    - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42;
    - iii. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
  - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
  - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
    - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
    - ii. Any upset which exceeds any effluent limitation in the permit.
    - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
  - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
  4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
  5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
  6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
  7. **Discharge Monitoring Reports.**
    - a. Monitoring results shall be reported at the intervals specified in the permit.
    - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
    - c. Monitoring results shall be reported to the Department no later than the 28<sup>th</sup> day of the month following the end of the reporting period.
- b. Notice.
    - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
    - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
  - c. Prohibition of bypass.
    - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
      1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
      3. The permittee submitted notices as required under paragraph 2. b. of this section.
    - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
    - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
    - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
      - ii. The permitted facility was at the time being properly operated; and
      - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
      - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
    - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

## Section C – Bypass/Upset Requirements

1. **Definitions.**
  - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
  - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
  - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
  - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.

## Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
  - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
  - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement



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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



STANDARD CONDITIONS FOR NPDES PERMITS  
ISSUED BY  
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION  
REVISED  
AUGUST 1, 2014

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
  - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
  - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
  - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
  - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
  - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
  - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.



## ENVIRONMENTAL WORKS

1000 Exchange Blvd. Suite 100  
Joplin, MO 64501  
Phone: 417-785-1100  
Fax: 417-785-1101  
www.environmentalworks.com

03/19/2014

March 19, 2014

Ms. Mandy Sappington  
Missouri Department of Natural Resources  
Water Protection Program/WPCB/Permits  
P.O. Box 176  
Jefferson City, MO 65102

RE: Renewal Application for Missouri State Operating Permit #MO-0054101

Dear Ms. Sappington:

Environmental Works, Inc. (EWI) is pleased to submit the enclosed application for renewal of Missouri State Operating Permit (MSOP) #MO-0054101 for FAG Bearings in Joplin, Missouri. Enclosed you will find Forms A & C as well as all required maps and diagrams. While this permit is open for renewal, EWI and FAG Bearings, LLC would like to address some of the current requirements that are either inappropriate or are no longer applicable to current facility operations. Please consider the following comments while drafting the draft permit.

### Background

FAG Bearings manufactures anti-friction bearings for construction equipment, power transfer equipment, locomotive engines, and other industrial equipment. The manufacturing process, including forging, heat-treating, machining, assembly, and packaging, all occurs indoors with no exposure to stormwater. The only industrial materials or activities that have the potential for exposure to stormwater are steel storage on the east side of Building C and the west and south sides of Building D as well as tractor fueling from an above ground storage tank (AST) on the south side of Building A (see enclosed site diagram). ASTs to the southeast of Building C are located within secondary containment and ASTs south of Building A are double-walled. Material storage outside of Building H is under roof and is contained by a concrete dike with a sump that does not discharge to the surface. A mop-pit for equipment cleaning is located between Buildings G and A. It is under roof and all wash water is routed to the facility's industrial pretreatment plant which discharges to the City of Joplin's sanitary sewer system. All dumpsters that are exposed to stormwater contain only non-industrial solid waste.

The Standard Industrial Classification (SIC) code for this facility is 3562 for the manufacturing of Ball and Roller Bearings. This SIC code falls under the applicability of Missouri's general permit #MO-R203 for stormwater discharges associated with ferrous and nonferrous foundries, casting, extrusion, rolling, galvanizing and finishing, structural

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steel production, light metal fabrication, and electrical equipment manufacturing. FAG Bearings is unable to obtain the MO-R203 permit at this time, however, because of the discharge of single pass non-contact cooling water at Outfall #002. Please note that this discharge is the only item at this facility preventing it from obtaining the general permit.

#### **Former Outfall #001**

The current permit lists Outfall #001 as a discharge point for non-contact cooling water with dechlorination and a retention basin. The facility has eliminated this cooling water discharge and, since then, this point has been sampled as a stormwater discharge point. All stormwater flowing through this point reaches Outfall #003 which contains discharges from all applicable portions of the facility. The two retention basins at this facility were closed well over a decade ago and, when the permit was modified in 2012, the dechlorination description was mistakenly attributed to this point. There is no discharge of cooling water and no dechlorination at this outfall. With this information and the fact that all stormwater from this area reaches Outfall #003, we respectfully request that this outfall be deactivated and all monitoring requirements and effluent limitations be removed from the permit.

#### **Outfall #002**

The current permit lists Outfall #002 as a discharge point for non-contact cooling water with dechlorination and a retention basin. This discharge point is, indeed, 100% non-contact cooling water with a dechlorination system; however, as noted for Outfall #001 above, the retention basins at the facility have long been closed. The current permit contains monitoring requirements and effluent limitations for Total Suspended Solids (TSS) at Outfall #002. This cooling water discharge is comprised entirely of public drinking water supplied by Missouri American Water. As such, TSS should not be expected to be present in the discharge. Furthermore, a review of quarterly Discharge Monitoring Reports (DMR) will indicate that TSS is consistently measured at or below analytical reporting limits. Because there is no reasonable potential to discharge TSS from this outfall, as demonstrated by DMR history, we respectfully request that TSS monitoring and effluent limitations be removed from the permit.

#### **Outfall #003**

Stormwater from all areas with industrial materials or activities exposed to stormwater reaches Outfall #003 at the south end of FAG Bearings' property. After the sampling point, this flow mixes with the discharge from Outfall #002 and then leaves the property in a southwest direction. The current permit contains monitoring requirements and effluent limitations at Outfall #002 for Biochemical Oxygen Demand<sub>5</sub> (BOD) with a maximum daily limit (MDL) of 60mg/L and an average monthly limit (AML) of 30mg/L. The permit's fact sheet states that these limitations are based on "State or Federal Regulation/Law" and cites state regulation [10 CSR 20-7.015], Effluent Regulations as their regulatory basis. The section of this regulation that applies to the receiving stream for this facility (Section 8) describes Technology Based Effluent Limits (TBELS) for secondary treatment from wastewater treatment facilities which receive primarily domestic waste. As the flow from this outfall is comprised entirely of stormwater, this regulation does not apply. Furthermore the lack of any numeric water quality standard

in regulation [10 CSR 20-7.031] for BOD leads to the conclusion that the inclusion of BOD monitoring and effluent limitations is inappropriate for this discharge. We respectfully request that BOD monitoring and effluent limitations be removed from the permit.

The current permit also requires recording daily precipitation with quarterly reporting of the daily maximum and monthly average. The permit's fact sheet states that "the discharges are dependent upon precipitation, therefore monitoring for rainfall is needed." EWI recognizes that, before historical precipitation data was readily available online, daily monitoring and reporting from facilities with stormwater permits was warranted. With the ease of accessing this information when it is needed now, it seems that inclusion of this permit requirement is no longer needed. The time and effort by FAG Bearings' staff to regularly read rain gauges or to compile and report precipitation data is better spent elsewhere at the facility. We, therefore, request that precipitation monitoring and reporting requirements be removed from the permit.

As noted above, the discharge of non-contact cooling water at this facility is the only thing excluding FAG Bearings from obtaining the MO-R203 general permit. The MO-R203 permit does not contain monitoring requirements or numeric effluent limitations. Instead it has benchmark limitations that a properly developed and implemented Stormwater Pollution Prevention Plan (SWPPP) should be capable of achieving. This approach to stormwater permitting has been seen in multiple site-specific permits issued by the Water Protection Program in recent years. EWI believes that, given the limited exposure of industrial activities and materials to stormwater, general compliance with permitted effluent limitations, and permit requirements for other facilities in Missouri under SIC Group 35, the benchmark limitation approach is more appropriate for this facility. We respectfully request that the permitted effluent limitations not already addressed in this letter be replaced with appropriate benchmark limitations.

### **Effluent Analyses**

Per our email correspondence from February 27, 2014 through March 3, 2014 you have approved an exclusion from submitting analytical results for BOD and Total Organic Carbon (TOC) at Outfall #002 and TOC and Temperature (summer and winter) at Outfall #003. Outfall #002 discharges non-contact cooling water that is supplied by Missouri American Water. As this is treated drinking water, there should be negligible oxygen demand or organic carbon present in the discharge. Outfall #003 discharges stormwater only. There are no materials or activities in the drainage area that have the potential to release TOC and the temperature of this discharge is dependent entirely upon weather conditions.

Subsequent email correspondences with Logan Cole, of your staff, we will be submitting the analyses for Chemical Oxygen Demand, Ammonia, and Iron separate from the permit application. Additional time is needed to sample a qualifying storm event and receive the results from the laboratory. We understand that the statutory time limit to process this application will be paused until the results are obtained. This information will be provided as soon as it is available.

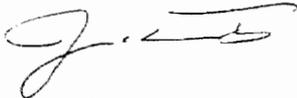
**Summary**

To recap, the FAG Bearings facility in Joplin, MO falls under the applicability of general permit #MO-R203 and would be able to obtain that permit except for the discharge of non-contact cooling water from Outfall #002. EWI and FAG Bearings, LLC respectfully request the following changes to the permit to make it more applicable to the current operations at the facility and to bring it in-line with other industrial stormwater permits in Missouri:

- Deactivation of Outfall #001 and removal of monitoring requirements and effluent limitations
- Removal of TSS monitoring and effluent limitations for Outfall #002 and removal of the retention basin from the description for that outfall
- Removal of BOD monitoring requirements and effluent limitations and removal of precipitation monitoring and reporting requirements at Outfall #003
- Replacement of the remaining effluent limitations at Outfall #003 with benchmark limitations similar to general permit #MO-R203 and other recently issued site-specific industrial stormwater permits in Missouri

EWI and FAG Bearings, LLC formally request an opportunity to review the draft permit prior to the required public comment period. If you have any questions or comments regarding this letter or the renewal application in general please call Jimmy Coles at (816) 285-8427. We look forward to working with you to achieve a permit for FAG Bearings that satisfies the goals of all parties involved.

Sincerely,



Jimmy Coles  
Project Manager

# **Permit Application**



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH  
**FORM A – APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT  
 UNDER MISSOURI CLEAN WATER LAW**

APPRO 2

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED 3/20/14	FEE SUBMITTED 6.88

**Note** ▶ PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:

- An operating permit and antidegradation review public notice
- A construction permit following an appropriate operating permit and antidegradation review public notice
- A construction permit and concurrent operating permit and antidegradation review public notice
- A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)
- An operating permit for a new or unpermitted facility Construction Permit # \_\_\_\_\_
- An operating permit renewal: permit # MO- 0054101 Expiration Date 09/20/2014
- An operating permit modification: permit # MO- \_\_\_\_\_ Reason: \_\_\_\_\_

1.1 Is the appropriate fee included with the application? (See instructions for appropriate fee)  YES  NO

**2. FACILITY**

NAME FAG Bearings		TELEPHONE WITH AREA CODE (417) 781-3600	
		FAX (417) 781-8143	
ADDRESS (PHYSICAL) 3900 Rangeline Road	CITY Joplin	STATE MO	ZIP CODE 64804

**3. OWNER**

NAME FAG Bearings, LLC		E-MAIL ADDRESS	TELEPHONE WITH AREA CODE (417) 781-3600	
			FAX (417) 781-7143	
ADDRESS (MAILING) 3900 Rangeline Road	CITY Joplin	STATE MO	ZIP CODE 64804	

3.1 Request review of draft permit prior to public notice?  YES  NO

**4. CONTINUING AUTHORITY**

NAME Same as owner		TELEPHONE WITH AREA CODE	
		FAX	
ADDRESS (MAILING)	CITY	STATE	ZIP CODE

**5. OPERATOR**

NAME Schaeffler Group USA, Inc., DBA FAG Bearings		CERTIFICATE NUMBER n/a	TELEPHONE WITH AREA CODE (803) 547-7978	
			FAX (803) 547-7992	
ADDRESS (MAILING) 308 Springhill Farm Road	CITY Fort Mill	STATE SC	ZIP CODE 29715	

**6. FACILITY CONTACT**

NAME Karen Bozman		TITLE Director - EHS	TELEPHONE WITH AREA CODE (803) 547-7978	
			FAX	

**7. ADDITIONAL FACILITY INFORMATION**

7.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)

001 \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 Sec \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_ County \_\_\_\_\_  
 UTM Coordinates Easting (X): \_\_\_\_\_ Northing (Y): \_\_\_\_\_  
*For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)*

002 NW 1/4 SE 1/4 Sec 19 T 27N R 32W Newt County  
 UTM Coordinates Easting (X): \_\_\_\_\_ Northing (Y): \_\_\_\_\_

003 NW 1/4 SE 1/4 Sec 19 T 27N R 32W Newt County  
 UTM Coordinates Easting (X): \_\_\_\_\_ Northing (Y): \_\_\_\_\_

004 \_\_\_\_\_ 1/4 \_\_\_\_\_ 1/4 Sec \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_ County \_\_\_\_\_  
 UTM Coordinates Easting (X): \_\_\_\_\_ Northing (Y): \_\_\_\_\_

7.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.

001 – SIC \_\_\_\_\_ and NAICS \_\_\_\_\_      002 – SIC 3562 and NAICS 332991  
 003 – SIC 3562 and NAICS 332991      004 – SIC \_\_\_\_\_ and NAICS \_\_\_\_\_

SW  
Newt

**8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION**  
**(Complete all forms that are applicable.)**

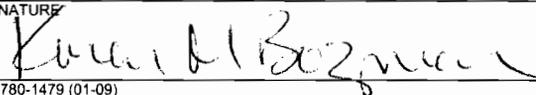
A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below).	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
B.	Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C and D.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
C.	Is application for storm water discharges only? If yes, complete EPA Form 2F.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
D.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.		
E.	Is wastewater land applied? If yes, complete Form I.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
F.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>

**9. DOWNSTREAM LANDOWNER(S)** Attach additional sheets as necessary. See Instructions.  
**(PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE).**

NAME James Remillard			
ADDRESS 3325 Silver Creek Road	CITY Joplin	STATE MO	ZIP CODE 64804

**10.** I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law to the Missouri Clean Water Commission.

NAME AND OFFICIAL TITLE (TYPE OR PRINT) Karen Bozman, Director, EHS	TELEPHONE WITH AREA CODE (803) 547-7978
--	--

SIGNATURE 	DATE SIGNED March 19, 2014
--	-------------------------------

MO 780-1479 (01-09)

**BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.**

Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

- Appropriate Fees?
- Map at 1" = 2000' scale?
- Signature?
- Form C, if applicable?
- Form D, if applicable?
- Form 2F, if applicable?
- Form I (Irrigation), if applicable?
- Form R (Sludge), if applicable?



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
**FORM C – APPLICATION FOR DISCHARGE PERMIT –**  
**MANUFACTURING, COMMERCIAL, MINING,**  
**SILVICULTURE OPERATIONS, PROCESS AND STORMWATER**

**FOR AGENCY USE ONLY**

CHECK NO.

DATE RECEIVED

FEE SUBMITTED

**NOTE: DO NOT ATTEMPT TO COMPLETE THIS FORM BEFORE READING THE ACCOMPANYING INSTRUCTIONS**

1.00 NAME OF FACILITY

FAG Bearings

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER

MO-0054101

1.20 THIS IS A NEW FACILITY AND WAS CONSTRUCTED UNDER MISSOURI CONSTRUCTION PERMIT NUMBER (COMPLETE ONLY IF THIS FACILITY DOES NOT HAVE AN OPERATING PERMIT).

N/A

2.00 LIST THE STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES APPLICABLE TO YOUR FACILITY (FOUR DIGIT CODE)

A. FIRST 3562 B. SECOND \_\_\_\_\_  
 C. THIRD \_\_\_\_\_ D. FOURTH \_\_\_\_\_

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) NW 1/4 SE 1/4 SEC 19 T 27 N R 32 W Newton COUNTY

Same for all outfalls

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST)	RECEIVING WATER
#002	Tributary to Silver Creek (U)
#003	Tributary to Silver Creek (U)

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

FAG Bearings manufactures bearings for construction equipment, power transfer equipment, locomotive engines, and other industrial equipment. The manufacturing process entails forging, heat-treating, machining, assembly, and packaging. Ancillary operations include administration, quality control, engineering, facility and equipment maintenance, and wastewater treatment. Treated wastewater is sent to the POTW.



**2.40 CONTINUED**

C. EXCEPT FOR STORM RUNOFF, LEAKS OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL?

YES (COMPLETE THE FOLLOWING TABLE)       NO (GO TO SECTION 2.50)

1. OUTFALL NUMBER <i>(list)</i>	2. OPERATION(S) CONTRIBUTING FLOW <i>(list)</i>	3. FREQUENCY		4. FLOW				C. DURATION <i>(in days)</i>
		A. DAYS PER WEEK <i>(specify average)</i>	B. MONTHS PER YEAR <i>(specify average)</i>	A. FLOW RATE <i>(in mgd)</i>		B. TOTAL VOLUME <i>(specify with units)</i>		
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	4. LONG TERM DAILY	3. MAXIMUM AVERAGE	

**2.50 MAXIMUM PRODUCTION**

A. DOES AN EFFLUENT GUIDELINE LIMITATION PROMULGATED BY EPA UNDER SECTION 304 OF THE CLEAN WATER ACT APPLY TO YOUR FACILITY?

YES (COMPLETE B.)       NO (GO TO SECTION 2.60)

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINES EXPRESSED IN TERMS OF PRODUCTION (OF OTHER MEASURE OF OPERATION)?

YES (COMPLETE c.)       NO (GO TO SECTION 2.60)

C. IF YOU ANSWERED "YES" TO B. LIST THE QUANTITY THAT REPRESENTS AN ACTUAL MEASUREMENT OF YOUR MAXIMUM LEVEL OF PRODUCTION. EXPRESSED IN THE TERMS AND UNITS USED IN THE APPLICABLE EFFLUENT GUIDELINE AND INDICATE THE AFFECTED OUTFALLS.

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS <i>(list outfall numbers)</i>
A. QUANTITY PER DAY	B. UNITS OF MEASURE	C. OPERATION, PRODUCT, MATERIAL, ETC. <i>(specify)</i>	

**2.60 IMPROVEMENTS**

A. ARE YOU NOW REQUIRED BY ANY FEDERAL, STATE OR LOCAL AUTHORITY TO MEET, ANY IMPLEMENTATION SCHEDULE FOR THE CONSTRUCTION, UPGRADING OR OPERATION OF WASTEWATER TREATMENT EQUIPMENT OR PRACTICES OR ANY OTHER ENVIRONMENTAL PROGRAMS THAT MAY AFFECT THE DISCHARGES DESCRIBED IN THIS APPLICATION? THIS INCLUDES, BUT IS NOT LIMITED TO, PERMIT CONDITIONS, ADMINISTRATIVE OR ENFORCEMENT ORDERS, ENFORCEMENT COMPLIANCE SCHEDULE LETTERS, STIPULATIONS, COURT ORDERS AND GRANT OR LOAN CONDITIONS

YES (COMPLETE THE FOLLOWING TABLE)       NO (GO TO 3.00)

1. IDENTIFICATION OF CONDITION AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
				A. REQUIRED	B. PROJECTED

B. OPTIONAL: YOU MAY ATTACH ADDITIONAL SHEETS DESCRIBING ANY ADDITIONAL WATER POLLUTION CONTROL PROGRAMS (OR OTHER ENVIRONMENTAL PROJECTS WHICH MAY AFFECT YOUR DISCHARGES) YOU NOW HAVE UNDER WAY OR WHICH YOU PLAN. INDICATE WHETHER EACH PROGRAM IS NOW UNDER WAY OR PLANNED, AND INDICATE YOUR ACTUAL OR PLANNED SCHEDULES FOR CONSTRUCTION.

MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED.



3.10 BIOLOGICAL TOXICITY TESTING DATA

DO YOU HAVE ANY KNOWLEDGE OR REASON TO BELIEVE THAT ANY BIOLOGICAL TEST FOR ACUTE OR CHRONIC TOXICITY HAS BEEN MADE ON ANY OF YOUR DISCHARGES OR ON RECEIVING WATER IN RELATION TO YOUR DISCHARGE WITHIN THE LAST THREE YEARS?

YES (IDENTIFY THE TEST(S) AND DESCRIBE THEIR PURPOSES BELOW.)  NO (GO TO 3.20)

N/A

3.20 CONTRACT ANALYSIS INFORMATION

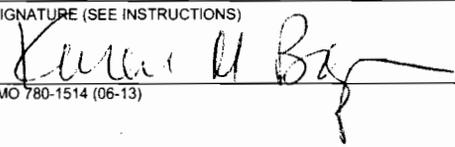
WERE ANY OF THE ANALYSES REPORTED PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM?

YES (LIST THE NAME, ADDRESS AND TELEPHONE NUMBER OF AND POLLUTANTS ANALYZED BY EACH SUCH LABORATORY OR FIRM BELOW.)  NO (GO TO 3.30)

A. NAME	B. ADDRESS	C. TELEPHONE (area code and number)	D. POLLUTANTS ANALYZED (list)
Pace Analytical Services, Inc.	808 West McKay Frontenac, KS 66763	620-235-0003	All pollutants analyzed by Pace

3.30 CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS APPLICATION AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

NAME AND OFFICIAL TITLE (TYPE OR PRINT) Karen Bozman, Director, EHS	TELEPHONE NUMBER WITH AREA CODE (803) 547-7978
SIGNATURE (SEE INSTRUCTIONS) 	DATE SIGNED March 19, 2014

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages.  
SEE INSTRUCTIONS

FORM C  
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO.  
002

INTAKE AND EFFLUENT CHARACTERISTICS

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify if blank)				4. INTAKE (optional)		B. NO. OF ANALYSES	
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION		(2) MASS
A. Biochemical Oxygen Demand (BOD)	N/A											
B. Chemical Oxygen Demand (COD)	to be tested											
C. Total organic Carbon (TOC)	N/A											
D. Total Suspended Solids (TSS)	below detect				below detect		3	mg/L				
E. Ammonia (as N)	to be tested											
F. Flow	VALUE 284680		VALUE		VALUE 161922		394		GPD			
G. Temperature (winter)	VALUE 17.2		VALUE		VALUE 20		2	°C				
H. Temperature (summer)	VALUE 23.3		VALUE		VALUE 23.3		1	°C				
I. pH	MINIMUM 7.1	MAXIMUM 7.7	MINIMUM	MAXIMUM			2	STANDARD UNITS				

PART B - Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)		B. NO. OF ANALYSES	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION		(2) MASS
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS														
A. Bromide (24959-67-9)		X												
B. Chlorine, Total Residual	X		below detect					below detect						
C. Color		X												
D. Fecal Coliform		X												
E. Fluoride (16984-48-8)		X												
F. Nitrate - Nitrate (as N)		X												

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS			5. INTAKE <i>(optional)</i>		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS						
G. Nitrogen, Total Organic <i>(as N)</i>		X												
H. Oil and Grease		X												
I. Phosphorus <i>(as P)</i> , Total (7723-14-0)		X												
J. Sulfate <i>(as SO<sub>4</sub>)</i> (14808-79-8)		X												
K. Sulfide <i>(as S)</i>		X												
L. Sulfite <i>(as SO<sub>3</sub>)</i> (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum, Total (7429-90-5)		X												
O. Barium, Total (7440-39-3)		X												
P. Boron, Total (7440-42-8)		X												
Q. Cobalt, Total (7440-48-4)		X												
R. Iron, Total (7439-89-6)		X												
S. Magnesium, Total (7439-95-4)		X												
T. Molybdenum, Total (7439-98-7)		X												
U. Manganese, Total (7439-96-5)		X												
V. Tin, Total (7440-31-5)		X												
W. Titanium, Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE <i>(optional)</i>			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE <i>(if available)</i>	B. MAXIMUM 30 DAY VALUE <i>(if available)</i>	C. LONG TERM AVRG. VALUE <i>(if available)</i>		A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES	
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		
<b>METALS, AND TOTAL PHENOLS</b>												
1M. Antimony, Total (7440-36-9)		X										
2M. Arsenic, Total (7440-38-2)		X										
3M. Beryllium, Total (7440-41-7)		X										
4M. Cadmium, Total (7440-43-9)		X										
5M. Chromium III (16065-83-1)		X										
6M. Chromium VI (18540-29-9)		X										
7M. Copper, Total (7440-50-8)		X										
8M. Lead, Total (7439-92-1)		X										
9M. Mercury, Total (7439-97-6)		X										
10M. Nickel, Total (7440-02-0)		X										
11M. Selenium, Total (7782-49-2)		X										
12M. Silver, Total (7440-22-4)		X										
13M. Thallium, Total (7440-28-0)		X										
14M. Zinc, Total (7440-66-6)		X										
15M. Cyanide, Amenable to Chlorination		X										
16M. Phenols, Total		X										
<b>RADIOACTIVITY</b>												
(1) Alpha Total		X										
(2) Beta Total		X										
(3) Radium Total		X										
(4) Radium 226 Total		X										

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages.  
SEE INSTRUCTIONS

FORM C  
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO.  
003

INTAKE AND EFFLUENT CHARACTERISTICS

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify, if blank)				4. INTAKE (optional)		B. NO. OF ANALYSES	
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION		(2) MASS
A. Biochemical Oxygen Demand (BOD)	15				9.15		2	mg/L				
B. Chemical Oxygen Demand (COD)	to be tested											
C. Total organic Carbon (TOC)	N/A											
D. Total Suspended Solids (TSS)	42				28.5		2	mg/l	1			
E. Ammonia (as N)	to be tested											
F. Flow	VALUE 233000				VALUE 203500		2			VALUE		
G. Temperature (winter)	VALUE N/A				VALUE			°C		VALUE		
H. Temperature (summer)	VALUE N/A				VALUE			°C		VALUE		
I. pH	MINIMUM 7.5	MAXIMUM 7.5		MINIMUM	MAXIMUM		2	STANDARD UNITS				

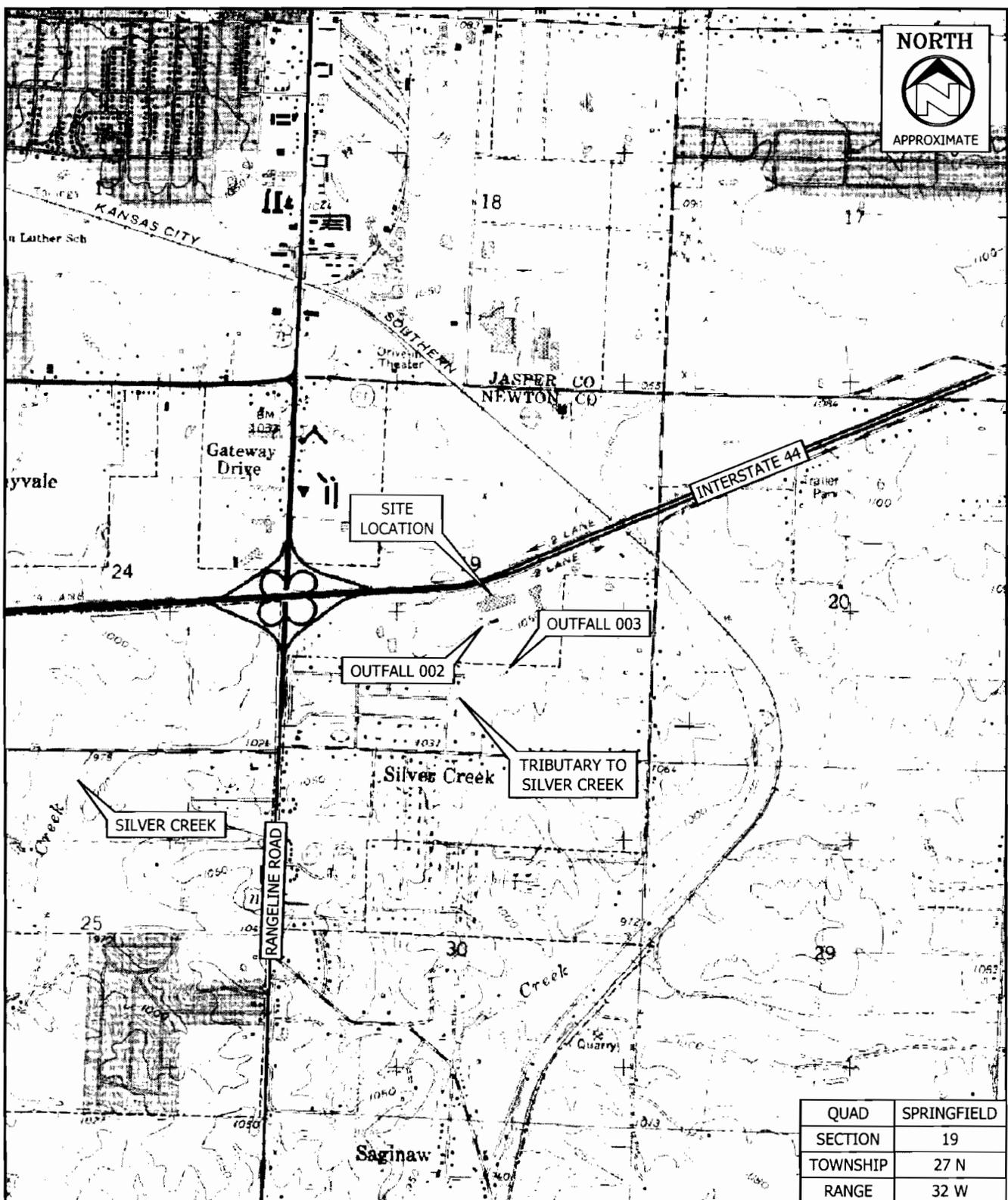
PART B - Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)		B. NO. OF ANALYSES	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION		(2) MASS
A. Bromide (24959-67-9)		X												
B. Chlorine, Total Residual		X												
C. Color		X												
D. Fecal Coliform		X												
E. Fluoride (16984-48-8)		X												
F. Nitrate - Nitrate (as N)		X												

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS	
G. Nitrogen, Total Organic (as N)		X											
H. Oil and Grease		X	below detect						mg/L				
I. Phosphorus (as P), Total (7723-14-0)		X											
J. Sulfate (as SO <sub>4</sub> ) (14808-79-8)		X											
K. Sulfide (as S)		X											
L. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		X											
M. Surfactants		X											
N. Aluminum, Total (7429-90-5)		X											
O. Barium, Total (7440-39-3)		X											
P. Boron, Total (7440-42-8)		X											
Q. Cobalt, Total (7440-48-4)		X											
R. Iron, Total (7439-89-6)	X		to be tested										
S. Magnesium, Total (7439-95-4)		X											
T. Molybdenum, Total (7439-98-7)		X											
U. Manganese, Total (7439-96-5)		X											
V. Tin, Total (7440-31-5)		X											
W. Titanium, Total (7440-32-6)		X											

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS			5. INTAKE (optional)		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
<b>METALS, AND TOTAL PHENOLS</b>												
1M. Antimony, Total (7440-36-9)		X										
2M. Arsenic, Total (7440-38-2)		X										
3M. Beryllium, Total (7440-41-7)		X										
4M. Cadmium, Total (7440-43-9)		X										
5M. Chromium III (16065-83-1)		X										
6M. Chromium VI (18540-29-9)		X										
7M. Copper, Total (7440-50-8)		X										
8M. Lead, Total (7439-92-1)		X										
9M. Mercury, Total (7439-97-6)		X										
10M. Nickel, Total (7440-02-0)		X										
11M. Selenium, Total (7782-49-2)		X										
12M. Silver, Total (7440-22-4)		X										
13M. Thallium, Total (7440-28-0)		X										
14M. Zinc, Total (7440-66-6)		X										
15M. Cyanide, Amenable to Chlorination		X										
16M. Phenols, Total		X										
<b>RADIOACTIVITY</b>												
(1) Alpha Total		X										
(2) Beta Total		X										
(3) Radium Total		X										
(4) Radium 226 Total		X										

# Figures



QUAD	SPRINGFIELD
SECTION	19
TOWNSHIP	27 N
RANGE	32 W

SOURCE: www.mapcard.com (1978)

CHECKED BY:  
J. COLES

EWI# 130162  
DRAWN BY: MEK  
Mar. 12, 2014

SCALE (FEET)

0 1000 2000  
APPROXIMATE



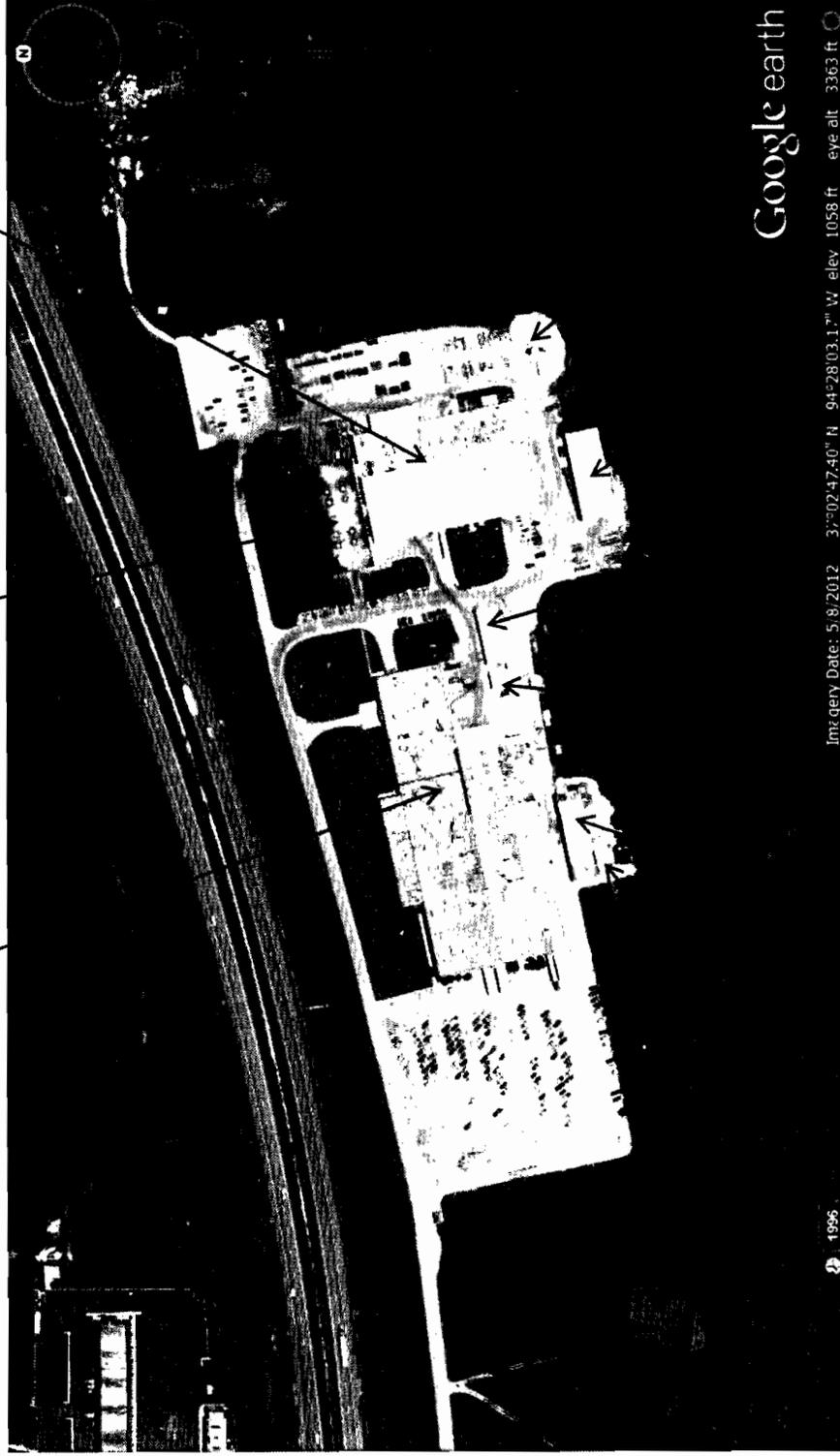
SITE LOCATION-TOPOGRAPHIC MAP

FAG BEARINGS  
3900 S. RANGELINE ROAD  
JOPLIN, NEWTON COUNTY, MISSOURI

FIGURE  
**1.0**

FAG Bearings, Joplin

Building A      Building B      Building C



Building F      Building E      Building G      Building H      Building D      Tank Farm

**Form C - Section 2.40, A.**

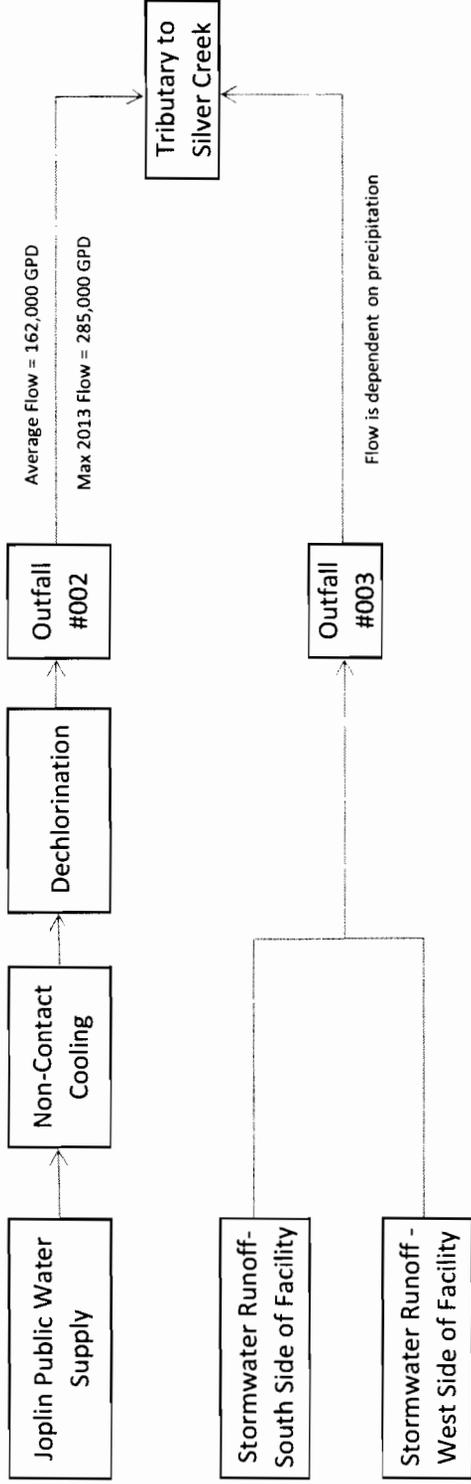




FIGURE  
**2.0**

**SITE DIAGRAM**  
 FAG BEARINGS  
 3900 S. RANGELINE ROAD  
 JOPLIN, NEWTON COUNTY, MISSOURI

Springfield Office Location:  
 1455 E. Chestnut Expressway  
 Springfield, MO 65802  
 Phone: (417) 890-9500



**ENVIRONMENTAL WORKS**

SCALE IN FEET  
 0 125 250  
 APPROXIMATE

CHECKED BY:  
 J. COLES  
 E.W.I. # 140066  
 DRAWN BY: MEK  
 Mar. 13, 2014

