

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

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

Permit No. MO-0134627

Owner: MOARNG Environmental Management Office
Address: 6819B N. Boundary Road, Jefferson City, MO 65101

Continuing Authority: Same as Above
Address: Same as Above

Facility Name: Aviation Classification and Repair Activity Depot (AVCRAD)
Facility Address: 2501 Lester Jones Avenue, Springfield MO 65803

Legal Description: See page 2
UTM Coordinates: See page 2

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

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

FACILITY DESCRIPTION

See page 2

This permit authorizes only 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.

September 1, 2013
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

August 31, 2018
Expiration Date

John Madras, Director, Water Protection Program

FACILITY DESCRIPTION CONTINUED

Outfall #001—Aircraft Maintenance & Flight Operations, SIC #4581
Stormwater discharge only.
Flow is dependent upon precipitation.

Legal Description: SE¼, SE¼, Sec. 01, T29N, R23W, Greene County
UTM Coordinates: X = 465633, Y = 4122295
Receiving Stream: Unnamed tributary to Rainer Branch (U)
First Classified Stream and ID: Clear Creek (P)(1409)
USGS Basin & Sub-watershed No.: (10290106-0204)

Outfall #002— Eliminated in August 2011

Outfall #003— Eliminated in January 2010

Outfall #004— Aircraft Maintenance & Flight Operations, SIC #4581
Stormwater discharge only.
Flow is dependent upon precipitation.

Legal Description: NE¼, SE¼, Sec. 01, T29N, R23W, Greene County
UTM Coordinates: X = 465570, Y = 4123059
Receiving Stream: Unnamed tributary to Rainer Branch (U)
First Classified Stream and ID: Clear Creek (P)(1409)
USGS Basin & Sub-watershed No.: (10290106-0204)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				PAGE NUMBER 3 of 5		
				PERMIT NUMBER MO-0134627		
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfalls #001 & #004****</u>						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Chemical Oxygen Demand	mg/L	120		90	once/quarter***	grab
Total Suspended Solids	mg/L	100		70	once/quarter***	grab
pH	SU	**		**	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
Benzene	µg/L	*		*	once/quarter***	grab
Toluene	µg/L	*		*	once/quarter***	grab
Ethylbenzene	µg/L	*		*	once/quarter***	grab
Xylene	µg/L	*		*	once/quarter***	grab
Chloride as Cl	mg/L	*		*	once/quarter***	grab
Total Ammonia Nitrogen (summer) April 1 – September 30	mg/L	*		*	once/quarter***	grab
Total Ammonia Nitrogen (winter) October 1 – March 31	mg/L	7.5		2.9	once/quarter***	grab
Nitrate	mg/L	16.4		8.2	once/quarter***	grab
Precipitation (#001 only)	inches	*		*	daily	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2014</u> . 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.
- ** pH is measured in pH units and is not to be averaged. The pH for all facilities except lagoons is limited to the range of 6.5-9.0 pH units.
- *** See table below for quarterly sampling.

Minimum 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 th
Second	April, May, June	Sample at least once during any month of the quarter	July 28 th
Third	July, August, September	Sample at least once during any month of the quarter	October 28 th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 th

**** 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 precipitation event does not occur within the reporting period, report as **no discharge**.

B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Part I standard conditions dated October 1, 1980, 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.
3. Changes in Discharges of Toxic Substances

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

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
 - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
4. Report as no-discharge when a discharge does not occur during the report period.

5. 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.

C. SPECIAL CONDITIONS (continued)

6. The permittee shall develop and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be prepared within 30 days and implemented within 90 days of permit issuance. The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

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

The SWPPP must include the following:

- (a) An assessment of all storm water discharges associated with vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning, and chemical deicing/anti-icing activities. This must include a list of potential contaminants and an annual estimate of amounts that will be used in the described activities.
 - (b) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter storm water.
 - (c) The SWPPP must include a schedule for a bi-monthly site inspection and a brief written report. The inspections must include observation and evaluation of BMP effectiveness, deficiencies, and corrective measures that will be taken. Deficiencies must be corrected within seven days. Inspection reports must be kept on site with the SWPPP. These must be made available to Department 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.
7. Permittee shall adhere to the following minimum Best Management Practices:
- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of stormwater from these substances.
 - (b) 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 storm water or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit.
 - (c) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
 - (d) Before releasing water that has accumulated in secondary containment areas it must be examined for hydrocarbon odor and presence of sheen. If the presence of hydrocarbons is indicated, this water may not be released.
 - (e) All spills must be cleaned up within 24 hours or as soon as possible.
8. A record of each spill reported in accordance with 10 CSR 24-3010 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-0134627
SPRINGFIELD AVIATION CLASSIFICATION AND REPAIR DEPOT

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

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

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

This Factsheet is for an Industrial Facility.

Part I – Facility Information

Facility Type: Industrial
Facility SIC Code(s): 4581

Facility Description:

The AVCRAD facility is located at Springfield-Branson National Airport in Greene County, in northwest Springfield. The facility is located north of the intersection of northwest-southeast Runway 32 and northeast-southwest Runway 2 at the Springfield-Branson National Airport. The address of the AVCRAD facility is 2501 Lester Jones Avenue, Springfield, Missouri, 65803, and the facility is generally located in the southeast ¼ of Section 1, Township 29 North, Range 23 West, Greene County, Missouri.

The AVCRAD facility is normally occupied 24 hours per day, seven days per week. Personnel are on site continuously during operating periods. The AVCRAD facility is one of four facilities in the U.S. that maintains aircraft for the Army National Guard. The Springfield AVCRAD facility maintains aircraft for the Missouri Army National Guard and 13 surrounding Midwestern states. Aircraft maintained at the AVCRAD facility are primarily helicopters; Apaches, Blackhawks, Chinooks, Hueys, and OH58's and several fixed wing aircraft. Maintenance work includes repairs, maintenance, and overhauls of all portions of the helicopters including engines, rotor blades, interiors, electronics, avionics, and air-frame work and repainting. The AVCRAD also provides crew member training and aviation flight and maintenance training. No aircraft chemical de-icing using ethylene glycol is performed at the facility.

The surface area at the AVCRAD facility consists generally of impervious surfaces; the main hanger and building roofs, and the aircraft apron, access roads, driveways, and employee parking areas that are paved with either concrete or asphalt.

All wastewaters generated at the installation, including sanitary sewage from restrooms and showers and wastewaters from floor drains and oil/water separators, is conveyed by the City of Springfield municipal sewer system to the City's Northwest Wastewater Treatment Plant.

Potential Spill Sources

The following narrative describes those oil storage areas and buildings that are of concern due to the potential for significant spills of either oil or hazardous substances. A site layout showing petroleum storage locations and major facility features is provided in a table below. The information contained in this plan detailing the number, location, and contents of flammable and corrosive cabinets that do not contain regulated quantities of Petroleum, Oil, and Lubricants (POL) is for MOARNG informational purposes only. However, all regulated quantities are addressed accordingly in the plan.

Hazardous substance storage device or area	Qty	Location	Product	Capacity (gallon)	Container Type/Material	Secondary Containment	Equip. Failure Rate of Flow/ Comments
JP-8 Storage Tanks	2	West of Warehouse	JP-8 Aviation Fuel	12,000	Steel	Double-wall Tanks	Valve leak - 1 gpm Overfill - 50 gpm Tank Failure - Capacity
Mo-Gas Tank	1	South-southeast of 12,000 gallon JP-8 ASTs	Mo-Gas	520	Steel	Double-Wall Tank	Valve leak - 1 gpm Overfill - 25 gpm Tank Failure - Capacity
Diesel Fuel	1	South-southeast of 12,000 gallon JP-8 ASTs	Diesel Fuel	520	Steel	Double-Wall Tank	Valve leak - 1 gpm Overfill - 25 gpm Tank Failure - Capacity
Used Oil	1	South-southeast of 12,000 gallon JP-8 ASTs	Used Oil	675	Steel	Double-Wall Tank	Valve leak - 1 gpm Overfill - 5 gpm Tank Failure - Capacity
FEDS Tank	1	East and Outside of FEDS Building	JP-8 Aviation Fuel	1,000	Steel	Double-Wall Tank	Valve leak - 1 gpm Overfill - 50 gpm Tank Failure - Capacity
JP-8 Recycling Tank	1	East of New Maintenance Warehouse	JP-8 Aviation Fuel	300	Steel	Metal Containment Pan	Valve leak - 1 gpm Overfill - 5 gpm Tank Failure - Capacity
Aviation Ground Power Units (AGPU's)	M	North of Blade Shop	Diesel Fuel	65	Steel	General Secondary Containment	Small leak - 1 gpm Tanks failure - 65 Gallons
Drums	M	FEDS Building Interior	POL	M @ ≤ 55	Varies	Spill Containment via pallets and mobile drum containment units	Small leak - 1 gpm Tipover - 55 Gallons
Drums	M	Hazmat Building Interior	POL	M @ ≤ 55	Varies	Concrete floors and curbing	Small leak - 1 gpm Tipover - 55 Gallons
Aircraft Refueler Truck	1	Next to 12,000 gallon tanks	JP-8 Aviation Fuel	3,000	Steel	General Secondary Containment	Valve leak - 1 gpm Overfill - 50 gpm Tank Failure - Capacity
Aircraft Refueler Truck	1	Containment Pad West of Warehouse	JP-8 Aviation Fuel	2,500	Steel	General Secondary Containment	Valve leak - 1 gpm Overfill - 50 gpm Tank Failure - Capacity

Notes: Flammables cabinets may contain one or more of the following products in containers ≤ 10 gallon cans: aerosol paints, liquid paints, lacquers, adhesives, degreasers, cleaners, solvents, thinners, mineral spirits, oils, and detergents. Some cabinets may contain 55-gallon drums of oil. Flammables cabinets are self-contained and would be expected to contain minor leaks and spills of liquids stored inside. M = Multiple

The 520-gallon diesel tank, 520-gallon MoGas tank, and 675-gallon used oil tank are located south-southeast of the 12,000 gallon JP-8 tanks. The three double-walled tanks are enclosed and therefore not open and exposed to rainfall. The double-wall construction of each tank provides intrinsic secondary containment for 110 percent of the tank capacity. Since the secondary containment is not open to precipitation, the volume is sufficient to fully contain the product in the event of a leak from the primary tank. The interstitial space between the primary and secondary tanks is inspected on an annual basis to detect any leak from the primary tank.

The FEDS 1,000-gallon JP-8 tank is a double-walled steel tank located east of the FEDS building. The double-walled tank is enclosed and therefore not open and exposed to rainfall so no drainage is necessary for this tank. The double-wall construction provides intrinsic secondary containment for 110 percent of the tank capacity. Since the secondary containment is not open to precipitation, the volume is sufficient to fully contain the product in the event of a leak from the primary tank. The interstitial space between the primary and secondary tanks is inspected on an annual basis to detect any leak from the primary tank.

The two 12,000-gallon JP-8 fuel tanks are double-walled steel tanks that are located west-southwest from the new Warehouse building. The double-walled tanks are enclosed and therefore not open and exposed to rainfall so no drainage is necessary for these tanks. The double-wall construction provides intrinsic secondary containment for 110 percent of the tank capacity. Since the secondary containment is not open to precipitation, the volume is sufficient to fully contain the product in the event of a leak from the primary tank. Leak detection sensors are present in the interstitial space between the primary and secondary tank. If a leak was detected, the alarm would sound at the panel located on the front of the tank. Personnel pass by this area on a daily basis and would be able to immediately hear the alarm when they are nearby. Adjacent to the tanks is a drive-on concrete containment structure. The concrete structure is in sound condition without visible cracks and would be substantially impervious to oil, which would be adequate for a response.

The 300-gallon JP-8 Recycling Tank is located east of the new Maintenance Warehouse building. The tank has an integral metal pan for secondary containment with an approximate containment volume of 350 gallons, which is adequate to hold the contents of the tank plus allow for freeboard for precipitation.

There may be mobile generator units known as Aviation Ground Power Units (AGPU's) parked in the yard north of the Blade Shop and at other locations on the facility property. Each AGPU has a fuel tank that contains approximately 65 gallons of diesel fuel. The AGPU's are considered oil-filled equipment and not subject to sized secondary containment requirements in 40 CFR 112.8(c), but are subject to general secondary containment requirements in 40 CFR 112.7(c). The number of AGPU's at the AVCRAD facility will vary.

There are 55-gallon drums inside the FEDS Building and the Hazmat Building. The number of these drums will vary. The drums are stored inside buildings and would not be exposed to precipitation. The floor of the FEDS building is impervious concrete that is sloped away from doorways. Drums located in the FEDS Building are maintained on secondary containment pallets or within individual mobile containment units. The oil-water separators are maintained on a routine basis. The Hazmat Building has impervious concrete flooring with adequate curbing to retain any spills from any drums.

There are at least two oil-water separators on-site. All wash bays and floor drains are hooked to the oil-water separators before discharging to the local POTW. The fuel that originates from pre-flight checks is collected and placed in the JP-8 recycling tank and used accordingly, such as to power generators. Any used oil is placed in the used oil tank that is onsite. Materials that may be exposed to rainfall include staged aircraft on the tarmac and urea that may be used to deice the tarmac area and adjoining roadways. In areas not associated with aircraft, rock salt is applied on the sidewalks and parking lots as per the label of the product.

Hazardous Waste Program Inspections

There have been at least four Department hazardous waste inspections of the MO-AVCRAD since the facility began operations at the current location in 1981. Inspections were conducted in April 1984, June 1990, June 1993 and September 1999. One Notice of Violation (NOV) was issued as the result of a deficiency noted in an inspection. In the April 1984 inspection, NOV No. 00166 was issued for using an unlicensed hazardous waste transporter.

Through 1995, paint and stripping wastes were disposed of in a 7,000-gallon UST. The waste in the 7,000-gallon UST was being disposed of every 2-3 years (Reference 14). By the time of removal of the UST in 1995, the amount of paint waste generated was significantly less than in the early 1980s, due in part to painting advances and to the recycling efforts of the facility. After the UST was removed in 1995, paint waste was stored in 55-gallon drums.

The most recent inspection was conducted in September 1999. The facility was determined to qualify as a small quantity generator. No unsatisfactory items were noted during the inspection. Painting activities at the site have decreased since 1981 and in the September 1999 report, the facility was documented as painting only small aircraft components and helicopter blades.

At the time of the site visit, paint waste was dried into small 'pucks' and stored in a drum for disposal by Safety Kleen.

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

- No.

Application Date: 07/24/2012
 Expiration Date: 01/24/2013
 Last Inspection: 11/29/2012 In Compliance ; Non-Compliance

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	Dependent upon precipitation	BMPs	Stormwater	~5.7
004	Dependent upon precipitation	BMPs	Stormwater	~5.8

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

The facility discharges into a losing stream.

Part II – Operator Certification Requirements

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

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

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

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

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

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

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC
Unnamed tributary to Rainer Branch	U	N/A	General Criteria	10290106-0204

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

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed tributary to Rainer Branch (U)	0	0	0
Clear Creek (P)	0.1	0.1	1.0

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

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

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

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

Not Applicable;

The discharge is for stormwater. Best management practices will be used.

ANTI-BACKSLIDING:

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

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

Previous limits were established in error. The TSS limits given to this facility previously were applicable to domestic wastewater dischargers. This facility is an industrial stormwater discharges. Based on Best Professional Judgement and guidance in the EPA Multisector General Permit, for TSS were changed to be more appropriate for the discharge. There will be no changes to industrial activates onsite or the composition of the stormwater discharge as a result of this renewal.

ANTIDegradation:

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

- Renewal no degradation proposed and no further review necessary.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:

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

BIOSOLIDS & SEWAGE SLUDGE:

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

<http://dnr.mo.gov/env/wpp/pub/index.html>, items WQ422 through WQ449.

Not applicable;

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

COMPLIANCE AND ENFORCEMENT:

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

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

REASONABLE POTENTIAL ANALYSIS (RPA):

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

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

Not Applicable;
A RPA was not conducted for this facility.

SCHEDULE OF COMPLIANCE (SOC):

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

Not Applicable; This permit does not contain a SOC.

SPILL BILL

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.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

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

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

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

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

VARIANCE:

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

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

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

Applicable;

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

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

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

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

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

Number of Samples "n":

Additionally, 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, be targeted to comply with the values dictated by the WLA. Therefore, it is recommended that 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:

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

Not Applicable;

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

WHOLE EFFLUENT TOXICITY (WET) TEST:

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

Not Applicable;

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

40 CFR 122.41(M) - BYPASSES:

The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from “bypassing” untreated or partially treated sewage (wastewater) beyond the headworks. A bypass is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-2.010(11) defines a bypass as the diversion of wastewater from any portion of wastewater treatment facility or sewer system to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri’s Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

- Not Applicable;
 This facility does not bypass.

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

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs. A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

Not Applicable; This facility does not discharge to a 303(d) listed stream.

Outfalls #001 and #004 – Stormwater Outfalls

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	*		*	N/A	N/A
CHEMICAL OXYGEN DEMAND	MG/L	120		90	YES	52/27
TOTAL SUSPENDED SOLIDS	MG/L	100		70	YES	*
PH	SU	6.5-9.0		6.5-9.0	NO	
OIL AND GREASE	MG/L	15		10	NO	
BENZENE	µG/L	*		*	YES	BTEX
TOLUENE	µG/L	*		*	YES	BTEX
ETHYLBENZENE	µG/L	*		*	YES	BTEX
XYLENE	µG/L	*		*	YES	BTEX
CHLORIDE AS CL	MG/L	*		*	NO	
TOTAL AMMONIA NITROGEN (SUMMER)	MG/L	*		*	NO	
TOTAL AMMONIA NITROGEN (WINTER)	MG/L	7.5		2.9	NO	
NITRATE	MG/L	16.4		8.2	NO	
PRECIPITATION	INCHES	*		*	NO	

* - Monitoring requirement only

OUTFALL #001 AND #004 - DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Chemical Oxygen Demand (COD).** The 52 mg/L daily maximum and 27 mg/L monthly average effluent limitations were based from 10 CSR 20-7.015 for losing streams for POTW. However, these limits are inapplicable for stormwater discharges associated with industrial activities. For stormwater, permit writers normally look at the EPA Multi-Sector General Permit as a guide. To be consistent with other stormwater effluent discharges, it the permit writer's best professional judgment to change the limits to 120 mg/L daily maximum and 90 mg/L monthly average. The facility's 5-year DMR showed COD concentrations ranging from 5 mg/L to 52 mg/L for Outfall #001 and 7.3 mg/L to 37 mg/L for Outfall #004.
- **Total Suspended Solids (TSS).** The 30 mg/L daily maximum and 15 mg/L monthly average effluent limitations were based from 10 CSR 20-7.015 for losing streams for POTW. However, these limits are inapplicable for stormwater discharges associated with industrial activities. For stormwater, permit writers normally look at the EPA Multi-Sector General Permit as a guide. To be consistent with other stormwater effluent discharges, it the permit writer's best professional judgment to change the limits to 100 mg/L daily maximum and 70 mg/L monthly average. The facility's 5-year DMR showed TSS concentrations ranging from 2.8 mg/L to 135 mg/L for Outfall #001 and 4 mg/L to 20 mg/L for Outfall #004.
- **Settleable Solids.** Removed; this parameter is redundant since this permit has TSS already established.
- **pH.** pH is limited to the range of 6.0 – 9.0 pH units, as per [10 CSR 20-7.015]. pH is measured in pH units and is not to be averaged.
- **BTEX.** This parameter has been broken down into Benzene, Toluene, Ethylbenzene, and Xylene; these are pollutants associated with petroleum use and storage.
- **Benzene.** Monitoring requirement only; this parameter is a component of products derived from coal and petroleum and is found in gasoline and other fuels. The Water Quality Criteria for Benzene are the following: 71 µg/L HHF, 5 µg/L DWS, 5 µg/L GRW.
- **Toluene.** Monitoring requirement only; this parameter is added to gasoline, used to produce benzene, and used as a solvent.
- **Ethylbenzene.** Monitoring requirement only; this parameter is used as a solvent, as a constituent of asphalt and naphtha, and in fuels.
- **Xylene (total).** Monitoring requirement only; this parameter is used as a solvent and used in gasoline.
- **Oil & Grease.** This is a conventional pollutant with effluent limitation for protection of aquatic life established at 10 mg/L monthly average and 15 mg/L daily maximum.
- **Nitrate.** Previous permit has limits of 16.4 mg/L daily maximum and 8.2 mg/L monthly average. The WQS for nitrate is 10 mg/L for DWS and GRW. Considering that the discharge is to a losing stream, GRW criterion applies. The facility's 5-year DMR showed nitrate concentrations ranging from 0.07 to 1.0 mg/L for Outfall #001 and 0.21 mg/L to 0.87 mg/L for Outfall #004.

$$\text{Chronic WLA: } C_e = ((0.37 \text{ cfs} + 0.0) 10 \text{ mg/L} - (0.0 * 0.0))/0.37 \text{ cfs}$$
$$C_e = 10 \text{ µg/L}$$

$$\text{LTA}_c = 10 \text{ mg/L} (0.527) = 5.27 \text{ mg/L}$$
$$\text{MDL} = 5.27 \text{ mg/L} (3.11) = 16.4 \text{ mg/L}$$
$$\text{AML} = 5.27 \text{ mg/L} (1.55) = 8.2 \text{ mg/L}$$

$$[\text{CV} = 0.6, 99^{\text{th}} \text{ Percentile}]$$
$$[\text{CV} = 0.6, 99^{\text{th}} \text{ Percentile}]$$
$$[\text{CV} = 0.6, 95^{\text{th}} \text{ Percentile, } n = 4]$$

- **Total Ammonia Nitrogen.** The facility's 5-year DMR showed concentrations of Ammonia ranging from 0.1 mg/L to 1.5 mg/L for Outfall #001 and 0.11 mg/L to 1.0 mg/L for Outfall #004.

Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3] default pH 7.8 SU
 Background total ammonia nitrogen = 0.01 mg/L

Season	Temp (°C)	pH (SU)	Total Ammonia Nitrogen CCC (mg/L)	Total Ammonia Nitrogen CMC (mg/L)
Summer	26	7.8	1.5	12.1
Winter	6	7.8	3.1	12.1

Summer: April 1 – September 30

Monitoring only because no Urea used for deicing in the summer. Winter limits are imposed during the winter season because the use of Urea for deicing causes a determination of reasonable potential to exceed ammonia water quality standards.

Winter: October 1 – March 31

Chronic WLA: $C_e = ((0.37 \text{ cfs} + 0.0) 3.1 \text{ mg/L} - (0.0 * 0.01 \text{ mg/L}))/0.37 \text{ cfs}$
 $C_e = 3.1 \text{ mg/L}$

Acute WLA: $C_e = ((0.37 \text{ cfs} + 0.0) 12.1 \text{ mg/L} - (0.0 * 0.01 \text{ mg/L}))/0.37 \text{ cfs}$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 3.1 \text{ mg/L} (0.780) = \mathbf{2.4 \text{ mg/L}}$ [CV = 0.6, 99th Percentile, 30 day avg.]
 $LTA_a = 12.1 \text{ mg/L} (0.321) = 3.9 \text{ mg/L}$ [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

$MDL = 2.4 \text{ mg/L} (3.11) = 7.5 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $AML = 2.4 \text{ mg/L} (1.19) = 2.9 \text{ mg/L}$ [CV = 0.6, 95th Percentile, n =30]

- **Chloride as Cl.** The general permit has chloride in the permit therefore monitoring was added to this permit. Monitoring requirement only; the facility's 5-year DMR showed concentrations of chloride ranging from 0.01 mg/L to 3.6 mg/L for Outfall #001 and 0.4 mg/L to 4.0 mg/L for Outfall #004.
- **Precipitation.** Monitoring requirement only for Outfall #001.

Part VII – 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. 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.

The permittee requested a 5 year permit be issued at this time and would like to sync during the next renewal.

PUBLIC NOTICE:

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

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

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

- The Public Notice period for this operating permit was from 06/29/2013 to 07/29/2013. No responses received.

Comments on Pre-Public Notice Draft

- 1- Under "C. Special Conditions #10," the Missouri Army National Guard (MOARNG) requests that this condition be taken out of the permit. Before releasing any accumulated storm water in POL (petroleum, oil, and lubricant) containment structures, inspections are conducted prior to discharge for the presence of a sheen or odor. MOARNG will sample stormwater at the facility outfalls, per the sampling frequency of the operating permit, to ensure compliance with effluent parameters.

Response:

Special Condition #10 is a standard for facility with above ground storage tanks. The condition was modified to be a BMP: "Before releasing water that has accumulated in secondary containment areas it must be examined for hydrocarbon odor and presence of sheen. If the presence of hydrocarbons is indicated, the water may not be released."

- 2- Under "C. Special Conditions #11," the MOARNG suggests changing the sentence, "Stormwater Outfalls #001 and #004 may come into contact with the applied urea" to "Applied urea may come into contact with storm water outfalls #001 and #004." MOARNG also suggests changing the sentence, "Area not associated with aircraft rock salt will be applied on the sidewalks and parking lots as per the label of the product," to "In areas not associated with aircraft, rock salt will be applied on the sidewalks and parking lots as per the label of the product."

Response:

Special Condition #11 has been removed and the suggested language was placed in the Fact Sheet facility description.

- 3- Under "C. Special Conditions #12," the MOARNG requests that this condition be taken out of the permit. The AVCRAD is bound by and complies with state and federal regulations that define when a spill must be reported.

Response:

Conditions 8 & 9 referring to other federal regulations such as RCRA and CERCLA were removed. Spill language was modified to the following revised condition.

A record of each spill reported in accordance with 10 CSR 24-3010 shall be retained with the SWPPP and made available to the Department upon request.

DATE OF FACT SHEET: AUGUST 9, 2013

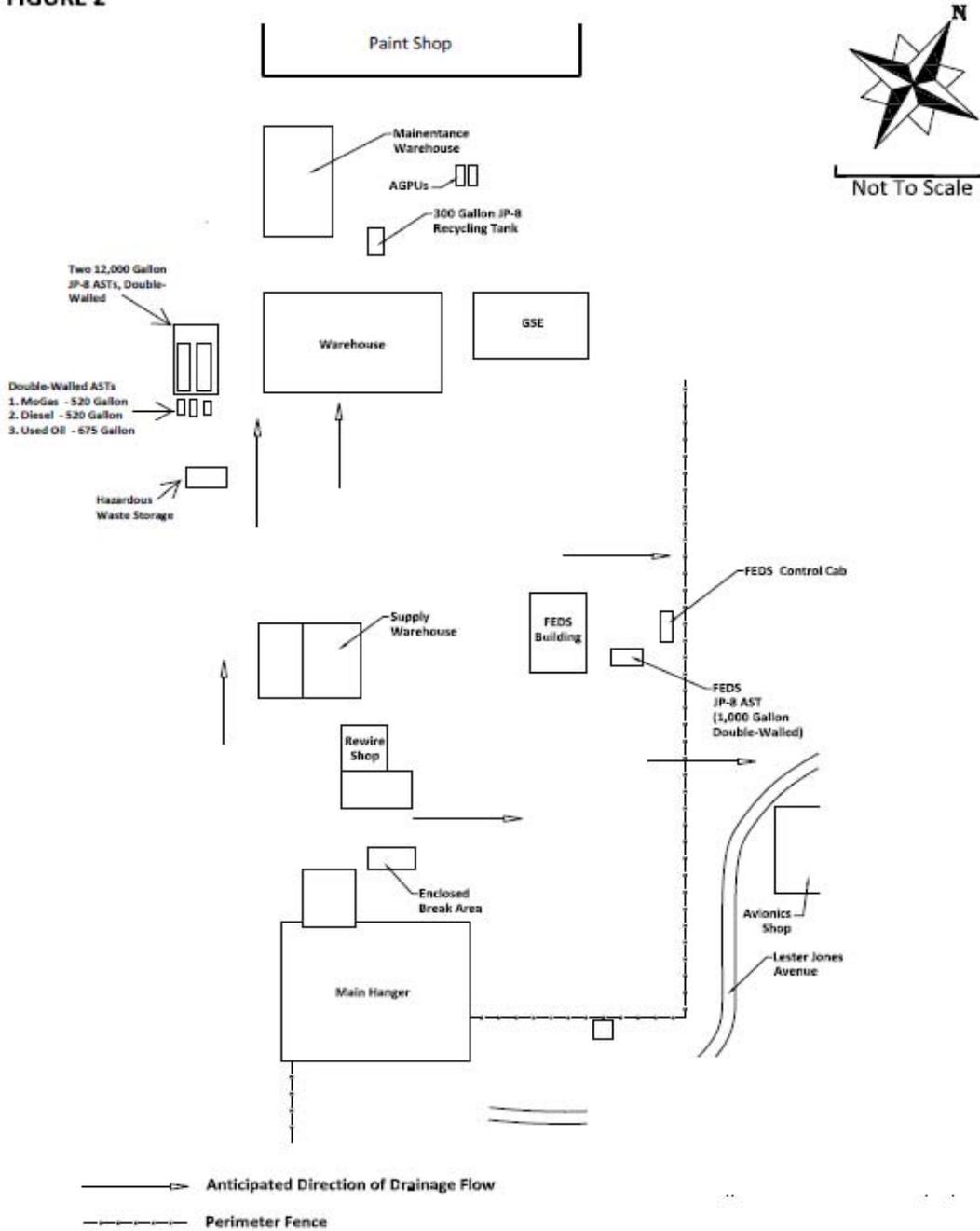
COMPLETED BY:

AMANDA SAPPINGTON
NPDES PERMITS UNIT
WATER PROTECTION PROGRAM
amanda.sappington@dnr.mo.gov

APPENDIX I: FACILITY SITE PLAN

 **Missouri National Guard**
Springfield AVCRAD SPCCP
Site Plan

FIGURE 2



Jeremiah W. (Jay) Nixon
Governor



STATE OF MISSOURI
OFFICE OF THE ADJUTANT GENERAL
DEPARTMENT OF PUBLIC SAFETY
IKE SKELTON NATIONAL GUARD TRAINING SITE
2302 MILITIA DRIVE
JEFFERSON CITY, MISSOURI 65101-1203
<http://www.moguard.com>

Stephen L. Danner
Major General, MONG
The Adjutant General



July 11, 2012

SUBJECT: Permit #MO-0134627 Renewal Application



Missouri Department of Natural Resources
Southwest Regional Office
Water Pollution Permitting and Assistance
2040 W. Woodland
Springfield, MO 65807-5912

To Whom It May Concern:

Enclosed please find the necessary information for the renewal of permit #MO-0134627. This permit is issued to the Missouri Army National Guard (MOARNG) Springfield Aviation Classification and Repair Activity Depot (AVCRAD) located in Greene County, Missouri.

The operating permit fee for the Springfield AVCRAD is \$1,350.00. The MOARNG requests interagency billing in SAMS II for the fee. Our Agency Code is 812 and our Customer ID is I8124425002.

If you have any questions, please contact Angela Neal at 573-638-9802.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jerry R. Sanders".
Jerry R. Sanders
Lieutenant Colonel, AUS (Retired)
Environmental Management Officer

Enclosures



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**



AP 12423

FOR AGENCY USE ONLY	
CHECK NUMBER	No FEE REQUIRED
DATE RECEIVED	FEE SUBMITTED
7/24/12	

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

An operating permit renewal: permit # MO- 0134627

An operating permit modification: permit # MO-

Construction Permit # _____

Expiration Date 1/24/2013

Reason: _____

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

2. FACILITY

NAME Aviation Classification and Repair Activity Depot (AVCRAD)		TELEPHONE WITH AREA CODE (417) 874-8400	
ADDRESS (PHYSICAL) 2501 Lester Jones Avenue		CITY Springfield	STATE ZIP CODE MO 65803
		FAX (417) 874-8407	

3. OWNER

NAME MOARNG Environmental Management Office		E-MAIL ADDRESS Keith.d.braun@us.army.mil	TELEPHONE WITH AREA CODE (573) 638-9694
ADDRESS (MAILING) 6819B North Boundary Road		CITY Jefferson City	STATE ZIP CODE MO 65101
		FAX (573) 638-9511	

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

4. CONTINUING AUTHORITY

NAME MOARNG Environmental Management Office		TELEPHONE WITH AREA CODE (573) 638-9694	
ADDRESS (MAILING) 6819B North Boundary Road		CITY Jefferson City	STATE ZIP CODE MO 65101
		FAX (573) 638-9511	

5. OPERATOR

NAME N/A	CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE
ADDRESS (MAILING)	CITY	FAX STATE ZIP CODE

6. FACILITY CONTACT

NAME Ms. Wendy Beazley	TITLE Environmental Protection Specialist	TELEPHONE WITH AREA CODE (417) 874-8416
		FAX (417) 874-8456

7. ADDITIONAL FACILITY INFORMATION

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

001 SE 1/4 SE 1/4 Sec 01 T 29N R 23W Greene County
 UTM Coordinates Easting (X): 465633 Northing (Y): 4122295
 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

002 1/4 T R Greene County
 UTM Coordinates Easting (X): Northing (Y):

003 1/4 1/4 Sec T R County
 UTM Coordinates Easting (X): Northing (Y):

004 NE 1/4 SE 1/4 Sec 01 T 29N R 23W Greene County
 UTM Coordinates Easting (X): 465570 Northing (Y): 4123059

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

001 - SIC 4581 and NAICS 488190 002 - SIC _____ and NAICS _____

003 - SIC _____ and NAICS _____ 004 - SIC 4581 and NAICS 488190

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? YES NO
 If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below).
- B. Is your facility considered a "Primary Industry" under EPA guidelines: YES NO
 If yes, complete Forms C and D.
- C. Is application for storm water discharges only? YES NO
 If yes, complete EPA Form 2F.
- 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 NO
- F. Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? YES NO
 If yes, complete Form R.

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

NAME See Attached Sheet			
ADDRESS	CITY	STATE	ZIP CODE

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) Keith D. Braun, Deputy Environmental Manager	TELEPHONE WITH AREA CODE (573) 638-9694
SIGNATURE 	DATE SIGNED 7/11/12

MO 780-1475 (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?

Form A – Additional Information

9. Downstream Landowners

The site is bounded on all sides by property owned by the City of Springfield.

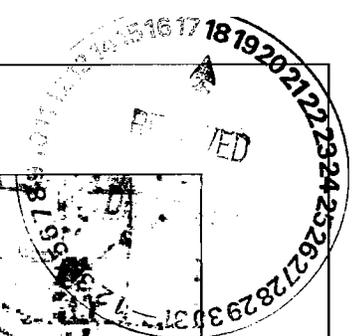
City of Springfield
Busch Municipal Building
840 Boonville
Springfield, MO 65802

Subsurface flow is directed by natural drainage course to Fantastic Caverns.

Fantastic Caverns
4872 North Farm Road 125
Springfield, MO 65803

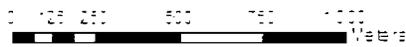


AVCRAD

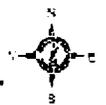


Legend

- EXISTING WEEDER OUTFALL
- AVCRAD Boundary



AVCRAD is a registered trademark of the AVCRAD Board of Directors. All rights reserved. AVCRAD is a registered trademark of the AVCRAD Board of Directors. All rights reserved.





MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
 (SEE MAP FOR APPROPRIATE REGIONAL OFFICE)
**FORM C - APPLICATION FOR DISCHARGE PERMIT - MANUFACTURING,
 COMMERCIAL, MINING AND SILVICULTURE OPERATIONS**

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

Aviation Classification and Repair Activity Depot (AVCRAD)

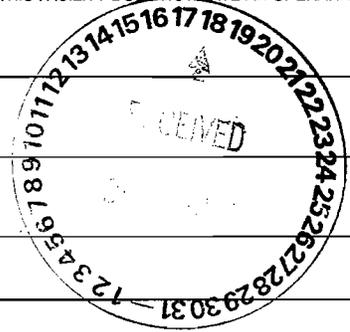
1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER

MO-0134627

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).

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

A. FIRST 4581 B. SECOND _____
 C. THIRD _____ D. FOURTH _____



2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) _____ ¼ _____ ¼ SEC _____ T _____ R _____ County

001 SE ¼ SE ¼ Sec 01 T29 N R23W Greene County

004 NE ¼ SE ¼ Sec 01 T29 N R23W Greene County

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER.

OUTFALL NUMBER (LIST)	RECEIVING WATER
001	Groundwater (sinkhole)
004	Unnamed tributary to Rainer Branch

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS:

Aircraft maintenance (painting, repairing, fueling, and engine testing) and flight operations

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. DUR- ATION <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?

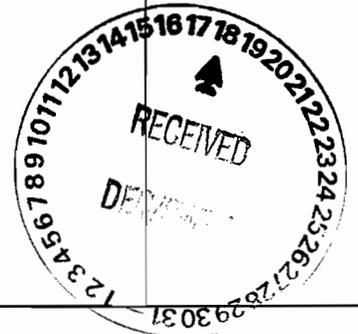
YES (COMPLETE B.) NO (GO TO SECTION 2.60)

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINE EXPRESSED IN TERMS OF PRODUCTION (OR 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 A 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)



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)
Midwest Environmental Consultants	1350 E. Kingsley Street Springfield, MO 65804	417-886-9200	TSS SS Oil + Grease Total BTEX Chloride Nitrate Ammonia as N

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)

Keith Braun, Deputy Environmental Manager

SIGNATURE (SEE INSTRUCTIONS)

TELEPHONE NUMBER (AREA CODE AND NUMBER)

573-638-9694

DATE SIGNED

7/11/12

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

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO.
001

INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify if blank)			4. INTAKE (optional)		B. NO. OF ANAL-YSES	
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)	D. NO. OF ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION		(2) MASS
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS							
A. Biochemical Oxygen Demand (BOD)											
B. Chemical Oxygen Demand (COD)	<6				10.5		14	mg/L			
C. Total Organic Carbon (TOC)					31.2		14	mg/L			
D. Total Suspended Solids (TSS)	4.8				0.77		10	mg/L			
E. Ammonia (as N)	<1				VALUE 292,000 gpd		6	VALUE			
F. Flow					VALUE 236,033 gpd			VALUE			
G. Temperature (winter)					VALUE			°C			
H. Temperature (summer)					VALUE			°C			
I. pH					MINIMUM	MAXIMUM		STANDARD UNITS			

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.

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of 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)			
	A. BE- LIEVED PRE- SENT	B. BE- LIEVED AB- SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANAL-YSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	B. NO. OF ANAL-YSES
			(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-Nitrite (as N)	X							0.6	10	mg/L				

Outfall #001 cont.

CONTINUED FROM FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE (optional)		B. NO. OF ANAL-YSES
	A. BE-LIEVED PRE-SENT	B. BE-LIEVED AB-SENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	B. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	D. NO. OF ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	
G. Nitrogen	X										
Total Organic (as N)	X		Do not produce, most likely associated with fertilizer								
H. Oil and Grease	X		<5.9								
I. Phosphorus (as P)	X		Do not produce, most likely associated with fertilizer								
Total (7723-14-0)						10					
J. RADIOACTIVITY											
(1) Alpha Total		X									
(2) Beta Total		X									
(3) Radium Total		X									
(4) Radium 226 Total		X									
K. Sulfate (as SO ₄) (14808-79-8)		X									
L. Sulfide (as S)		X									
M. Sulfite (as SO ₃) (14265-45-3)		X									
N. Surfactants		X									
O. Aluminum Total (7429-90-5)		X									
P. Barium Total (7440-39-3)		X									
Q. Boron Total (7440-42-8)		X									
R. Cobalt Total (7440-48-4)		X									
S. Iron total (7439-89-6)		X									
T. Magnesium Total (7439-95-4)		X									
U. Molybdenum Total (7439-98-7)		X									
V. Manganese Total (7439-96-5)		X									
W. Tin Total (7440-31-5)		X									
X. Titanium Total (7440-32-6)		X									



INSTRUCTIONS FOR FILLING OUT APPLICATION FOR DISCHARGE PERMIT FORM C – MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS

All blanks must be filled in when the application is submitted to the appropriate Regional Office (see map). The form **must be signed** as indicated.

This application is to be completed only for wastewater facilities with a discharge. Include any facility it is possible to discharge from even if normally there is no discharge. If this form is not adequate for you to describe your existing operation, then sufficient information should be attached so that an evaluation of the discharge can be made.

1.00 Name of Facility - By what title or name is this facility known locally?

1.10 and 1.20 Self-explanatory.

2.00 List in descending order of significance the four digit Standard Industrial Classification (SIC) codes that best describe your facility in terms of the principal products or services you produce or provide. Also, specify each classification in words.

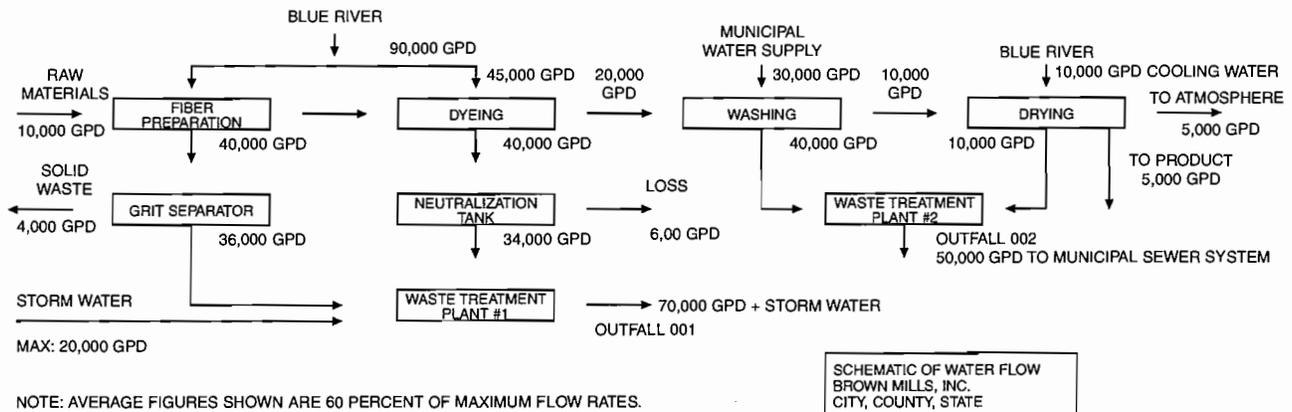
SIC code numbers are descriptions that may be found in the "Standard Industrial Classification Manual" prepared by the Executive Office of the President, Office of Management and Budget, that is available from the Government Printing Office, Washington, D.C. Use the current edition of the manual. If you have any questions concerning the appropriate SIC code for your facility, contact the Missouri Department of Natural Resources Regional Office in your area (see map).

2.10 Point of discharge should be given in terms of the legal description of the waste treatment plant, location or sufficient information so that it may be located by the Missouri Clean Water Commission staff.

2.20 Receiving Water – the name of the stream to which the discharge is directed and any subsequent tributary until a continuous flowing stream is reached.

2.30 Self-explanatory.

2.40 A. The line drawing should show generally the route taken by water in your facility from intake to discharge. Show all operations contributing wastewater, including process and production areas, sanitary flows, cooling water and storm water runoff. You may group similar operations into a single unit labeled to correspond to the more detailed listing. The water balance should show average and maximum flows. Show all significant losses of water to products, atmosphere, discharge and public sewer systems. You should use actual measurements whenever available; otherwise, use your best estimate. An example of any acceptable line drawing appears below.



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

FORM C
TABLE 1 FOR 3.00 ITEM A AND B

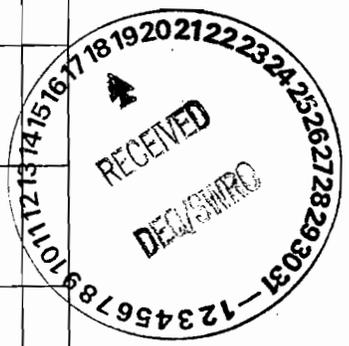
OUTFALL NO. **004**

INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify, if blank)				4. INTAKE (optional)		
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANAL-YSES		A. LONG TERM AVRG. VALUE		B. NO. OF ANAL-YSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	A. CONCENTRATION	B. MASS	(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	22				10.9		10	mg/L			
B. Chemical Oxygen Demand (COD)	4				26.2		10	mg/L			
C. Total Organic Carbon (TOC)	<1				0.64		10	mg/L			
D. Total Suspended Solids (TSS)	VALUE 21,400 gpd				VALUE 288,500 gpd		6		VALUE		
E. Ammonia (as N)	VALUE				VALUE			°C	VALUE		
F. Flow (winter)	VALUE				VALUE			°C	VALUE		
G. Temperature (summer)	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM				STANDARD UNITS			
H. pH											

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of 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)	
	A. BE- LIEVED PRE- SENT	B. BE- LIEVED AB- SENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	B. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	C. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	D. NO. OF ANAL-YSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE (2) MASS	B. NO. OF ANAL-YSES
	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-Nitrite (as N)	X		0.21		0.75	10	mg/L					

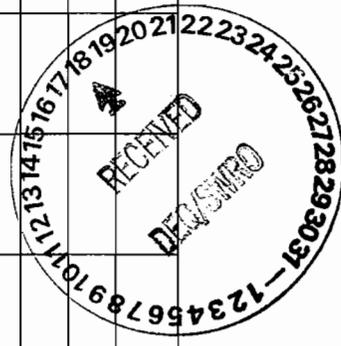


Outfall #004 cont.

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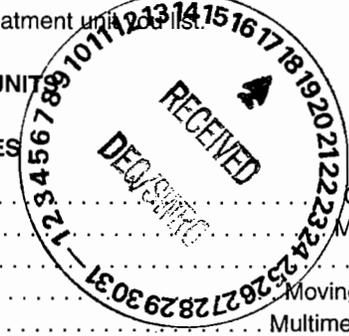
1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)	
	A. BE- LUB PRE- SENT	B. BE- LUB PRE- SENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	B. MAXIMUM 30 DAY VALUE (1) CONCENTRATION	C. LONG TERM AVRG. VALUE (1) CONCENTRATION	D. NO. OF ANAL- YSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	B. NO. OF ANAL- YSES	
G. Nitrogen Total Organic (as N)	X											
H. Oil and Grease	X											
I. Phosphorus (as P) Total (7723-14-0)	X											
J. RADIOACTIVITY												
(1) Alpha Total		X										
(2) Beta Total		X										
(3) Radium Total		X										
(4) Radium 226 Total		X										
K. Sulfate (as SO ₄) (14808-79-8)		X										
L. Sulfide (as S)		X										
M. Sulfite (as SO ₃) (14265-45-3)		X										
N. Surfactants		X										
O. Aluminum Total (7429-90-5)		X										
P. Barium Total (7440-39-3)		X										
Q. Boron Total (7440-42-8)		X										
R. Cobalt Total (7440-48-4)		X										
S. Iron total (7439-89-6)		X										
T. Magnesium Total (7439-95-4)		X										
U. Molybdenum Total (7439-98-7)		X										
V. Manganese Total (7439-96-5)		X										
W. Tin Total (7440-31-5)		X										
X. Titanium Total (7440-32-6)		X										

Do not produce, most likely associated with fertilizer from nearby fields.
 <5.4
 10
 mg/L
 Do not produce, most likely associated with fertilizer from nearby fields.



B. List all sources of wastewater to each outfall. Operations may be described in general terms (for example, "dye-making reactor" or a "distillation tower"). You may estimate the flow contributed by each source if no data is available, and for storm water, you may use any reasonable measure of duration, volume or frequency. For each treatment unit, indicate its size, flow rate and retention time, and describe the ultimate disposal of any solid or liquid wastes not discharged. Treatment units should be listed in order and you should select the proper code from Table A to fill in column 3B for each treatment unit. Insert "XX" into column 3B if no code corresponds to a treatment unit on this list.

TABLE A – CODES FOR TREATMENT UNIT



PHYSICAL TREATMENT PROCESSES

1-A	Ammonia Stripping	1-M	Grit Removal
1-B	Dialysis	1-N	Microstraining
1-C	Diatomaceous Earth Filtration	1-O	Mixing
1-D	Distillation	1-P	Moving Bed Filters
1-E	Electrodialysis	1-Q	Multimedia Filtration
1-F	Evaporation	1-R	Rapid Sand Filtration
1-G	Flocculation	1-S	Reverse Osmosis (Hyperfiltration)
1-H	Flotation	1-T	Screening
1-I	Foam Fractionation	1-U	Sedimentation (Settling)
1-J	Freezing	1-V	Slow Sand Filtration
1-K	Gas-Phase Separation	1-W	Solvent Extraction
1-L	Grinding (Comminutors)	1-X	Sorption

CHEMICAL TREATMENT PROCESSES

2-A	Carbon Absorption	2-G	Disinfection (Ozone)
2-B	Chemical Oxidation	2-H	Disinfection (Other)
2-C	Chemical Precipitation	2-I	Electrochemical Treatment
2-D	Coagulation	2-J	Ion Exchange
2-E	Dechlorination	2-K	Neutralization
2-F	Disinfection (Chlorine)	2-L	Reduction

BIOLOGICAL TREATMENT PROCESSES

3-A	Activated Sludge	3-E	Pre-Aeration
3-B	Aerated Lagoons	3-F	Spray Irrigation/Land Application
3-C	Anaerobic Treatment	3-G	Stabilization Ponds
3-D	Nitrification-Denitrification	3-H	Trickling Filtration

OTHER PROCESSES

4-A	Discharge to Surface Water	4-C	Reuse/Recycle of Treated Effluent
4-B	Ocean Discharge Through Outfall	4-D	Underground Injection

SLUDGE TREATMENT AND DISPOSAL PROCESSES

5-A	Aerobic Digestion	5-M	Heat Drying
5-B	Anaerobic Digestion	5-N	Heat Treatment
5-C	Belt Filtration	5-O	Incineration
5-D	Centrifugation	5-P	Land Application
5-E	Chemical Conditioning	5-Q	Landfill
5-F	Chlorine Treatment	5-R	Pressure Filtration
5-G	Composting	5-S	Pyrolysis
5-H	Drying Beds	5-T	Sludge Lagoons
5-I	Elutriation	5-U	Vacuum Filtration
5-J	Flotation Thickening	5-V	Vibration
5-K	Freezing	5-W	Wet Oxidation
5-L	Gravity Thickening		

2.40 C. A discharge is intermittent unless it occurs without interruption during the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes or other similar activities. A discharge is seasonal if it occurs only during certain parts of the year. Fill in every applicable column in this item for each source of intermittent or seasonal discharges. Base your answers on actual data whenever available; otherwise, provide your best estimate. Report the highest daily value for flow rate and total volume in the "Maximum Daily" columns. Report the average of all daily values measured during days when discharge occurred within the last year in the "Long Term Average" columns.

2.50 A. All effluent guidelines promulgated by EPA appear in the Federal Register and are published annually in 40 CFR Subchapter N. A guideline applies to you if you have any operations contributing process wastewater in any subcategory covered by BPT, BCT, or BAT guidelines. If you are unsure whether you are covered by a promulgated effluent guideline, check with your Missouri Department of Natural Resources' Regional Office. You must check yes if an applicable effluent guideline has been promulgated, even if the guideline limitations are being contested in court. If you believe that a promulgated effluent guideline has been remanded for reconsideration by a court and does not apply to your operations, you may check no.

B. An effluent guideline is expressed in terms of production (or other measure of operation) if the limitations are expressed as mass of pollutant per operational parameter; for example, "pounds of BOD per cubic foot of logs from which bark is removed," or "pounds of TSS per megawatt hour of electrical energy consumed by smelting furnace." An example of a guideline not expressed in terms of a measure of operation is one which limits the concentration of pollutants.

C. This item must be completed only if you checked yes to Item III-B. The production information requested here is necessary to apply effluent guidelines to your facility and you may not claim it as confidential. However, you do not have to indicate how the reported information was calculated.

Report quantities in the units of measurement used in the applicable effluent guideline. The figures provided must be a measure of actual operation over a one month period, such as the production for the highest month during the last twelve months, or the monthly average production for the highest year of the last five years, or other reasonable measure of actual operation, but may not be based on design capacity or on predictions of future increases in operation.

2.60 A. If you check yes to this question, complete all parts of the chart, or attach a copy of any previous submission you have made containing the same information.

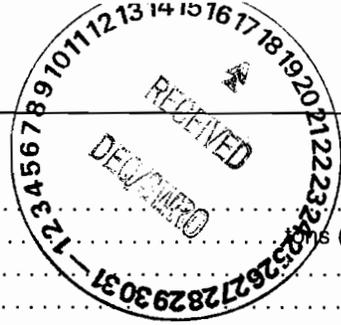
B. You are not required to submit a description of future pollution control projects if you do not wish to or if none is planned.

3.00 These items require you to collect and report data on the pollutants discharged from each of your outfalls. Each part of this item addresses a different set of pollutants and must be completed in accordance with the specific instructions for that part. The following general instructions apply to the entire item.

GENERAL INSTRUCTIONS. Part A requires you to report at least one analysis for each pollutant listed. Part B requires you to mark "X" in either the "Believe Present" column or the "Believe Absent" column (column 2A or 2B, Part B) base don your best estimate, and test for those which you believe to be present. Part C requires you to list any of a group of pollutants which you believe to be present, with a brief explanation of why you believe it to be present. (See specific instructions on the form and below for Parts A through C).

Base your determination that a pollutant is present in or absent from your discharge on your knowledge of your raw materials, maintenance chemicals, intermediate and final products and byproducts, and any previous analyses known to you of your effluent or of any similar effluent. (For example, if you manufacture pesticides, you should expect those pesticides to be present in contaminated storm water runoff.) If you would expect a pollutant to be present solely as a result of its presence in your intake water, you must mark "Believe Present" but you are not required to analyze for that pollutant. Instead, mark an "X" in the "Intake" column.

REPORTING. All levels must be reported as a concentration and as total mass. You may report some or all of the required data by attaching separate sheets of paper. (Use the following abbreviations in the columns headed "Units" (column 3, Part A, and column 4, Part B).



CONCENTRATION

ppm parts per million
mg/l milligrams per liter
ppb parts per billion
µg/l micrograms per liter

MASS

lbs pounds
ton tons (English tons)
mg milligrams
g grams
kg kilograms
T tonnes (metric tons)

If you measure only one daily value, complete only the "Maximum Daily Values" columns and insert "1" into the "number of analyses" columns (columns 2A and 2B, Part A, and columns 3A and 3D, Part B). The Missouri Department of Natural Resources may require you to conduct additional analyses to further characterize your discharges.

For composite samples, the daily value is the total mass or average concentration found in a composite sample taken over the operating hours of the facility during a 24 hour period; for grab samples, the daily value is the arithmetic or flow-weighted total mass or average concentration found in a series of at least four grab samples taken over the operating hours of the facility during a 24 hour period.

If you measure more than one daily value for a pollutant, determine the average of all values within the last year and report the concentration and mass under the "Long Term Average Values" columns (column 2C, Part A, and column 3C, Part B), and the total number of daily values under the "Number of Analyses" columns (column 2D, Part A, and column 3D, Part B). Also, determine the average of all daily values taken during each calendar month, and report the highest average of all daily values taken during each calendar month, and report the highest average under the "Maximum 30 Day Values" columns (column 2B, Part A, and column 3B, Part B).

SAMPLING. The collection of the samples for the reported analyses should be supervised by a person experienced in performing sampling of industrial wastewater. You may contact your Missouri Department of Natural Resources' Regional Office for detailed guidance on sampling techniques and for answers to specific questions. Any specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding times, the collection of duplicate samples, etc. The time when you sample should be representative of your normal operation, to the extent feasible, with all processes which contribute wastewater in normal operation and with your treatment system operating properly with no system upsets. Samples should be collected from the center of the flow channel, where turbulence is at a maximum, at a site specified in your present permit or at any site adequate for the collection of a representative sample.

Grab and composite samples are defined as follows:

GRAB SAMPLE. An individual sample of at least 100 milliliters collected at a randomly selected time over a period not exceeding 15 minutes.

COMPOSITE SAMPLE. A combination of at least eight sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24 hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.

ANALYSIS. You must use test methods promulgated in 40 CFR Part 136; however, if none has been promulgated for a particular pollutant, you may use any suitable method for measuring the level of the pollutant in your discharge provided that you submit a description of the method or a reference to a published method. Your description should include the sample holding times, preservation techniques and the quality control measures which you used.

If you have two or more substantially identical outfalls, you may request permission from the Missouri Department of Natural Resources to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If your request is granted by the Missouri Department of Natural Resources, on a separate sheet attached to the application form, identify which outfall you did test and describe why the outfalls which you did not test are substantially identical to the outfall which you did test.

REPORTING OF INTAKE DATA. You are not required to report data under the "Intake" columns unless you wish to demonstrate your eligibility for a "net" effluent limitation for one or more pollutants, that is, an effluent limitation adjusted by subtracting the average level of the pollutant(s) present in your intake water. National Pollutant Discharge Elimination System (NPDES) regulations allow net limitations only in certain circumstances. To demonstrate your eligibility, under the Intake columns report the average of the results of analyses on your intake water (if your water is treated before use, test the water after it is treated), and attach a separate sheet containing the following for each pollutant:

1. A statement that the intake water is drawn from the body of water into which the discharge is made. (Otherwise, you are not eligible for net limitations.)
2. A statement of the extent to which the level of the pollutant is reduced by treatment of your wastewater. (Your limitations will be adjusted only to the extent that the pollutant is not removed.)
3. When applicable, a demonstration of the extent to which the pollutants in the intake vary physically, chemically, or biologically from the pollutants contained in your discharge. For example, when the pollutant represents a class of compounds. Your limitations will be adjusted only to the extent that the intake pollutants do not vary from the discharged pollutants.

3.00 Part A must be completed by all applicants for all outfalls, including outfalls containing only noncontact cooling water or storm runoff. However, at your request, the Missouri Department of Natural Resources may waive the requirements to test for one or more of these pollutants, upon a determination that testing for the pollutant(s) is not appropriate for your effluent.

Use composite samples for all pollutants in this part, except use grab samples for pH and temperature. See discussion in instructions above for definitions of the columns in Part A. The "Long Term Average Values" column (column 2C) and "Maximum 30 Day Values" column (column 2B) are not compulsory but should be filled out if data is available.

3.00 Part B must be completed by all applicants for all outfalls, including outfalls containing only noncontact cooling water or storm runoff.

Use composite samples for all pollutants you analyze for in this part, except use grab samples for residual chlorine, oil and grease and fecal coliform. The Long Term Average Values column (column 3C) and Maximum 30 Day Values column (column 3B) are not compulsory but should be filled out if data is available.

3.00 List any pollutants in Table B that you believe to be present and explain why you believe them to be present. No analysis is required, but if you have analytical data, you must report it.

TABLE B – TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES REQUIRED TO BE IDENTIFIED BY APPLICANTS IF EXPECTED TO BE PRESENT

TOXIC POLLUTANT	HAZARDOUS SUBSTANCES	HAZARDOUS SUBSTANCES
Asbestos	Dichlorvos	Naled
	Diethyl amine	Napthenic acid
HAZARDOUS SUBSTANCES	Dimethyl amine	Nitrotoluene
	Dintrobenzene	Parathion
Acetaldehyde	Diquat	Phenolsulfonate
Allyl alcohol	Disulfoton	Phosgene
Allyl chloride	Diuron	Propargite
Amyl acetate	Epichlorohydrin	Propylene oxide
Aniline	Ethion	Pyrethrins
Benzonitrile	Ethylene diamine	Quinoline
Benzyl chloride	Ethylene dibromide	Resorcinol
Butyl acetate	Formaldehyde	Strontium
Butylamine	Furfural	Strychnine
Captan	Guthion	Sytrene

TABLE B – (continued)

HAZARDOUS SUBSTANCES	HAZARDOUS SUBSTANCES	HAZARDOUS SUBSTANCES
Carbaryl	Isoprene	2,4,5-T (2,4,5-Trichloro- phenoxyacetic acid)
Carbofuran	Isopropanolamine	TDE (Tetrachlorodiphenyl ethane)
Carbon disulfide	Kelthane	2,4,5-TP (2-(2,4,5-Trichloro- phenoxy) propanoic acid)
Chlorpyrifos	Kepone	Trichlorofon
Coumaphos	Malathion	Triethanolamine
Cresol	Mercaptodimethur	Triethylamine
Crotonaldehyde	Methoxychlor	Trimethylamine
Cyclohexane	Methyl mercaptan	Uranium
2,4-D (2,4-Dichloro- phenoxyacetic acid)	Methyl methacrylate	Vanadium
Diazinon	Methyl parathion	Vinyl acetate
Dicamba	Mevinphos	Xylene
Dichlobenil	Mexacarbate	Xylenol
2,2-Dichloropropionic acid	Monethyl amine	Zirconium
	Monomethyl amine	

3.10 Self-explanatory. Additional information may be requested by the Missouri Department of Natural Resources.

3.20 Self-explanatory.

3.30 The Clean Water Act provides for severe penalties for submitting false information on this application form.

Section 309(c)(2) of the Clean Water Act provides that "Any person who knowingly makes any false statement, representation, or certification in any application . . . shall upon conviction, be punished by a fine of no more than \$10,000 or by imprisonment for not more than six months, or both."

All applications must be signed as follows and the signature must be original:

- A. For a corporation, by an officer having responsibility for the overall operation of the regulated facility or activity or for environmental matters.
- B. For a partnership or sole proprietorship, by a general partner or the proprietor.
- C. For a municipal, state, federal or other public facility, by either a principal executive officer or by an individual having overall responsibility for environmental matters at the facility.



Stormwater Flow Chart

Form C, 2.40 Part A



South drainage area of complex (tarmac, parking pads, old hangar roof)

North drainage area of complex (corrosion control hangar, new parking lot)

Storm water collection system

Storm Water collection system channeled to detention pond

Outfall #001

Outfall #004

Discharge to swale and flows to sinkhole

Discharge to unnamed tributary of Rainer Branch

