

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-0004880

Owner: Department of the Army
Address: 25201 East 78 Highway, Independence, MO 64057

Continuing Authority: Same as above
Address: Same as above

Facility Name: Lake City Army Ammunition Plant
Facility Address: 25201 East 78 Highway, Independence, MO 64057

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

The use or operation of this facility shall not require the supervision of a **Certified Operator**.

Lake City Army Ammunition Plant (LCAAP) manufactures small caliber ammunition, 5.56mm, 7.62mm, 30 caliber, 50 caliber, 20mm (load assembly and pack only) and associated explosive/pyrotechnic materials. Operations include cartridge and bullet case drawing, annealing, pickling, case priming and cartridge loading, assembly and packing. Additionally, LCAAP manufactures the links for small and medium ammunition.

See page 2

This permit authorizes only stormwater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Sections 640.013, 621.250, and 644.051.6 of the Law.

July 1, 2015
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

March 31, 2019
Expiration Date

John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (continued):

Outfall #001 - Eliminated prior to 2008. Reason unknown.

Outfall #002 - Eliminated prior to 2008. Reason unknown.

Outfall #003 - Eliminated in 2008 due to connection to industrial sewers, which discharges to the Little Blue Valley Sewer District Atherton Plant.

Outfall #004 - Eliminated in 2008 due to connection to industrial sewers, which discharges to the Little Blue Valley Sewer District Atherton Plant.

Outfall #005 - Eliminated prior to 2008. Reason unknown.

Outfall #006 - Eliminated upon issuance.

Outfall #007 - Small Arms Ammunition – SIC #3482

Stormwater runoff / no treatment.

Design flow is 0.294 MGD.

Actual flow is dependent upon precipitation.

Legal Description: NW¼, SE¼, Sec. 36, T50N, R31W, Jackson County
UTM Coordinates: X= 389298, Y= 4328999
Receiving Stream: West Fire Prairie Creek (C) (3960)
First Classified Stream and ID: 8-20-13 MUDD V1.0 (C) (3960) (locally known as West Fire Prairie Creek)
Second Classified Stream and ID: Little Blue River (P) (0422) 303(d) List (within 2 miles)
USGS Basin & Sub-watershed No.: 10300101-0208

Outfall #008 - Small Arms Ammunition – SIC #3482

Stormwater runoff / no treatment.

Design flow is 0.026 MGD.

Actual flow is dependent upon precipitation.

Legal Description: NW¼, NE¼, Sec. 32, T50N, R30W, Jackson County
UTM Coordinates: X= 392669, Y= 4329739
Receiving Stream: Tributary to East Fire Prairie Creek (P) (3960)
First Classified Stream and ID: 8-20-13 MUDD V1.0 (C) (3960) (locally known as tributary to East Fire Prairie Creek)
USGS Basin & Sub-watershed No.: 10300101-0208

Outfall #009 - Never constructed. Outfall was dependent on vertical expansion of the landfill. The department denied the vertical expansion of the landfill and the outfall was not built. All stormwater that would have discharged through this outfall will be discharged through Outfall #008.

Outfall #010 - Small Arms Ammunition – SIC #3482

Constructed concrete leachate collection basin. No-discharge. Leachate hauled to on-site industrial wastewater treatment plant for pretreatment prior to discharge to the Little Blue Valley Sewer District Atherton Plant.

Design flow is 0.003 MGD.

Actual flow is dependent upon precipitation.

Outfall moved due to accessibility issues. New location of outfall:

Legal Description: NW¼, NE¼, Sec. 01, T49N, R31W, Jackson County
UTM Coordinates: X= 389172, Y=4328070
Receiving Stream: Tributary to East Fire Prairie Creek
First Classified Stream and ID: 8-20-13 MUDD V1.0 (C) (3960) (locally known as tributary to East Fire Prairie Creek)
USGS Basin & Sub-watershed No.: 10300101-0208

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL #007	TABLE A-1. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					
<p>The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on July 1, 2015, and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:</p>						
EFFLUENT PARAMETER(S) (Note 1, Page 7)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*			once/quarter****	24 hr. estimate
Precipitation	Inches	*			once/quarter****	total measured
Total Suspended Solids	mg/L	*			once/quarter****	grab
Settleable Solids	mL/L/hr	**			once/quarter****	grab
Chemical Oxygen Demand	mg/L	*			once/quarter****	grab
pH – Units	SU	***			once/quarter****	grab
Oil & Grease	mg/L	**			once/quarter****	grab
Aluminum, Total Recoverable	µg/L	*			once/quarter****	grab
Copper, Total Recoverable	µg/L	**			once/quarter****	grab
Lead, Total Recoverable	µg/L	**			once/quarter****	grab
Zinc, Total Recoverable	µg/L	**			once/quarter****	grab
<p>MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY****</u>; THE FIRST REPORT IS DUE <u>OCTOBER 28, 2015</u>. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.</p>						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

OUTFALL #008	TABLE A-2. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					
	The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on July 1, 2015 , and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:					
EFFLUENT PARAMETER(S) (Note 1, Page 7)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*			once/quarter****	24 hr. estimate
Precipitation	Inches	*			once/quarter****	total measured
Total Suspended Solids	mg/L	*			once/quarter****	grab
Settleable Solids	mL/L/hr	**			once/quarter****	grab
Chemical Oxygen Demand	mg/L	*			once/quarter****	grab
pH – Units	SU	***			once/quarter****	grab
Oil & Grease	mg/L	**			once/quarter****	grab
Aluminum, Total Recoverable	µg/L	*			once/quarter****	grab
Copper, Total Recoverable	µg/L	*			once/quarter****	grab
Lead, Total Recoverable	µg/L	*			once/quarter****	grab
Zinc, Total Recoverable	µg/L	*			once/quarter****	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

OUTFALL #010	TABLE A-3. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					
	The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on July 1, 2015 , and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:					
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*		24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L	140		37		grab
Chemical Oxygen Demand	mg/L	120		90		grab
Total Suspended Solids	mg/L	88		27		grab
pH – Units	SU	***		***		grab
Oil & Grease	mg/L	15		10		grab
Total Xylene	mg/L	*		*		grab
Ammonia as N	mg/L	10		4.9		grab
Nitrogen, Total as N	mg/L	*		*		grab
Phosphorus, Total as P	mg/L	*		*	daily during discharge (Note 2, Page 6)	grab
α-Terpineol	mg/L	0.033		0.016		grab
Benzoic Acid	mg/L	0.12		0.071		grab
ρ-Cresol	mg/L	0.025		0.014		grab
Phenol	mg/L	0.026		0.015		grab
Total Toxic Organics, Modified (Note 3, Page 6)	mg/L	*		*		grab
Aluminum, Total Recoverable	µg/L	*		*		grab
Copper, Total Recoverable	µg/L	*		*		grab
Lead, Total Recoverable	µg/L	*		*		grab
Manganese, Total Recoverable	µg/L	*		*		grab
Zinc, Total Recoverable	µg/L	200		110		grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY****; THE FIRST REPORT IS DUE OCTOBER 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** Monitoring requirement with a benchmark value. See special condition #11.
- *** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
- **** 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 28th
Third	July, August, September	Sample at least once during any month of the quarter	October 28th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28th

Note 1 - All samples shall be collected within the first 60 minutes of 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**. The total amount of precipitation should be noted from the event from which the samples were collected. Precipitation includes rainfall, snowmelt, hail or other forms of precipitation that can result in a measurable discharge.

Note 2 - Sample each parameter once per day during any discharge from Outfall #010. Any discharge will be considered a violation of the permit unless the discharge is classified as an emergency discharge. If a discharge does not occur within the reporting period, report as **no discharge**.

Emergency Discharge. Leachate shall be stored and hauled to the on-site industrial wastewater treatment plant. An emergency discharge from the leachate storage structure(s) may only occur if rainfall exceeds the 1 in 10 year (Data taken from the Missouri Climate Atlas) or the 24 hour, 25 year (Data taken from NRCS Urban Hydrology for Small Watersheds) rainfall events. **Discharge for any other reason shall constitute a permit violation and shall be reported in accordance with Standard Conditions, Part 1, Section B.2.b.**

Note 3 - See the table below for a list of the Total Toxic Organics that should be sampled during any discharge from Outfall #010.

TOTAL TOXIC ORGANICS

Acenaphthene	4-chlorophenyl phenyl ether
Acrolein	4-bromophenyl phenyl ether
Acrylonitrile	Bis (2-chloroisopropyl) ether
Benzene	Bis (2-chloroethoxy) methane
Benzidine	Methylene Chloride (dichloromethane)
Carbon Tetrachloride (tetrachloromethane)	Methyl Chloride (chloromethane)
Chlorobenzene	Methyl bromide (bromomethane)
1,2,4-trichlorobenzene	Bromoform (tribromomethane)
Hexachlorobenzene	Dichlorobromomethane
1,2-dichloroethane	Chlorodibromemethane
1,1,1-trichloroethane	Hexachlorobutadiene
Hexachloroethane	Hexachlorocyclopentadiene
1,1-dichloroethane	Isophorone
1,1,2-trichloroethane	Naphthalene
1,1,2,2-tetrachloroethane	Nitrobenzene
Chloroethane	2-nitrophenol
Bis (2-chloroethyl) ether	4-nitrophenol
2-chloroethyl vinyl ether	2,4-dinitrophenol
N-nitrosodi-n-propylamine	4,6-dintro-o-cresol
Pentachlorophenol	N-nitrosodimethylamine
	N-nitrosodiphenylamine
Bis (2-ethylhexyl) phthalate	Phenanthrene
Butyl benzyl phthalate	1,2,5,6-dibenzanthracene (dibenzo(a,h)anthracene)
Di-n-butyl phthalate	Indeno (1,2,3-cd) pyrene (2,3-o-phenylene pyrene)

TOTAL TOXIC ORGANICS (continued)

Di-n-octyl phthalate	Pyrene
Diethyl phthalate	Tetrachloroethylene
Dimethyl phthalate	Toluene
1,2-benzanthracene (benzo(a)anthracene)	Trichloroethylene
Benzo(a)pyrene (3,4-benzopyrene)	Vinyl Chloride (chloroethylene)
3,4-benzofluoranthene (benzo(b)fluoranthene)	Aldrin
11,12-benzofluoranthene (benzo(k)fluoranthene)	Dieldrin
Chrysene	Chlordane (technical mixture and metabolites)
Anthracene	4,4-DDT
1,12-benzoperylene (benzo(ghi)perylene)	4,4-DDE (p,p-DDX)
Fluorene	4,4-DDD (p,p-TDE)
2-chloronaphthalene	Alpha-endosulfan
2,4,6-trichlorophenol	Beta-endosulfan
Parachlorometa cresol	Endosulfan sulfate
Chloroform (trichloromethane)	Endrin
2-chlorophenol	Endrin aldehyde
1,2-dichlorobenzene	Heptachlor
1,3-dichlorobenzene	Heptachlor epoxide (BHC hexachlorocyclohexane)
1,4-dichlorobenzene	Alpha-BHC
3,3-dichlorobenzidine	Beta-BHC
1,1-dichloroethylene	Gamma-BHC
1,2-trans-dichloroethylene	Delta-BHC (PCB polychlorinated biphenyls)
2,4-dichlorophenol	PCB-1242 (Arochlor 1242)
1,2-dichloropropane (1,3-dichloropropane)	PCB-1254 (Arochlor 1254)
2,4-dimethylphenol	PCB-1221 (Arochlor 1221)
2,4-dinitrotoluene	PCB-1232 (Arochlor 1232)
2,6-dinitrotoluene	PCB-1248 (Arochlor 1248)
1,2-diphenylhydrazine	PCB-1260 (Arochlor 1260)
Ethylbenzene	PCB-1016 (Arochlor 1016)
Fluoranthene	Toxaphene

B. STANDARD CONDITIONS

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

C. SPECIAL CONDITIONS

1. This permit establishes final ammonia limitations based on Missouri's current Water Quality Standard. On August 22, 2013, the U.S. Environmental Protection Agency (EPA) published a notice in the Federal Register announcing of the final national recommended ambient water quality criteria for protection of aquatic life from the effects of ammonia in freshwater. The EPA's guidance, Final Aquatic Life Ambient Water Quality Criteria for Ammonia – Fresh Water 2013, is not a rule, nor automatically part of a state's water quality standards. States must adopt new ammonia criteria consistent with EPA's published ammonia criteria into their water quality standards that protect the designated uses of the water bodies. The Department of Natural Resources has initiated stakeholder discussions on how to best incorporate these new criteria into the State's rules. A date for when this rule change will occur has not been determined. Also, refer to Section IV of this permit's factsheet for further information including estimated future effluent limits for this facility. It is recommended the permittee view the Department's 2013 EPA criteria Factsheet located at <http://dnr.mo.gov/pubs/pub2481.htm>.
2. 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. SPECIAL CONDITIONS (continued)

- (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.

3. All outfalls must be clearly marked in the field.
4. 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.
5. 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 by the Director in accordance with 40 CFR 122.44(f).
 - (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.
6. Report as no-discharge when a discharge does not occur during the report period.
7. Reporting of Non-Detects
 - (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
 - (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
 - (c) The permittee shall provide the "Non-Detect" sample result using the less than sign and the minimum detection limit (e.g. <10).
 - (d) The permittee shall use one-half of the detection limit for the non-detect result when calculating and reporting monthly averages.
 - (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
8. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
9. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 ET. SEQ.) and the use of such pesticides shall be in a manner consistent with its label.

C. SPECIAL CONDITIONS (continued)

10. The permittee shall implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be prepared and implemented upon permit issuance. The SWPPP must be kept on-site and should not be sent to the department unless specifically requested. The SWPPP must be reviewed and updated, if needed, every five (5) years or as site conditions change. 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: 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.

The SWPPP must include the following:

- a. 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 stormwater. The BMPs at the facility should be designed to meet this value during rainfall event up to the 10 year, 24 hour rain event.
- b. The SWPPP must include a schedule for once per month site inspections and brief written reports. The inspection report must include precipitation information for the entire period since last inspection, as well as observations and evaluations of BMP effectiveness. Deficiencies must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report, including photographs. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to department personnel upon request.
- c. A provision for designating an individual to be responsible for environmental matters.
- d. A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of the department.

11. This permit stipulates pollutant benchmarks applicable to your discharge. The benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation. Benchmark monitoring and visual inspections shall be used to determine the overall effectiveness of SWPPP and to assist you in knowing when additional corrective action may be necessary to protect water quality. If a sample exceeds a benchmark concentration you must review your SWPPP and your BMPs to determine what improvements or additional controls are needed to reduce that pollutant in your stormwater discharge(s).

Outfall #007	
Parameter	Benchmark
Settleable Solids	1.5 mL/L/hr
Oil & Grease	10 mg/L
Copper, Total Recoverable	26 µg/L
Lead, Total Recoverable	188 µg/L
Zinc, Total Recoverable	209 µg/L

Outfall #008	
Parameter	Benchmark
Settleable Solids	1.5 mL/L/hr
Oil & Grease	10 mg/L

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

12. Permittee shall adhere to the following minimum Best Management Practices (BMPs):
- a. Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
 - b. Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
 - c. Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
 - d. Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
 - e. Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with monitoring requirements, benchmark values and effluent limits.

C. SPECIAL CONDITIONS (continued)

- f. Ensure that adequate provisions are provided to prevent surface water intrusion into the storage basin, to divert stormwater runoff around the storage basin, and to protect embankments from erosion.
13. The purpose of the SWPPP and the BMPs listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.
14. Before releasing water that has accumulated in secondary containment areas it must be examined for hydrocarbon odor and presence of a sheen. On-site remediation may take place prior to testing. If the presence of hydrocarbons is indicated, this water must be tested for Total Petroleum Hydrocarbons (TPH). The analytical method for testing TPH must comply with EPA approved testing methods listed in [40 CFR 136] and the water must be tested prior to release to ensure compliance with water quality standards. If the concentration for TPH exceeds 10mg/L, the water shall be taken to a WWTP for treatment.
15. Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the SWPPP and made available to the department upon request.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0004880
LAKE CITY ARMY AMMUNITION PLANT**

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): 3482

FACILITY DESCRIPTION:

Lake City Army Ammunition Plant (LCAAP) manufactures small caliber ammunition, 5.56mm, 7.62mm, 30 caliber, 50 caliber, 20mm (load assembly and pack only) and associated explosive/pyrotechnic materials. Operations include cartridge and bullet case drawing, annealing, pickling, case priming and cartridge loading, assembly and packing. Additionally, LCAAP manufactures the links for small and medium ammunition.

Application Date: 10/02/2013
 Expiration Date: 04/09/2014
 Last Inspection: 03/05/2015 To fulfill request from permit writer regarding status of Outfall #006 and #010.

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#007	0.45	Best Management Practices (BMPs)	Stormwater
#008	0.04	BMPs	Stormwater
#010		No-Discharge	Stormwater

FACILITY PERFORMANCE HISTORY & COMMENTS:

There are no records of site-inspections for determining compliance with the permit completed at this facility. The database indicates a compliance assistance action was completed August 22, 2013. This consisted of department staff meeting with the permittee to discuss changes to the facility that will affect the permit renewal.

The most recent site-inspection was conducted on March 5, 2015. This inspection was conducted upon the request of the permit writer to help confirm the status of Outfalls #006 and #010 as stated in the permit application. The inspector confirmed that Outfall #006 is no longer associated with stormwater in contact with industrial activity. As a result, Outfall #006 has been eliminated from the permit and no further monitoring at that location is required. The inspector also confirmed the re-location of Outfall #010. The previous storage tank associated with Outfall #010 was emptied and cleaned out. This tank will remain at the site; however this location is no longer accessible due to its proximity to the outdoor firing range. The permit now reflects the location of the new storage tank that will function in the same way as the previous storage tank. However, this location is easily accessible.

Part II. RECEIVING STREAM INFORMATION

RECEIVING WATER BODY'S WATER QUALITY

The tributaries to classified streams, tributary to West Fire Prairie Creek and Fire Prairie Creek are not listed on the Missouri 303(d) List of impaired waters not have an associated Total Maximum Daily Load (TMDL) wasteload allocation. The Little Blue River is on the 2014 Missouri 303(d) List of impaired waters for *E. coli* from urban runoff/storm sewers.

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.

As per Missouri's Stormwater Regulations [10 CSR 20.6.200(6)(B)2.], the department shall establish effluent limits as necessary to protect waters of the state. Effluent limitations for stormwater are established using best professional judgment based on the category and designated uses of the receiving stream.

- Missouri or Mississippi River:
- Lake or Reservoir:
- Losing:
- Metropolitan No-Discharge:
- Special Stream:
- Subsurface Water:
- All Other Waters:

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 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:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES	DISTANCE TO CLASSIFIED SEGMENT	12-DIGIT HUC
#007	8-20-13 MUDD V1.0 (West Fire Prairie Creek)	C	3960	AQL, GEN, HHP, IRR, LWW, SCR, WBC-B	0.0	10300101-0208
#008	8-20-13 MUDD V1.0 (Tributary to East Fire Prairie Creek)	C	3960	AQL, GEN, HHP, IRR, LWW, SCR, WBC-B	0.0	
#010	Tributary to East Fire Prairie Creek	N/A	N/A	GEN	0.5	

AQL= Protection of Warm Water Aquatic Life and Human Health-Fish Consumption; C= Streams may cease flow in dry periods; CDF= Cold Water Fishery; CLF= Cool Water Fishery; DWS= Drinking Water Supply; E= Ephemeral stream; GEN= General Criteria; GRW = Groundwater; HHP= Human Health Protection; HUC= Hydrologic Unit Code; IND= Industrial; IRR=Irrigation; LWW= Livestock & Wildlife Watering; P= Permanent; SCR= Secondary Contact Recreation; W= Wetland; WBC= Whole Body Contact Recreation; WBID= Water Body Identification Number

RECEIVING STREAM(S) LOW-FLOW VALUES:

OUTFALL	RECEIVING STREAM (C, P)	LOW-FLOW VALUES (CFS)		
		1Q10	7Q10	30Q10
#007	8-20-13 MUDD V1.0 (C) (West Fire Prairie Creek)	0.0	0.0	0.1
#008	8-20-13 MUDD V1.0 (C) (Tributary to East Fire Prairie Creek)	0.0	0.0	0.0
#010	Tributary to East Fire Prairie Creek	0.0	0.0	0.0

MIXING CONSIDERATIONS

Mixing Zone: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)].
Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Part III. RATIONALE AND DERIVATION OF EFFLUENT LIMITATIONS & PERMIT CONDITIONS

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

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

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

ANTI-BACKSLIDING:

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

- ✓ Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.
 - ✓ Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.
 - ✓ The Department determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).

The previous permit limits for Outfall #007 and #008 were established in using best professional judgment. However, based on current permitting procedures for stormwater, the permit writer used best professional judgment to remove certain effluent limitations from these outfalls and utilize benchmark values in place of limitations. There will be no changes to industrial activities onsite or the composition of the stormwater discharge as a result of this renewal. The benchmark concentrations and required corrective actions are protective of the applicable water quality standards.

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.
- ✓ This permit is for stormwater only hence antidegradation does not apply.

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://extension.missouri.edu/main/DisplayCategory.aspx?C=74>, 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.

INDUSTRIAL SLUDGE:

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

- ✓ Permittee is not authorized to land apply industrial sludge. Sludge from leachate catchment shall be hauled to the on-site industrial wastewater treatment plant.

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)(1)(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 REPORTING:

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

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.

303(d) List:

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.

✓ Applicable. The Little Blue River is listed on the 2014 Missouri 303(d) List for *E. coli*.

✓ It is unknown at this time if the facility is a source of the above listed pollutant(s) or considered to contribute to the impairment of Little Blue River. Once a TMDL is developed, the permit may be modified to include WLAs from the TMDL.

Total Maximum Daily Load (TMDL):

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. 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 is not associated with a TMDL.

VARIANCE:

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

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

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

✓ Not applicable. Wasteload allocations were not calculated.

WLA MODELING:

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

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

WATER QUALITY STANDARDS:

Per [10 CSR 20-7.031(4)], general criteria shall be applicable to all waters of the state at all times including mixing zones.

Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TEST:

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

✓ Not applicable; at this time, the permittee is not required to conduct WET test for this facility.

Part IV. 2013 WATER QUALITY CRITERIA FOR AMMONIA

Upcoming changes to the Water Quality Standard for ammonia may require significant upgrades to wastewater treatment facilities.

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

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

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

Many treatment facilities in Missouri are currently scheduled to be upgraded to comply with the current water quality standards. But these new ammonia standards may require a different treatment technology than the one being considered by the permittee. It is important that permittees discuss any new and upcoming requirements with their consulting engineers to ensure that their treatment systems are capable of complying with the new requirements. The Department encourages permittees to construct treatment technologies that can attain effluent quality that supports the EPA ammonia criteria.

Ammonia toxicity varies by temperature and by pH of the water. Assuming a stable pH value, but taking into account winter and summer temperatures, Missouri includes two seasons of ammonia effluent limitations. Current effluent limitations in this permit are:

Summer and Winter – 10 mg/L daily maximum, 4.9 mg/L monthly average.

Under the new EPA criteria, where mussels of the family Unionidae are present or expected to be present, the ESTIMATED effluent limitations for a facility in a location such as this that discharges to a receiving stream with no mixing will be:

Summer – 1.7 mg/L daily maximum, 0.6 mg/L monthly average.

Winter – 5.6 mg/L daily maximum, 2.1 mg/L monthly average.

Actual effluent limits will depend in part on the actual performance of the facility.

Operating permits for facilities in Missouri must be written based on current statutes and regulations. Therefore permits will be written with the existing effluent limitations until the new standards are adopted. To aid permittees in decision making, an advisory will be added to permit Fact Sheets notifying permittees of the expected effluent limitations for ammonia. When setting schedules of compliance for ammonia effluent limitations, consideration will be given to facilities that have recently constructed upgraded facilities to meet the current ammonia limitations.

For more information on this topic feel free to contact the Missouri Department of Natural Resources, Water Protection Program, Water Pollution Control Branch, Operating Permits Section at (573) 751-1300.

Part V. EFFLUENT LIMITS DETERMINATION

Outfall #007 – Stormwater Outfall

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

Due to the nature of the discharges from these outfalls being stormwater, only a maximum daily limit (MDL) or monitoring requirement will be implemented for many of the parameters listed below. Stormwater events are acute occurrences that result in the greatest concentrations of pollutants being discharged in the first part of the runoff. This first flush can best be represented by a grab sample within the first hours of runoff. Additionally, stormwater events are highly variable. Recording an average monthly limit (AML) is not representative of the nature of these discharges. Many of these parameters that require just a MDL monitoring only requirement will now have a benchmark value associated with that monitoring only requirement. These benchmark values will be listed under the individual discussion and derivation of each parameter containing such a value.

BENCHMARKS

Benchmark concentrations are **not** effluent limitations; benchmark exceedance, therefore, is not a permit violation. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the permittee in knowing when additional corrective action(s) may be necessary to comply with the technology based effluent limitations (TBEL). Failure to take corrective action is a violation of the permit. Benchmark exceedance alone is not a permit violation.

The benchmarks listed in the derivation discussion below have been determined to be feasible, affordable and protective of water quality. These benchmark values are consistent with other stormwater permits including the Environmental Protection Agency's (EPA's) *Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity* (MSGP), subsector AA1. The facility will be required to monitor for all these parameters and if the benchmarks are exceeded at all in the following permit cycle, then the permit writer will use best professional judgment to determine if effluent limitations will be necessary to protect water quality.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	Basis for Limits	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*****	YES	*/*
PRECIPITATION	INCHES	6	*			YES	****
TSS	MG/L	6	*			YES	****
SETTLABLE SOLIDS	ML/L/HR	6	**		*****	YES	1.5/1.0
COD	MG/L	6	*			YES	****
PH	SU	1	6.5-9.0		*****	YES	6.5-9.0
OIL & GREASE (MG/L)	MG/L	1, 3, 6	**		*****	YES	15/10
ALUMINUM, TOTAL RECOVERABLE	µg/L	1, 3, 6	*			YES	****
COPPER, TOTAL RECOVERABLE	µg/L	1, 3, 6	**		*****	YES	*/*
LEAD, TOTAL RECOVERABLE	µg/L	1, 3, 6	**		*****	YES	*/*
ZINC, TOTAL RECOVERABLE	µg/L	1, 3, 6	**		*****	YES	*/*

* - Monitoring requirement only

** - Monitoring with associated benchmark

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

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

***** - Parameter removed from the permit.

Basis for Limitations Codes:

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

OUTFALL #007 – DERIVATION AND DISCUSSION OF LIMITS:

Flow

Monitoring only requirement; 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.

Precipitation

Monitoring only requirement; measuring the amount of precipitation [(10 CSR 20-6.200(2)(C)1.E(VI)] during an event is necessary to ensure adequate stormwater management exists at the site. Knowing the amount of potential stormwater runoff can provide the permittee a better understanding of specific control measure that should be employed to ensure protection of water quality.

Total Suspended Solids (TSS)

Monitoring only requirement; There is no water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the permittee to identify increases in TSS that may indicate uncontrolled materials leaving the site.

Settleable Solids

Effluent limitations have been removed and replaced with monitoring only requirements using the permit writer's best professional judgment. There is no water quality standard for settleable solids; however, sediment discharges can negatively impact aquatic life habitat. Settleable solids are also a valuable indicator parameter. Settleable solids monitoring allows the permittee to identify increases in solids that may indicate uncontrolled materials leaving the site. Additionally, a benchmark value will be implemented for this parameter. The benchmark value will be set at 1.5 mg/L. This value falls within the range of values implemented in other permits that have similar industrial activities and was the daily maximum effluent limitations from the previous permit. The Discharge Monitoring Report (DMR) data support this decision. See the values below.

DMR data: 0.01 – 0.1 mL/L/hr

Chemical Oxygen Demand (COD)

Monitoring is included using the permit writer's best professional judgment. There is no water quality standard for COD; however, increased oxygen demand may impact instream water quality. COD is also a valuable indicator parameter. COD monitoring allows the permittee to identify increases in COD that may indicate materials/chemicals coming into contact with stormwater that cause an increase in oxygen demand. Increases in COD may indicate a need for maintenance or improvement of BMPs.

pH

6.5-9.0 SU. Technology based effluent limitations of 6.0-9.0 SU [10 CSR 20-7.015] are not protective of the Water Quality Standard, which states water contaminants shall not cause pH to be outside the range of 6.5-9.0 SU. No mixing zone is allowed due to the classification of the receiving stream, therefore the water quality standard must be met at the outfall.

Oil & Grease.

Effluent limitations have been removed from the permit and replaced with monitoring only using the permit writer's best professional judgment. The DMR data and application data show this facility has no reasonable potential to exceed water quality standards. Additionally, a benchmark value will be set at 10 mg/L. This value is the criteria for protection of aquatic life, per 10 CSR 20-7.031 Table A.

DMR data: 5 – 6.1 mg/L

Application data: < 5.0 mg/L

Metals

Benchmark values for total recoverable metals were developed using methods and procedures outlined in “The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion” (EPA 823-B-96-007). General warm-water fishery criteria apply and a water hardness of 193 for stormwater is used in the conversion below.

Due to the absence of contemporaneous effluent and instream data for total recoverable metals, dissolved metals, hardness, and total suspended solids with which to calculate metals translators, partitioning between the dissolved and absorbed phases was assumed to be minimal (Section 5.7.3, EPA/505/2-90-001). Freshwater criteria conversion factors for dissolved metals were used as the metals translator as recommended in guidance (Section 1.3, 1.5.3, and Table 1, EPA 823-B-96-007). If concurrent site-specific data for total recoverable metals, dissolved metals, hardness, and total suspended solids are provided to the Department, partitioning evaluations may be considered and site-specific translators developed.

METAL	CONVERSION FACTORS	
	ACUTE	CHRONIC
Aluminum	NA	NA
Copper	0.960	0.960
Iron	NA	NA
Lead	0.695	0.695
Zinc	0.980	0.980

Conversion factors for Cd and Pb are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 193 mg/L. N/A = not applicable.

Aluminum, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment to include this parameter in the permit. This parameter is listed as a pollutant of concern in EPA’s MSGP for stormwater discharges associated with this industrial activity. This parameter data will be evaluated during the following permit renewal to determine if this is a pollutant of concern in this facility’s discharge.

Copper, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment to continue monitoring for this parameter. The DMR data and application data show the presence of this pollutant in the discharge. See the values below. Additionally, a benchmark value will be set at the water quality standard of 26 µg/L, which is based on the acute criteria for protection of aquatic life of 25.0 µg/L and the conversion factor listed above.

DMR data: 10 – 100 µg/L (16 samples)

Application data: 60 µg/L (3 samples)

$$\text{Acute} = 25.0/0.960 = 26.0 \text{ } \mu\text{g/L}$$

Iron, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment to include this parameter in the permit. This parameter is listed as a pollutant of concern in EPA’s MSGP for stormwater discharges associated with this industrial activity. This parameter data will be evaluated during the following permit renewal to determine if this is a pollutant of concern in this facility’s discharge.

Lead, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment to continue monitoring for this parameter. The DMR data and application data show the presence of this pollutant in the discharge. See the values below. Additionally, a benchmark value will be set at the water quality standard of 188 µg/L, which is based on the acute criteria for protection of aquatic life of 131 µg/L and the conversion factor listed above.

DMR data: 10 – 49 µg/L (16 samples)

Application data: 10 µg/L (3 samples)

$$\text{Acute} = 131/0.695 = 188 \text{ } \mu\text{g/L}$$

Zinc, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment to continue monitoring for this parameter. The DMR data and application data show the presence of this pollutant in the discharge. See the values below. The EPA’s MSGP subsector AA1 also contains this parameter as a pollutant of concern in the discharge of stormwater associated with this industrial activity. Additionally, a benchmark value will be set at the water quality standard of 209 µg/L, which is based on the acute criteria for protection of aquatic life of 204.97 µg/L and the conversion factor listed above.

DMR data: 10 – 120 µg/L (16 samples)
 Application data: 60 µg/L (3 samples)

$$\text{Acute} = 204.97/0.980 = 209 \text{ } \mu\text{g/L}$$

MINIMUM SAMPLING AND REPORTING FREQUENCY REQUIREMENTS

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/quarter	once/quarter
Precipitation	once/quarter	once/quarter
TSS	once/quarter	once/quarter
Settleable Solids	once/quarter	once/quarter
COD	once/quarter	once/quarter
pH	once/quarter	once/quarter
Oil & Grease	once/quarter	once/quarter
Aluminum, Total Recoverable	once/quarter	once/quarter
Copper, Total Recoverable	once/quarter	once/quarter
Iron, Total Recoverable	once/quarter	once/quarter
Lead, Total Recoverable	once/quarter	once/quarter
Zinc, Total Recoverable	once/quarter	once/quarter

SAMPLING FREQUENCY JUSTIFICATION

Sampling and Reporting Frequency was retained from previous permit. The permit writer used best professional judgment to determine that quarterly frequency is sufficient to monitor stormwater discharge quality and ensure best management practices are functioning properly. All new parameters will require the same frequency as the existing parameters.

SAMPLING TYPE JUSTIFICATION

Sampling type was retained from previous permit. The permit writer used best professional judgment to determine that grab samples are appropriate in capturing the first flush runoff associated with stormwater events. All new parameters will require the same sampling type as the existing parameters except precipitation. The precipitation shall be reported as a total measured value.

Outfall #008 – Stormwater Outfall

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

Due to the nature of the discharges from these outfalls being stormwater, only a maximum daily limit (MDL) or monitoring requirement will be implemented for many of the parameters listed below. Stormwater events are acute occurrences that result in the greatest concentrations of pollutants being discharged in the first part of the runoff. This first flush can best be represented by a grab sample within the first hours of runoff. Additionally, stormwater events are highly variable. Recording an average monthly limit (AML) is not representative of the nature of these discharges. Many of these parameters that require just a MDL monitoring only requirement will now have a benchmark value associated with that monitoring only requirement. These benchmark values will be listed under the individual discussion and derivation of each parameter containing such a value.

BENCHMARKS

Benchmark concentrations are **not** effluent limitations; benchmark exceedance, therefore, is not a permit violation. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the permittee in knowing when additional corrective action(s) may be necessary to comply with the technology based effluent limitations (TBEL). Failure to take corrective action is a violation of the permit. Benchmark exceedance alone is not a permit violation.

The benchmarks listed in the derivation discussion below have been determined to be feasible, affordable and protective of water quality. These benchmark values are consistent with other stormwater permits including the Environmental Protection Agency’s (EPA’s) *Multi-Sector General Permit For Stormwater Discharges Associated With Industrial Activity* (MSGP), subsector AA1. The facility will be required to monitor for all these parameters and if the benchmarks are exceeded at all in the following permit cycle, then the permit writer will use best professional judgment to determine if effluent limitations will be necessary to protect water quality.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	Basis for Limits	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*****	YES	*/*
PRECIPITATION	INCHES	6	*			YES	****
TSS	MG/L	6	*			YES	****
SETTLABLE SOLIDS	ML/L/HR	6	**		*****	YES	1.5/1.0
COD	MG/L	6	*			YES	****
pH	SU	1	6.5-9.0		*****	YES	6.5-9.0
OIL & GREASE (MG/L)	MG/L	1, 3, 6	**		*****	YES	15/10
ALUMINUM, TOTAL RECOVERABLE	µg/L	1, 3, 6	*			YES	****
COPPER, TOTAL RECOVERABLE	µg/L	1, 3, 6	*			YES	****
LEAD, TOTAL RECOVERABLE	µg/L	1, 3, 6	*			YES	****
ZINC, TOTAL RECOVERABLE	µg/L	1, 3, 6	*			YES	****

- * - Monitoring requirement only
- ** - Monitoring with associated benchmark
- *** - # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean.
- **** - Parameter not previously established in previous state operating permit.
- *****- Parameter removed from the permit.

Basis for Limitations Codes:

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

OUTFALL #008 – DERIVATION AND DISCUSSION OF LIMITS:

Flow

Monitoring only requirement; 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.

Precipitation

Monitoring only requirement; measuring the amount of precipitation [(10 CSR 20-6.200(2)(C)1.E(VI)] during an event is necessary to ensure adequate stormwater management exists at the site. Knowing the amount of potential stormwater runoff can provide the permittee a better understanding of specific control measure that should be employed to ensure protection of water quality.

Total Suspended Solids (TSS)

Monitoring only requirement; There is no water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the permittee to identify increases in TSS that may indicate uncontrolled materials leaving the site.

Settleable Solids

Effluent limitations have been removed and replaced with monitoring only requirements using the permit writer's best professional judgment. There is no water quality standard for settleable solids; however, sediment discharges can negatively impact aquatic life habitat. Settleable solids are also a valuable indicator parameter. Settleable solids monitoring allows the permittee to identify increases in solids that may indicate uncontrolled materials leaving the site. Additionally, a benchmark value will be implemented for this parameter. The benchmark value will be set at 1.5 mg/L. This value falls within the range of values implemented in other permits that have similar industrial activities and was the daily maximum effluent limitations from the previous permit. The Discharge Monitoring Report (DMR) data support this decision. See the values below.

DMR data: 0.01 – 0.1 mL/L/hr

Chemical Oxygen Demand (COD)

Monitoring is included using the permit writer's best professional judgment. There is no water quality standard for COD; however, increased oxygen demand may impact instream water quality. COD is also a valuable indicator parameter. COD monitoring allows the permittee to identify increases in COD that may indicate materials/chemicals coming into contact with stormwater that cause an increase in oxygen demand. Increases in COD may indicate a need for maintenance or improvement of BMPs.

pH

6.5-9.0 SU. Technology based effluent limitations of 6.0-9.0 SU [10 CSR 20-7.015] are not protective of the Water Quality Standard, which states water contaminants shall not cause pH to be outside the range of 6.5-9.0 SU. No mixing zone is allowed due to the classification of the receiving stream, therefore the water quality standard must be met at the outfall.

Oil & Grease.

Effluent limitations have been removed from the permit and replaced with monitoring only using the permit writer's best professional judgment. The DMR data and application data show this facility has no reasonable potential to exceed water quality standards. Additionally, a benchmark value will be set at 10 mg/L. This value is the criteria for protection of aquatic life, per 10 CSR 20-7.031 Table A.

DMR data: 4.9 – 6.9 mg/L

Application data: < 5.0 mg/L

Metals

Benchmark values for total recoverable metals were developed using methods and procedures outlined in “The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion” (EPA 823-B-96-007). General warm-water fishery criteria apply and a water hardness of 193 for stormwater is used in the conversion below.

Due to the absence of contemporaneous effluent and instream data for total recoverable metals, dissolved metals, hardness, and total suspended solids with which to calculate metals translators, partitioning between the dissolved and absorbed phases was assumed to be minimal (Section 5.7.3, EPA/505/2-90-001). Freshwater criteria conversion factors for dissolved metals were used as the metals translator as recommended in guidance (Section 1.3, 1.5.3, and Table 1, EPA 823-B-96-007). If concurrent site-specific data for total recoverable metals, dissolved metals, hardness, and total suspended solids are provided to the Department, partitioning evaluations may be considered and site-specific translators developed.

METAL	CONVERSION FACTORS	
	ACUTE	CHRONIC
Aluminum	NA	NA
Copper	0.960	0.960
Iron	NA	NA
Lead	0.695	0.695
Zinc	0.980	0.980

Conversion factors for Cd and Pb are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 193 mg/L. N/A = not applicable.

Aluminum, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment to include this parameter in the permit. This parameter is listed as a pollutant of concern in EPA’s MSGP for stormwater discharges associated with this industrial activity. This parameter data will be evaluated during the following permit renewal to determine if this is a pollutant of concern in this facility’s discharge.

Copper, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment include this parameter in the permit. The applicant indicated the presence of this parameter in the application, reporting a value of 50 µg/L. This parameter data will be evaluated during the following permit renewal to determine if this is a pollutant of concern in this facility’s discharge.

Iron, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment to include this parameter in the permit. This parameter is listed as a pollutant of concern in EPA’s MSGP for stormwater discharges associated with this industrial activity. This parameter data will be evaluated during the following permit renewal to determine if this is a pollutant of concern in this facility’s discharge.

Lead, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment include this parameter in the permit. The applicant indicated the presence of this parameter in the application, reporting a value of 10 µg/L. This parameter data will be evaluated during the following permit renewal to determine if this is a pollutant of concern in this facility’s discharge.

Zinc, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment to include this parameter in the permit. This parameter is listed as a pollutant of concern in EPA’s MSGP for stormwater discharges associated with this industrial activity. Additionally, the applicant indicated the presence of this parameter in the application, reporting a value of 60 µg/L. This parameter data will be evaluated during the following permit renewal to determine if this is a pollutant of concern in this facility’s discharge.

MINIMUM SAMPLING AND REPORTING FREQUENCY REQUIREMENTS

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/quarter	once/quarter
Precipitation	once/quarter	once/quarter
TSS	once/quarter	once/quarter
Settleable Solids	once/quarter	once/quarter
COD	once/quarter	once/quarter
pH	once/quarter	once/quarter
Oil & Grease	once/quarter	once/quarter
Aluminum, Total Recoverable	once/quarter	once/quarter
Copper, Total Recoverable	once/quarter	once/quarter
Iron, Total Recoverable	once/quarter	once/quarter
Lead, Total Recoverable	once/quarter	once/quarter
Zinc, Total Recoverable	once/quarter	once/quarter

SAMPLING FREQUENCY JUSTIFICATION

Sampling and Reporting Frequency was retained from previous permit. The permit writer used best professional judgment to determine that quarterly frequency is sufficient to monitor stormwater discharge quality and ensure best management practices are functioning properly. All new parameters will require the same frequency as the existing parameters.

SAMPLING TYPE JUSTIFICATION

Sampling type was retained from previous permit. The permit writer used best professional judgment to determine that grab samples are appropriate in capturing the first flush runoff associated with stormwater events. All new parameters will require the same sampling type as the existing parameters except precipitation. The precipitation shall be reported as a total measured value.

Outfall #010 – Leachate

This outfall should be operated as a no-discharge holding structure. Any discharge from this outfall will be considered a violation of this permit. However, the following is required for an emergency discharge. Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

Due to the nature of the emergency discharge, federal effluent limitation guidelines (ELG's) 40 CFR Part 445 – Landfills Point Source Category will be applied to any illicit discharge from this outfall.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	Basis for Limits	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	*/*
BOD ₅	MG/L	1	140		37	YES	***
COD	MG/L	6	120		90	NO	120/90
TSS	MG/L	1	88		27	YES	***
pH	SU	1	6.5-9.0		6.5-9.0	NO	6.5-9.0
OIL & GREASE (MG/L)	MG/L	1, 3, 6	15		10	YES	***
TOTAL XYLENES	MG/L	6	*		*	YES	***
AMMONIA AS N	MG/L	1	10		4.9	YES	***
NITROGEN, TOTAL AS N	MG/L	1	*		*	YES	***
PHOSPHORUS, TOTAL AS P	MG/L	1	*		*	YES	***
α-TERPINEOL	MG/L	1	0.033		0.016	YES	***
BENZOIC ACID	MG/L	1	0.12		0.071	YES	***
P-CRESOL	MG/L	1	0.025		0.014	YES	***
PHENOL	MG/L	1	0.026		0.015	YES	*/*
MODIFIED, TOTAL TOXIC ORGANICS****	MG/L	6	*		*	NO	*/*
ALUMINUM, TOTAL RECOVERABLE	µg/L	6	*		*	YES	***
COPPER, TOTAL RECOVERABLE	µg/L	6	*		*	YES	***
LEAD, TOTAL RECOVERABLE	µg/L	6	*		*	YES	***
MANGANESE, TOTAL RECOVERABLE	µg/L	6	*		*	YES	***
ZINC, TOTAL RECOVERABLE	µg/L	1	200		110	YES	***

* - Monitoring requirement only
 ** - # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean.
 *** - Parameter not previously established in previous state operating permit.
 **** - The permittee shall conduct an analysis on a grab sample to determine the concentration of each individual parameter listed in the table under Modified, Total Toxic Organics below.

Basis for Limitations Codes:

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

OUTFALL #010 – DERIVATION AND DISCUSSION OF LIMITS:

Flow

Monitoring only requirement; 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.

Biochemical Oxygen Demand (BOD₅)

Maximum daily limit of 140 mg/L and average monthly limit of 37 mg/L; per 40 CFR 445.20, the effluent limitations listed above apply to any discharge of leachate from non-hazardous waste landfills. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Chemical Oxygen Demand (COD)

Maximum daily limit of 120 mg/L and average monthly limit of 90 mg/L have been continued in this permit using permit writer's best professional judgment. The landfill may contain waste materials from the ammunitions manufacturing process that occurs onsite. Although BOD₅ is required by federal ELG's, COD can better capture influences of industrial waste products in the discharge. Additionally, the permittee indicated the presence of this parameter in the discharge, reporting 187 mg/L. Therefore, effluent limitations for COD will remain in the permit. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Total Suspended Solids (TSS)

Maximum daily limit of 88 mg/L and average monthly limit of 27 mg/L; per 40 CFR 445.20, the effluent limitations listed above apply to any discharge of leachate from non-hazardous waste landfills. Additionally, the permittee indicated the presence of this parameter in the discharge, reporting 0.035 mg/L. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

pH

6.5-9.0 SU. Technology based effluent limitations of 6.0-9.0 SU [10 CSR 20-7.015] are not protective of the Water Quality Standard, which states water contaminants shall not cause pH to be outside the range of 6.5-9.0 SU. No mixing zone is allowed due to the classification of the receiving stream, therefore the water quality standard must be met at the outfall. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Oil & Grease

Maximum daily limit of 15 mg/L and average monthly limit of 10 mg/L; conventional pollutant, in accordance with 10 CSR 20-7.031 Table A effluent limitation for protection of aquatic life. The permittee indicated the presence of this pollutant on the permit application, reporting 5.46 mg/L. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Total Xylenes

Monitoring only requirement; the permittee indicated the presence of this pollutant in the landfill leachate, reporting 3.46 µg/L. The permit writer has used best professional judgment to include monitoring for this parameter. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the permittee should monitor for this parameter will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Ammonia as N

Maximum daily limit of 10 mg/L and average monthly limit of 4.9 mg/L; per 40 CFR 445.20, the effluent limitations listed above apply to any discharge of leachate from non-hazardous waste landfills. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Nitrogen, total N

Per 10 CSR 20-7.015(9)(D)7, nutrient monitoring shall be instituted on a quarterly basis for facilities with a design flow greater than 0.1 MGD.

Phosphorous, total P

Per 10 CSR 20-7.015(9)(D)7, nutrient monitoring shall be instituted on a quarterly basis for facilities with a design flow greater than 0.1 MGD.

α-Terpineol

Maximum daily limit of 0.033 mg/L and average monthly limit of 0.016 mg/L; per 40 CFR 445.20, the effluent limitations listed above apply to any discharge of leachate from non-hazardous waste landfills. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Benzoic Acid

Maximum daily limit of 0.12 mg/L and average monthly limit of 0.071 mg/L; per 40 CFR 445.20, the effluent limitations listed above apply to any discharge of leachate from non-hazardous waste landfills. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

p-Cresol

Maximum daily limit of 0.025 mg/L and average monthly limit of 0.014 mg/L; per 40 CFR 445.20, the effluent limitations listed above apply to any discharge of leachate from non-hazardous waste landfills. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Phenol

Maximum daily limit of 0.026 mg/L and average monthly limit of 0.015 mg/L; per 40 CFR 445.20, the effluent limitations listed above apply to any discharge of leachate from non-hazardous waste landfills. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Total Toxic Organics, Modified

Monitoring only requirement has been continued from the previous permit for all total toxic organic parameters listed in the table below. The permit writer has used best professional judgment to include monitoring for this parameter. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the permittee should monitor for this parameter will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Acenaphthene	4-chlorophenyl phenyl ether
Acrolein	4-bromophenyl phenyl ether
Acrylonitrile	Bis (2-chloroisopropyl) ether
Benzene	Bis (2-chloroethoxy) methane
Benzidine	Methylene Chloride (dichloromethane)
Carbon Tetrachloride (tetrachloromethane)	Methyl Chloride (chloromethane)
Chlorobenzene	Methyl bromide (bromomethane)
1,2,4-trichlorobenzene	Bromoform (tribromomethane)
Hexachlorobenzene	Dichlorobromomethane
1,2-dichloroethane	Chlorodibromomethane
1,1,1-trichloroethane	Hexachlorobutadiene
Hexachloroethane	Hexachlorocyclopentadiene
1,1-dichloroethane	Isophorone
1,1,2-trichloroethane	Naphthalene
1,1,2,2-tetrachloroethane	Nitrobenzene
Chloroethane	2-nitrophenol
Bis (2-chloroethyl) ether	4-nitrophenol
2-chloroethyl vinyl ether	2,4-dinitrophenol
N-nitrosodi-n-propylamine	4,6-dintro-o-cresol
Pentachlorophenol	N-nitrosodimethylamine
	N-nitrosodiphenylamine
Bis (2-ethylhexyl) phthalate	Phenanthrene
Butyl benzyl phthalate	1,2,5,6-dibenzanthracene (dibenzo(a,h)anthracene)
Di-n-butyl phthalate	Indeno (1,2,3-cd) pyrene (2,3-o-phenylene pyrene)
Di-n-octyl phthalate	Pyrene
Diethyl phthalate	Tetrachloroethylene
Dimethyl phthalate	Toluene
1,2-benzanthracene (benzo(a)anthracene)	Trichloroethylene
Benzo(a)pyrene (3,4-benzopyrene)	Vinyl Chloride (chloroethylene)
3,4-benzofluoranthene (benzo(b)fluoranthene)	Aldrin
11,12-benzofluoranthene (benzo(k)fluoranthene)	Dieldrin
Chrysene	Chlordane (technical mixture and metabolites)
Anthracene	4,4-DDT
1,12-benzoperylene (benzo(ghi)perylene)	4,4-DDE (p,p-DDX)
Fluorene	4,4-DDD (p,p-TDE)
2-chloronaphthalene	Alpha-endosulfan
2,4,6-trichlorophenol	Beta-endosulfan
Parachlorometa cresol	Endosulfan sulfate
Chloroform (trichloromethane)	Endrin
2-chlorophenol	Endrin aldehyde
1,2-dichlorobenzene	Heptachlor
1,3-dichlorobenzene	Heptachlor epoxide (BHC hexachlorocyclohexane)
1,4-dichlorobenzene	Alpha-BHC
3,3-dichlorobenzidine	Beta-BHC
1,1-dichloroethylene	Gamma-BHC
1,2-trans-dichloroethylene	Delta-BHC (PCB polychlorinated biphenyls)
2,4-dichlorophenol	PCB-1242 (Arochlor 1242)
1,2-dichloropropane (1,3-dichloropropane)	PCB-1254 (Arochlor 1254)
2,4-dimethylphenol	PCB-1221 (Arochlor 1221)
2,4-dinitrotoluene	PCB-1232 (Arochlor 1232)
2,6-dinitrotoluene	PCB-1248 (Arochlor 1248)
1,2-diphenylhydrazine	PCB-1260 (Arochlor 1260)
Ethylbenzene	PCB-1016 (Arochlor 1016)
Fluoranthene	Toxaphene

Metals

Benchmark values for total recoverable metals were developed using methods and procedures outlined in “The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion” (EPA 823-B-96-007). General warm-water fishery criteria apply and a water hardness of 193 for stormwater is used in the conversion below.

Due to the absence of contemporaneous effluent and instream data for total recoverable metals, dissolved metals, hardness, and total suspended solids with which to calculate metals translators, partitioning between the dissolved and absorbed phases was assumed to be minimal (Section 5.7.3, EPA/505/2-90-001). Freshwater criteria conversion factors for dissolved metals were used as the metals translator as recommended in guidance (Section 1.3, 1.5.3, and Table 1, EPA 823-B-96-007). If concurrent site-specific data for total recoverable metals, dissolved metals, hardness, and total suspended solids are provided to the Department, partitioning evaluations may be considered and site-specific translators developed.

METAL	CONVERSION FACTORS	
	ACUTE	CHRONIC
Aluminum	NA	NA
Copper	0.960	0.960
Iron	NA	NA
Lead	0.695	0.695
Zinc	0.980	0.980

Conversion factors for Cd and Pb are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 193 mg/L. N/A = not applicable.

Aluminum, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment to include this parameter in the permit. This parameter has been added to all other outfalls for its association with the industrial activity that has potential to cause stormwater pollution. This permit writer has assumed that the waste products from the ammunitions and explosives manufacturing will also have a potential to leach out of the landfill. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Copper, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment to include this parameter in the permit. This parameter has been added to all other outfalls for its association with the industrial activity that has potential to cause stormwater pollution. This permit writer has assumed that the waste products from the ammunitions and explosives manufacturing will also have a potential to leach out of the landfill. Additionally, the permittee indicated the presence of this pollutant in the discharge in the permit application, reporting 0.12 mg/L. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Iron, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment to include this parameter in the permit. This parameter has been added to all other outfalls for its association with the industrial activity that has potential to cause stormwater pollution. This permit writer has assumed that the waste products from the ammunitions and explosives manufacturing will also have a potential to leach out of the landfill. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Lead, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment to include this parameter in the permit. This parameter has been added to all other outfalls for its association with the industrial activity that has potential to cause stormwater pollution. This permit writer has assumed that the waste products from the ammunitions and explosives manufacturing will also have a potential to leach out of the landfill. Additionally, the permittee indicated the presence of this pollutant in the discharge in the permit application, reporting 0.33 mg/L. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Manganese, Total Recoverable

Monitoring only requirement; the permit writer has used best professional judgment to include this parameter in the permit. The permittee indicated the presence of this pollutant in the discharge in the permit application, reporting 4.1 mg/L. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

Zinc, Total Recoverable

Maximum daily limit of 0.20 mg/L and average monthly limit of 0.11 mg/L; per 40 CFR 445.20, the effluent limitations listed above apply to any discharge of leachate from non-hazardous waste landfills. Additionally, the permittee indicated the presence of this pollutant in the discharge in the permit application, reporting 0.34 mg/L. Discharges from this outfall are not authorized by this permit; however, if an emergency discharge occurs, the values listed will protect general criteria, aquatic life and stream habitat [10 CSR 20-7.031].

MINIMUM SAMPLING AND REPORTING FREQUENCY REQUIREMENTS

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/day during discharge	quarterly
BOD ₅	once/day during discharge	quarterly
COD	once/day during discharge	quarterly
TSS	once/day during discharge	quarterly
pH	once/day during discharge	quarterly
<i>E. coli</i>	once/day during discharge	quarterly
Oil & Grease	once/day during discharge	quarterly
Total Xylenes	once/day during discharge	quarterly
Ammonia as N	once/day during discharge	quarterly
Nitrogen, Total as N	once/day during discharge	quarterly
Phosphorus, Total as P	once/day during discharge	quarterly
α-Terpineol	once/day during discharge	quarterly
Benzoic acid	once/day during discharge	quarterly
p-Cresol	once/day during discharge	quarterly
Phenol	once/day during discharge	quarterly
Total Toxic Organics, Modified	once/day during discharge	quarterly
Aluminum, Total Recoverable	once/day during discharge	quarterly
Copper, Total Recoverable	once/day during discharge	quarterly
Iron, Total Recoverable	once/day during discharge	quarterly
Lead, Total Recoverable	once/day during discharge	quarterly
Manganese, Total Recoverable	once/day during discharge	quarterly
Zinc, Total Recoverable	once/day during discharge	quarterly

SAMPLING FREQUENCY JUSTIFICATION

Sampling and Reporting Frequency was established at once per day during discharge. As the leachate from the landfill is not authorized to be discharged from this site, any emergency discharge must be monitored closely to ensure adequate protection of aquatic life. Sampling daily during the discharge will allow both the permittee and the Department to understand the impact the leachate discharge is having on aquatic life and stream habitat. As this should be a rare discharge, reporting the results quarterly has been continued from the previous permit.

SAMPLING TYPE JUSTIFICATION

Sampling type was retained from previous permit. The permit writer used best professional judgment to determine that grab samples are appropriate in capturing the acute occurrence of an emergency discharge. All new parameters will require the same sampling type as the existing parameters.

Part VI. COMPLIANCE WITH SWPPP REQUIREMENTS TO ACHIEVE BENCHMARK VALUES

The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate pollution of stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged with during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values discussed in Part V above. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure that will assist in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit. Additional information can be found in 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].

In order to effectively control the pollutants being discharged in stormwater runoff, potential stormwater pollution sources must be identified. Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). The pollutants of concern that have already been identified in Part V above can be used to assist in identifying potential sources. Once these potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed, employ the control measures that have been determined to be adequate to achieve the benchmark values discussed above. Conduct monitoring and inspections of the BMPs to ensure they are working properly. Re-evaluate any BMP that is not achieving compliance with permitting requirements. For example, if sample results from either outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established. If failures continue to occur and the permittee feels there are no practicable or cost-effective BMPs that will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values. Provide financial data of the company and documentation of cost associated with BMPs for review. This will allow the department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request should also include the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information.

The request shall be submitted in the form of an operating permit modification application. Appropriate application forms can be found on the Department's website: <http://dnr.mo.gov/forms/index.html>.

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. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than three years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit.

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 began on April 24, 2015 and ended on May 26, 2015. The permittee submitted comments during this period. Two errors were noted in the comments. The first was missing information about the type of ammunition produced at the site listed in the facility description on page 1 of the factsheet. The Department added 50 caliber ammunition to the list. The second error was incorrectly labeling Outfall #008 twice instead of Outfall #008 and Outfall #010 on the receiving stream table on page 2 of the factsheet. The Department has corrected this error. The permittee also requested that stormwater sampling only be required during business hours. The Department cannot grant this request. A precipitation event may not occur during normal business hours, so the permittee needs to be able to collect during nights or weekends in order to comply with the permit. Additionally, the permit writer noticed an error in the permit regarding units for metals. The units should be micrograms per liter, not milligrams per liter. This error has been corrected. The permit writer also noted an error regarding the note associated with Outfall #010. This note states that it is a violation of the permit to discharge from this outfall but then contains an allowance for an emergency discharge during extreme precipitation events. The language in this note had been revised to remove the contradictory statement and has clarified the sampling requirements for Outfall #010. Finally, the permit writer updated the receiving stream information to match the new stream dataset nomenclature for the newly classified streams. The original stream names are in parentheses for reference.

DATE OF FACT SHEET: MARCH 23, 2015

COMPLETED BY:

**LOGAN COLE, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - INDUSTRIAL UNIT
(573) 751-5827
logan.cole@dnr.mo.gov**



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

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

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

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

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

Section B – Reporting Requirements

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



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

Section C – Bypass/Upset Requirements

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

Section D – Administrative Requirements

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



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

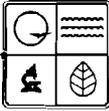


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10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this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

RECEIVED

C12195 APR 16 581



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

FOR AGENCY USE ONLY
CHECK NUMBER
DATE RECEIVED 10/2/13
FEE SUBMITTED

WATER PROTECTION PROGRAM

Note PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:
An operating permit and antidegradation review public notice
A construction permit following an appropriate operating permit and antidegradation review public notice
A construction permit and concurrent operating permit and antidegradation review public notice
A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)
An operating permit for a new or unpermitted facility Construction Permit #
An operating permit renewal: permit # MO- 0004880 Expiration Date April 9, 2013
An operating permit modification: permit # MO- Reason:

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

2. FACILITY

NAME Lake City Army Ammunition Plant (LCAAP) TELEPHONE WITH AREA CODE 816-796-7153
FAX 816-796-5043
ADDRESS (PHYSICAL) 25201 East 78 HWY CITY Independence STATE MO ZIP CODE 64057

3. OWNER

NAME Department of the Army E-MAIL ADDRESS TELEPHONE WITH AREA CODE 816-796-7153
FAX 816-796-7143
ADDRESS (MAILING) 25201 East 78 HWY CITY Independence STATE MO ZIP CODE 64057

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

4. CONTINUING AUTHORITY

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

5. OPERATOR

NAME Alliant Techsystems Operations LLC CERTIFICATE NUMBER NA TELEPHONE WITH AREA CODE 816-796-5192
FAX 816-796-5043
ADDRESS (MAILING) 25201 East 78 HWY CITY Independence STATE MO ZIP CODE 64057

6. FACILITY CONTACT

NAME George Abbott TITLE Environmental Engineer TELEPHONE WITH AREA CODE 816-796-5192
FAX 816-796-5043

7. ADDITIONAL FACILITY INFORMATION

7.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)
007 NW 1/4 NE 1/4 Sec 1 T 49N R 31W Jacks County
UTM Coordinates Easting (X): Northing (Y):
008 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)
NW 1/4 NE 1/4 Sec 32 T 50N R 30W Jacks County
UTM Coordinates Easting (X): Northing (Y):
010 SE 1/4 NE 1/4 Sec 32 T 50N R 30W Jacks County
UTM Coordinates Easting (X): Northing (Y):
004 1/4 1/4 Sec T R County
UTM Coordinates Easting (X): Northing (Y):

7.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.
001 - SIC 3482 and NAICS 002 - SIC and NAICS
003 - SIC and NAICS 004 - SIC and NAICS

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.

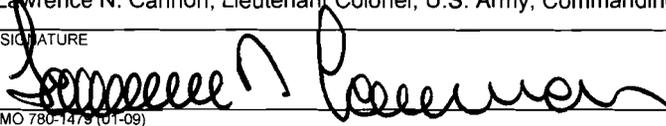
9. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instructions.
 (PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE).

NAME
 See Attachment 2 and 3

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) Lawrence N. Cannon, Lieutenant Colonel, U.S. Army, Commanding	TELEPHONE WITH AREA CODE 816-796-7120
--	--

SIGNATURE 	DATE SIGNED 12 Sep 13
--	--------------------------

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?

RECEIVED

OCT 02 2013

WATER PROTECTION PROGRAM

ATK Defense Corpn
Small Caliber Systems
P.O. Box 1000
Independence, MO 64051-1000

Proud Operator of the
Lake City Army Ammunition Plant

www.atk.com

CERTIFIED MAIL - 70082810000122619788
RETURN RECEIPT REQUESTED

November 19, 2013

Mandy Sappington
Industrial Permit Unit Chief
Water Protection Program
Missouri Department of Natural Resources
P.O. Box 76
Jefferson City, MO 65102

Subject: National Pollutant Discharge Elimination System (NPDES) Permit MO-0004880
Renewal

Dear Ms. Sappington;

Attached is the renewal application Form C – Application for Discharge Permit – Manufacturing, Commercial, Mining, Silviculture Operations, Process and Stormwater. Due to dry weather in the last few months of the summer, we had to wait for sufficient rainfall to complete the analytical analysis required for Form C.

As addressed in the Form A application, we are requesting that Outfall #006, Southwest Fire Prairie Creek Hillside Division Channel, be removed from our NPDES permit. The Southwest Prairie Hillside Division Channel is located in an area that is separated from industrial operations of the plant by a levee system. The channel drains the southwest section of the plant and the majority of the flow is coming from two creeks located in the middle of the south section of the plant. There are no industrial sources that could negatively affect the quality of the stormwater in the area.

If you have any questions, please contact George Abbott at 816-796-5192.

Sincerely,


Julie Casey
Manager
Environmental Engineering



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

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED 11/25/13	FEE SUBMITTED C SB

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

1.00 NAME OF FACILITY
 Lake City Army Ammunition Plant

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER
 MO-0004880

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 3482 B. SECOND _____

C. THIRD _____ D. FOURTH _____

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) _____ 1/4 _____ 1/4 SEC _____ T _____ R _____ See Attachment A _____ COUNTY _____

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST)	RECEIVING WATER
See Attachment A	

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

LCAA manufactures small caliber ammunition, 5.56mm, 7.62mm, 30 caliber, 20mm (load assembly and pack only) and associated explosive/pyrotechnic materials. Operations include cartridge and bullet case drawing, annealing, pickling, case priming and cartridge loading, assemble and packing. Manufacture of links for small and medium ammunition.

2.40 CONTINUED

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

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

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

2.50 MAXIMUM PRODUCTION

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

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

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

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

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

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

2.60 IMPROVEMENTS

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

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

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

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

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

3.10 BIOLOGICAL TOXICITY TESTING DATA

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

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

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)
Certified Energy Laboratory	324 NW Capital Drive Lees Summit, MO 64086	816-389-8400	Chemical Oxygen Demand and total Xylenes

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) Lawrence N. Cannon, Lieutenant Colonel, U.S. Army, Commanding	TELEPHONE NUMBER WITH AREA CODE 816-796-7120
SIGNATURE (SEE INSTRUCTIONS) 	DATE SIGNED 12 Nov 13

Attachment A

Outfall Location and Legal description for receiving streams

Outfall #007 SW Fire Prairie Creek (Old Ditch), Tributary to Little Blue River (Little Blue River Basin) This outfall serves the west central portion of the facility. Estimated 24-hour flow rate is 294,200 gallons per day.

Legal Description: NW1/4, NE ¼, Sec 1, T49N, R31W, Jackson County

Outfall #008, Fire Prairie Creek (East Creek), Tributary to Missouri River. This outfall serves the northeast portion of the facility. Estimated 24-hour flow rate is 25,900 gallons per day.

Legal Description: NW1/4, NE1/4, Sec 32, T50N, R30W, Jackson County

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

FORM C
 TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS

OUTFALL NO.
 007

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

1. POLLUTANT	2. EFFLUENT						3. UNITS (Specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)												
B. Chemical Oxygen Demand (COD)	<5	MG/L					1					
C. Total organic Carbon (TOC)												
D. Total Suspended Solids (TSS)	0.0258	MG/L					1					
E. Ammonia (as N)												
F. Flow	VALUE 294,200		VALUE GPD		VALUE		1			VALUE		
G. Temperature (winter)	VALUE 42		VALUE Degrees F		VALUE		1	°C		VALUE		
H. Temperature (summer)	VALUE 88		VALUE Degrees F		VALUE		1	°C		VALUE		
I. pH	MINIMUM 7.2	MAXIMUM 8.3	MINIMUM	MAXIMUM			3	STANDARD UNITS				

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

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

MO 780-1514 (06-13)

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>		B. NO OF ANALYSES			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE				
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION		(2) MASS		
G. Nitrogen, Total Organic <i>(as N)</i>		X														
H. Oil and Grease	X		<5.0	mg/l					3							
I. Phosphorus <i>(as P)</i> , Total (7723-14-0)		X														
J. Sulfate <i>(as SO⁴)</i> (14808-79-8)		X														
K. Sulfide <i>(as S)</i>		X														
L. Sulfite <i>(as SO³)</i> (14285-45-3)		X														
M. Surfactants		X														
N. Aluminum, Total (7429-90-5)		X														
O. Barium, Total (7440-39-3)		X														
P. Boron, Total (7440-42-8)		X														
Q. Cobalt, Total (7440-48-4)		X														
R. Iron, Total (7439-89-6)		X														
S. Magnesium, Total (7439-95-4)		X														
T. Molybdenum, Total (7439-98-7)		X														
U. Manganese, Total (7439-96-5)		X														
V. Tin, Total (7440-31-5)		X														
W. Titanium, Total (7440-32-6)		X														

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	B. MAXIMUM 30 DAY VALUE <i>(if available)</i> (1) CONCENTRATION	(2) MASS	C. LONG TERM AVRG. VALUE <i>(if available)</i> (1) CONCENTRATION	(2) MASS	D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	B. NO. OF ANALYSES
1M. Antimony, Total (7440-36-9)		X												
2M. Arsenic, Total (7440-38-2)		X												
3M. Beryllium, Total (7440-41-7)		X												
4M. Cadmium, Total (7440-43-9)		X												
5M. Chromium III (16065-83-1)		X												
6M. Chromium VI (18540-29-9)		X												
7M. Copper, Total (7440-50-8)	X		0.06	mg/l										
8M. Lead, Total (7439-92-1)	X		0.01	mg/l							3			
9M. Mercury, Total (7439-97-6)		X												
10M. Nickel, Total (7440-02-0)		X												
11M. Selenium, Total (7782-49-2)		X												
12M. Silver, Total (7440-22-4)		X												
13M. Thallium, Total (7440-28-0)		X												
14M. Zinc, Total (7440-66-6)	X		0.06	mg/l							3			
15M. Cyanide, Amenable to Chlorination		X												
16M. Phenols, Total		X												
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

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

FORM C
 TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS

OUTFALL NO.
 008

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

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)							1					
B. Chemical Oxygen Demand (COD)	<5.0											
C. Total organic Carbon (TOC)												
D. Total Suspended Solids (TSS)	0.012						1					
E. Ammonia (as N)												
F. Flow	VALUE 25,900		VALUE GPD		VALUE Estimated Flow		1			VALUE		
G. Temperature (winter)	VALUE 37		VALUE Degrees F		VALUE		1	°C		VALUE		
H. Temperature (summer)	VALUE 90		VALUE Degrees F		VALUE		1	°C		VALUE		
I. PH	MINIMUM 7.4	MAXIMUM 7.6	MINIMUM	MAXIMUM			3	STANDARD UNITS				

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

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

MO 780-1514 (06-13)

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>		B. NO. OF ANALYSES			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE				
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION		(2) MASS		
G. Nitrogen, Total Organic (as N)		X														
H. Oil and Grease	X		<5.0	mg/l												
I. Phosphorus (as P), Total (7723-14-0)		X														
J. Sulfate (as SO ⁴) (14808-79-8)		X														
K. Sulfide (as S)		X														
L. Sulfite (as SO ³) (14265-45-3)		X														
M. Surfactants		X														
N. Aluminum, Total (7429-90-5)		X														
O. Barium, Total (7440-39-3)		X														
P. Boron, Total (7440-42-8)		X														
Q. Cobalt, Total (7440-48-4)		X														
R. Iron, Total (7439-89-6)		X														
S. Magnesium, Total (7439-95-4)		X														
T. Molybdenum, Total (7439-98-7)		X														
U. Manganese, Total (7439-96-5)		X														
V. Tin, Total (7440-31-5)		X														
W. Titanium, Total (7440-32-6)		X														

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	B. MAXIMUM 30 DAY VALUE <i>(if available)</i> (1) CONCENTRATION	(2) MASS	C. LONG TERM AVRG. VALUE <i>(if available)</i> (1) CONCENTRATION	(2) MASS	D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	B. NO. OF ANALYSES
1M. Antimony, Total (7440-36-9)		X												
2M. Arsenic, Total (7440-38-2)		X												
3M. Beryllium, Total (7440-41-7)		X												
4M. Cadmium, Total (7440-43-9)		X												
5M. Chromium III (16065-83-1)		X												
6M. Chromium VI (18540-29-9)		X												
7M. Copper, Total (7440-50-8)	X		0.05	mg/l					3					
8M. Lead, Total (7439-92-1)	X		0.01	mg/l					3					
9M. Mercury, Total (7439-97-6)														
10M. Nickel, Total (7440-02-0)		X												
11M. Selenium, Total (7782-49-2)		X												
12M. Silver, Total (7440-22-4)		X												
13M. Thallium, Total (7440-28-0)		X												
14M. Zinc, Total (7440-66-6)	X		0.06	mg/l					3					
15M. Cyanide, Amenable to Chlorination		X												
16M. Phenols, Total		X												
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												

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

FORM C
 TABLE 1 FOR 3.00 ITEM A AND B

OUTFALL NO
 010

INTAKE AND EFFLUENT CHARACTERISTICS

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

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)			4. INTAKE (optional)		
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)												
B. Chemical Oxygen Demand (COD)	187	mg/l					5					
C. Total organic Carbon (TOC)												
D. Total Suspended Solids (TSS)	0.035	mg/l					1					
E. Ammonia (as N)												
F. Flow	VALUE NONE		VALUE		VALUE					VALUE		
G. Temperature (winter)	VALUE		VALUE		VALUE		1	°C		VALUE		
H. Temperature (summer)	VALUE 84		VALUE Degrees F		VALUE		1	°C		VALUE		
I. pH	MINIMUM 6.7	MAXIMUM 7.2	MINIMUM	MAXIMUM			2	STANDARD UNITS				

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

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

MO 780-1514 (06-13)

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	B. MAXIMUM 30 DAY VALUE (1) CONCENTRATION (if available)	(2) MASS	C. LONG TERM AVRG. VALUE (1) CONCENTRATION (if available)	(2) MASS	D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	B. NO. OF ANALYSES
G. Nitrogen, Total Organic (as N)		X												
H. Oil and Grease	X		5.46	mg/l					1					
I. Phosphorus (as P), Total (7723-14-0)		X												
J. Sulfate (as SO ²⁻) (14809-79-8)		X												
K. Sulfide (as S)		X												
L. Sulfite (as SO ³⁻) (14265-45-3)		X												
M. Surfactants		X												
N. Aluminum, Total (7429-90-5)		X												
O. Barium, Total (7440-39-3)		X												
P. Boron, Total (7440-42-8)		X												
Q. Cobalt, Total (7440-48-4)		X												
R. Iron, Total (7439-89-6)		X												
S. Magnesium, Total (7439-95-4)		X												
T. Molybdenum, Total (7439-98-7)		X												
U. Manganese, Total (7439-96-5)	X		4.1	mg/l					2					
V. Tin, Total (7440-31-5)		X												
W. Titanium, Total (7440-32-6)		X												

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	B. MAXIMUM 30 DAY VALUE (1) CONCENTRATION <i>(if available)</i>	(2) MASS	C. LONG TERM AVRG. VALUE (1) CONCENTRATION <i>(if available)</i>	(2) MASS	D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE (1) CONCENTRATION	(2) MASS	B. NO. OF ANALYSES
1M. Antimony, Total (7440-36-9)		X												
2M. Arsenic, Total (7440-38-2)		X												
3M. Beryllium, Total (7440-41-7)		X												
4M. Cadmium, Total (7440-43-9)		X												
5M. Chromium III (16055-83-1)		X												
6M. Chromium VI (18540-29-9)		X												
7M. Copper, Total (7440-50-8)	X		0.12	mg/l				4						
8M. Lead, Total (7439-92-1)	X		0.33	mg/l				4						
9M. Mercury, Total (7439-97-6)		X												
10M. Nickel, Total (7440-02-0)		X												
11M. Selenium, Total (7782-49-2)		X												
12M. Silver, Total (7440-22-4)		X												
13M. Thallium, Total (7440-28-0)		X												
14M. Zinc, Total (7440-66-6)	X		0.34	mg/l				4						
15M. Cyanide, Amenable to Chlorination		X												
16M. Phenols, Total		X												
RADIOACTIVITY														
(1) Alpha Total		X												
(2) Beta Total		X												
(3) Radium Total		X												
(4) Radium 226 Total		X												