

STATE OF MISSOURI

**DEPARTMENT OF NATURAL RESOURCES**



**MISSOURI HAZARDOUS WASTE MANAGEMENT FACILITY  
PART I PERMIT**

**PERMIT NUMBER: MO4213820489**

**PERMITTEE**

Owner: Department of the Army  
Lake City Army Ammunition Plant  
P.O. Box 1000  
Independence, MO 64051-1000

Operator: Alliant Techsystems Operations, LLC  
Lake City Army Ammunition Plant  
P.O. Box 1000  
Independence, MO 64051-1000

**FACILITY LOCATION**

Lake City Army Ammunition Plant  
25201 East Highway 78  
Independence, Missouri 64057  
Jackson County  
North Latitude – 39°06'15"  
West Longitude – 94°16'50"

**FACILITY DESCRIPTION**

The Lake City Army Ammunition Plant is a Class II, government-owned, contractor-operated military industrial installation under the jurisdiction of the U.S. Army Materiel Command. The plant manufactures small arms ammunition for the Department of Defense. The general facility location is shown in Figure 1. The facility property boundaries are shown in Figure 2.

**PERMITTED ACTIVITIES**

This Permit allows the Department of the Army to store and incinerate “characteristic” hazardous waste as well as store various F-, K-, and U-listed hazardous wastes as specified in the Part A application. The hazardous wastes include obsolete or off-specification ammunition generated on and off the permitted facility property by Alliant Techsystems Operations, LLC, Department of Defense, and Department of Defense Contractors, as well as other production and maintenance related wastes generated on the permitted facility property.

Due to the historical listing of the Lake City AAP facility on the EPA Superfund National Priorities List (NPL), and in order to eliminate overlap of investigation and cleanup activities, environmental investigation and cleanup activities are being conducted under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), rather than the State’s Resource Conservation and Recovery Act (RCRA) equivalent program reflected in this Permit. In 1989, EPA, the Army, and the State of Missouri signed the Lake City AAP 120 Interagency Agreement, to address most environmental investigation and cleanup activities at the facility under CERCLA. The deferral from the RCRA to CERCLA program is explicitly recognized in this Permit. This deferral remains effective as long as the requirements that would otherwise apply under the State’s RCRA-equivalent program are concurrently being met under the CERCLA deferral. This Permit does, however, contain contingencies that may be exercised in the event there is a newly identified release to the environment from a newly- or previously-identified solid waste management unit or area of concern.

EFFECTIVE DATES OF PERMIT: May 25, 2017 to May 25, 2027

May 25, 2017  
Date

[Original signed by Steve Feeler]  
\_\_\_\_\_  
Steve Feeler, Acting Director  
DIVISION OF ENVIRONMENTAL QUALITY

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## **INTRODUCTION**

After public notice, according to Code of State Regulations 10 CSR 25-8.124(1), and review of Lake City Army Ammunition Plant's Missouri Hazardous Waste Management Facility Part I Permit Application (hereafter referred to as the application), the Missouri Department of Natural Resources (hereafter referred to as the Department) has determined that the application conforms to the provisions of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA) and regulations promulgated thereunder by the U.S. Environmental Protection Agency (hereafter referred to as EPA) (codified and to be codified in Title 40 of the Code of Federal Regulations) and the Missouri Hazardous Waste Management Law (and all standards, rules, and regulations adopted under this act), Section 260.350, et seq., RSMo. Pursuant to Section 260.375.13, RSMo, and the Solid Waste Disposal Act, the Department hereby approves the application and issues Permit Number MO4213820489 to the Department of the Army as the facility owner and Alliant Techsystems Operations, LLC as the facility operator (hereafter collectively referred to as the Permittee) for operating the Lake City Army Ammunition Plant as described in the application and this Permit. This Permit also addresses corrective action requirements that may be triggered, if necessary, for Solid Waste Management Units and Areas of Concern pursuant to the state equivalent requirements of the federal Hazardous and Solid Waste Amendments of 1984 (HSWA) of RCRA, as administered and enforced by the Department. Applicable regulations are found in 40 CFR Parts 260 through 264, 266, 268, and 270, and 10 CSR 25-7, as specified in this Permit. The Department is issuing this Missouri Hazardous Waste Management Facility (MHWMF) Part I Permit (hereafter referred to as the Permit) under state authority.

All citations to federal regulations throughout this Permit are for the sake of convenient reference. The federal regulations are adopted by reference in 10 CSR 25. In instances where state regulations are more stringent, the appropriate state reference is given and shall apply.

The provisions of this Permit are severable. If any provision of this Permit, or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby.

All permit application information shall be available to the public unless the Permittee requests nondisclosure in writing, as described in Section 260.430, RSMo and 10 CSR 25-7.270(2)(B)2. This Permit and accompanying materials shall be available for review by the public at the Department's central office in Jefferson City, Missouri; and the EPA Region 7 office in Lenexa, Kansas.

Any appeals of this Permit, or specific permit conditions based on state authority, shall be filed according to 10 CSR 25-8.124(2). Any parties adversely affected or aggrieved by this decision may be entitled to pursue an appeal before the Administrative Hearing Commission (AHC). To

appeal, the party shall file a petition with the AHC within 30 calendar days after the date this Permit was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, then it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC. Contact information for the AHC can be found online at [ahc.mo.gov](http://ahc.mo.gov), or by calling (573) 751-2422. The Department also requests that a copy of any appeal request be provided to the Missouri Department of Natural Resources, ATTN: Hazardous Waste Program Director, P.O. Box 176, Jefferson City, MO 65102-0176.

The following shall collectively be referred to as the “approved permit application”:

- Missouri Hazardous Waste Management Facility Part I Permit Application, dated November 15, 2011, with revisions dated January 6, 2016.
- The March 12, 2012, Class 1 permit modification without prior director’s approval for changes to the post-closure plan maintenance and inspection schedule, acknowledged in the Department’s letter dated June 5, 2012.
- The April 9, 2012, Class 1 permit modification without prior director’s approval for updating the Vice President and General Manager, acknowledged in the Department’s letter dated June 5, 2012.
- The July 19, 2012, Class 1 permit modification without prior director’s approval for updating the commanding officer, acknowledged in the Department’s letter dated August 8, 2012.
- The November 12, 2012, Class 1 permit modification with prior director’s approval for removing redundant permit conditions, approved by the Department on December 20, 2012.
- The January 10, 2013, Class 1 permit modification without prior director’s approval for updating contingency plan contacts, acknowledged in the Department’s letter dated January 31, 2013.
- The April 8, 2013, Class 1 permit modification without prior director’s approval to replace the existing baghouse with a functionally equivalent baghouse, acknowledged in the Department’s letter dated April 24, 2013.

- The June 12, 2013, Class 1 permit modification without prior director's approval updating contingency plan contacts, acknowledged in the Department's letter dated July 15, 2013.
- The September 5, 2013, Class 1 permit modification without prior director's approval updating contingency plan contacts, acknowledged in the Department's letter dated September 23, 2013.
- The May 27, 2014, Class 1 permit modification without prior director's approval updating contingency plan contacts, acknowledged in the Department's letter dated June 17, 2014.
- The July 28, 2014, Class 1 permit modifications with prior director's approval updating the commanding officer and changing operational control to Orbital ATK, approved by the Department on August 25, 2014.
- The January 9, 2015, Class 1 permit modification with prior director's approval changing operation control to Alliant Techsystems Operations, LLC, approved by the Department on February 5, 2015.
- The March 20, 2015, Class 1 permit modification without prior director's approval updating contingency plan contacts and training changes, acknowledged in the Department's letter dated April 21, 2015.
- The May 20, 2015, Class 1 permit modification with prior director's approval for the storage of military munitions in 130D, 130E, and 130F, approved by the Department on June 17, 2015.
- The January 25, 2016, Class 1 permit modification without prior director's approval updating contingency plan contacts and changing the site contact person, acknowledged in the Department's letter dated February 26, 2016.
- The April 18, 2016, Class 1 permit modification without prior director's approval changing the site contact person, acknowledged in the Department's letter dated May 12, 2016.
- The July 27, 2016, Class 1 permit modification without prior director's approval changing the site contact person, updating contingency plan contacts and primary and alternate emergency coordinators, and updating the Commanding Officer, acknowledged in the Department's letter dated September 6, 2016.

The “consolidated permit application” is defined as the approved permit application, any changes resulting from the public comment period, and all additional documents required to be submitted under the Schedule of Compliance contained in this Permit. The Permittee shall maintain a copy of all documents outlined above with the consolidated permit application at the facility.

Any inaccuracies found in information submitted by the Permittee may be grounds for the termination, revocation and reissuance, or modification of this Permit according to 40 CFR Part 270 Subpart D, as incorporated by reference in 10 CSR 25-7.270(1), and for potential enforcement action. The Permittee shall inform the Department of any deviation from, or changes in, the information in the application, which would affect the Permittee’s ability to comply with the applicable regulations or permit conditions.

When the Department receives any information, such as inspection results, information from the Permittee, or requests from the Permittee, it may decide whether cause exists to modify, revoke and reissue, or terminate this Permit. All such changes to this Permit shall be handled according to the requirements of 10 CSR 25-8.124 and 40 CFR Part 270 Subpart D, as incorporated by reference in 10 CSR 25-7.270(1).

Operation of this hazardous waste facility and any required corrective action program activities shall be according to the provisions of this Permit, the Missouri Hazardous Waste Management Law (Sections 260.350 to 260.434, RSMo), the rules and regulations promulgated thereunder [Code of State Regulations, Title 10, Division 25 (10 CSR 25)] as effective on the date of this Permit, all final engineering plans, petitions, specifications, and operating procedures that were submitted to the Department during the permit application review process, which are included in the final version of the permit application, and any other conditions, changes, or additions to the engineering plans, specifications, and operating procedures as specified in this Permit. The consolidated permit application, which includes the final engineering plans, specifications, and operating procedures, is therefore incorporated by this reference into the conditions of this Permit. All conditions specified in this Permit supersede any conflicting information in the consolidated permit application. Where conflicts arise between documents, the latest revision shall be effective.

This Permit for operational, closure, and corrective action activities is issued only to the Permittees named above. This Permit is issued for a period of ten years and expires at midnight on May 25, 2027. This Permit is subject to review and modification by the Department according to Section 260.395.12, RSMo. According to 40 CFR 270.51, as incorporated by reference in 10 CSR 25-7.270(1), if a timely and complete application is submitted, the conditions of this Permit will continue in force until the effective date or denial of a new permit.



On July 6, 1999, Missouri received final authorization for revisions to its hazardous waste management program, including the corrective action portion of the HSWA Codification Rule (July 15, 1985, 50 FR 28702), which had been previously adopted by the state. Thus, the corrective action requirements implemented by the state in lieu of EPA are incorporated into this Permit and are under state authority.

40 CFR 264.101(a), as incorporated by reference in 10 CSR 25-7.264(1), requires all owners or operators of facilities seeking a Permit for the treatment, storage, or disposal of hazardous waste to institute corrective action as necessary to protect human health and the environment from all releases of hazardous wastes or hazardous constituents from any Solid Waste Management Unit, regardless of the time at which waste was placed in such unit.

40 CFR 264.101(b), as incorporated by reference in 10 CSR 25-7.264(1), requires that permits issued under the Hazardous Waste Management Law contain a schedule of compliance for corrective action (where corrective action cannot be completed before permit issuance) and assurances of financial responsibility for completing such corrective action.

40 CFR 264.101(c), as incorporated by reference in 10 CSR 25-7.264(1), requires that corrective action be taken by the facility owner or operator beyond the facility property boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates that, despite the owner or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. 40 CFR 264.101(c) further stipulates that the owner or operator is not relieved of any responsibility to cleanup a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases shall be determined on a case-by-case basis. In addition, assurances of financial responsibility for completing such corrective action shall be provided, according to 40 CFR 264.101.

40 CFR 270.32(b)(2), as incorporated by reference in 10 CSR 25-7.270(1), and Section 260.395.12, RSMo, requires that each permit issued under that section contain terms and conditions as the Department determines necessary to protect human health and the environment.

The Permittee is required to comply with all applicable environmental laws and regulations enforced by the Department. These environmental laws and regulations are administered by the Air Pollution Control Program, Hazardous Waste Program, Land Reclamation Program, Solid Waste Management Program, and Water Protection Program. Failure to comply with these environmental laws and regulations may, in certain circumstances, result in the suspension or revocation of this Permit and may subject the permit holder to civil and criminal liability.

## DEFINITIONS

For purposes of this Permit, terms used herein shall have the same meaning as those in RCRA and 40 CFR Parts 260, 261, 264, 266, 268, and 270, and 10 CSR 25, unless this Permit specifically provides otherwise. Where terms are not defined in RCRA, the regulations, this Permit, or EPA guidance or publications, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

“Approved Permit Application” means the original permit application and all subsequent revisions or addenda to the permit application, and any completeness and technical information submitted as referenced in the Introduction of this Permit.

“Area of Concern (AOC)” means any area where an actual or potential release of hazardous wastes or hazardous constituents that is not from a Solid Waste Management Unit has occurred or is occurring and is determined by the Department to pose a current or potential threat to human health or the environment. Investigation and/or remediation of AOCs may be required pursuant to Section 260.395, RSMo, and 40 CFR 270.32(b)(2), as incorporated in 10 CSR 25-7.270(1).

“Consolidated Permit Application” means the approved permit application, any changes resulting from the public comment period, and all additional documents required to be submitted under the Schedule of Compliance contained in this Permit.

“Corrective Action” means the investigation and remediation of hazardous wastes and hazardous constituents from any past and present release(s), including contamination that may have migrated beyond the boundaries of the permitted property.

“Director” means the Director of the Missouri Department of Natural Resources or authorized delegate.

“Facility” means:

- (1) All contiguous land and structures, other appurtenances, and improvements on the land used for treating, storing, or disposing hazardous waste; and
- (2) All contiguous property under the control of the owner or operator, for the purpose of implementing corrective action under 40 CFR 264.101, as incorporated by reference in 10 CSR 25-7.264(1) and as specified in this Permit.

“Hazardous constituent” means any chemical compound listed in 40 CFR Part 261 Appendix VIII, as incorporated by reference in 10 CSR 25-4.261.

“Hazardous waste” means any waste, or combination of wastes, as defined by or listed in 10 CSR 25-4, which, because of its quantity, concentration, physical, chemical, or infectious characteristics, may cause or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness or which may pose a threat to the health of humans or other living organisms.

“Interim/Stabilization Measures” means actions to control or abate threats to human health and/or the environment from releases at RCRA facilities and/or to prevent or minimize the further spread of contamination while long-term remedies are pursued.

“Release” means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes or hazardous constituents into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents).

“Remediation Waste” means all solid and hazardous wastes, and all media (including groundwater, surface water, soils, and sediments) and debris, that are managed for implementing cleanup.

“Solid Waste Management Unit (SWMU)” means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

“Thermal treatment” means the treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste.

**SCHEDULE OF COMPLIANCE**

- I. Within 60 calendar days after the effective date of this Permit, the Permittee shall:
  - A. Submit to the Department two paper copies of any changes resulting from public participation comments on the draft Permit, and one searchable electronic copy of the consolidated permit application, as required by 10 CSR 25-7.270(2)(B)7. and defined in the Introduction of this Permit.
  - B. Submit to the Department a certification by the Permittee that the Permittee has read this Permit in its entirety and understands all permit conditions contained in this Permit.
  - C. Submit to the Department, to the attention of the Hazardous Waste Program, Permits Section, a check or money order payable to "State of Missouri" for any outstanding engineering review costs.
  - D. Submit to the Department, to the attention of the Hazardous Waste Program, Permits Section, a check or money order payable to "State of Missouri" for \$1000 for each year this Permit is to be in effect beyond the first year. This Permit is effective for ten years. Since the Permittee has submitted a \$1000 deposit with the permit application and paid a \$1000 permit continuation fee for the current year, the remaining balance to be submitted by the Permittee is calculated as:

$$\text{Remaining balance} = \$9000.00 - \frac{\$1000.00}{365 \times \text{days}} \times N_d$$

where  $N_d$  equals the number of calendar days from the expiration date of the continued permit (which coincides with the anniversary date of the original permit issuance) to the date of permit reissuance. An invoice is included with this Permit based on the foregoing formula.

- II. The Permittee shall comply, as necessary, with all contingent corrective action requirements of this Permit, as specified in the Corrective Action Conditions of this Permit and as summarized in Table 3.

## **SUBMITTAL OF REQUIRED INFORMATION**

- I. Unless otherwise requested by the Department, the Permittee shall submit two paper copies and one searchable electronic copy of all reports, documents, plans/specifications, and consolidated permit application required under the terms of this Permit to:

Chief, Permits Section  
Missouri Department of Natural Resources  
Hazardous Waste Program  
P.O. Box 176  
Jefferson City, MO 65102-0176

- II. The Permittee shall submit one paper copy and one searchable electronic copy of all reports, documents, plans/specifications, and consolidated permit application required under the terms of this Permit to:

Chief, Waste Remediation and Permitting Branch  
U.S. Environmental Protection Agency Region 7  
Air and Waste Management Division  
11201 Renner Boulevard  
Lenexa, KS 66219

- III. If the Permittee requires additional time to submit a scheduled document or perform other activities required by this Permit, the Permittee shall submit a written extension request to the Department in accordance with Corrective Action Condition XV. of this Permit.

## **STANDARD PERMIT CONDITIONS**

- I. The Permittee shall comply with the requirements set forth in the Missouri Hazardous Waste Management Law and all corresponding standards, rules, and regulations adopted under this Law, Section 260.350, et seq., RSMo, 40 CFR Part 264 Subpart H, 40 CFR 264.101, 40 CFR 270.10, 40 CFR 270.30, 40 CFR 270.40, 40 CFR 270.42, and 40 CFR 270.51, as incorporated and modified in 10 CSR 25-7 and 10 CSR 25-8.124.

## **GENERAL PERMIT CONDITIONS**

- I. The Permittee shall comply with the applicable requirements described in 40 CFR Part 264 Subparts B, C, D, E, and G, 40 CFR Part 268, and 40 CFR Part 270, as incorporated and modified in 10 CSR 25-7 and 10 CSR 25-8.124.

- II. Notification of an Emergency Situation [Chapter 260.505.4, RSMo]

The Permittee shall, at the earliest practical moment upon discovery of an emergency involving the hazardous waste under the Permittee's control, implement the facility contingency plan, including notifying the Department's emergency response hotline at (573) 634-2436 and the National Response Center at 1-800-424-8802.

Within 15 calendar days of the incident occurrence, the Permittee shall submit a written report to the Department providing details. The content of the written report shall conform to 40 CFR 264.56(j), as incorporated by reference in 10 CSR 25-7.264(1), and be provided to the addressees listed in "Submittal of Required Information" provision.

- III. This Permit does not authorize the management of any non-hazardous solid waste outside of the hazardous waste management processes and units described herein. Handling of non-hazardous solid waste outside of the requirements of this Permit is subject to regulation under the state of Missouri's Solid Waste Management Law and regulations and is not authorized by this Permit.

## **SPECIAL PERMIT CONDITIONS**

In accordance with 40 CFR 270.32, as incorporated by reference in 10 CSR 25-7.270(1), the Department has established the following permit conditions for the Permittee and the hazardous waste facility at the location specified in this Permit.

### **I. Storage in Containers [10 CSR 25-7.264(2)(I)]**

Twelve container storage areas are currently permitted and operating, Building (BLDG) 13D, BLDG 13E, BLDG 13F, BLDG 130A, BLDG 130D, BLDG 130E, BLDG 130F, BLDG 49BB Cell A1, 49BB Cell A3, BLDG 68C, BLDG 97 PORCH, and BLDG 97B. These areas are located as shown on Figure 1 and are subject to the requirements of 10 CSR 25-7.264(2)(I).

#### **A. Waste Identification**

The Permittee shall store, in the permitted container storage areas, only the hazardous wastes identified in Part A of the approved permit application. Non-regulated material may be stored in the permitted container storage areas as long as the material does not interfere with hazardous waste operations, is containerized, and is managed according to the requirements of Special Permit Condition I. of this Permit. All stored wastes are subject to the terms of this Permit.

#### **B. Waste Quantities**

The Permittee shall adhere to the waste quantities in this Permit in addition to Department of Defense quantity limitations (the more stringent limitation shall apply). The maximum quantity of wastes that may be stored in each permitted container storage area is specified below:

1. **BLDG 13D:** The Permittee shall not store containers containing munitions or munitions components that bear the D003 waste code in this building. The Permittee may store containers containing free liquids in this building. The areas associated with BLDG 13D shall be limited to the amounts listed below:
  - a. Area A shall not contain more than 10,560 gallons or 192 fifty-five gallon containers, whichever is less.

- b. Area B shall not contain more than 4,400 gallons or 80 fifty-five gallon containers, whichever is less.
  - c. Area C shall not contain more than 5,280 gallons or 96 fifty-five gallon containers, whichever is less.
  - d. Area D shall not contain more than 5,280 gallons, or 96 fifty-five gallon containers, whichever is less.
- 2. Buildings 13E and 13F: Each building shall not contain more than 672 fifty-five gallon containers. The Permittee shall not store containers containing free liquids in these buildings.
  - 3. Building 49BB Cell A1 and 49BB Cell A3: Each cell shall not contain more than 3,960 gallons or exceed the net explosive weight limit of 2000 pounds, whichever is less. The Permittee may store containers containing free liquids in these buildings.
  - 4. Building 97 Porch: Building 97 Porch shall not exceed the net explosive weight limit of 400 pounds. The Permittee shall not store containers containing free liquids in this building.
  - 5. Building 97B: Building 97B shall not exceed the net explosive waste limit of 600 pounds. The Permittee shall not store containers containing free liquids in this building.
  - 6. Building 130A: Building 130A shall not exceed the net explosive waste limit of 60,000 pounds. The Permittee shall not store containers containing free liquids in this building.
  - 7. Buildings 130D, 130E, 130F, and 68C: Each building shall not exceed the net explosive weight limit of 100,000 pounds. The Permittee shall not store containers containing free liquids in these buildings.

C. Condition of Containers [40 CFR 264.171]

- 1. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer the hazardous waste to a container that is in good



condition or manage the waste in some other way that complies with the conditions of this Permit, such as over-packing.

2. Containers storing hazardous wastes that will be shipped off-site or that have the potential for off-site shipment, shall be labeled individually during the entire on-site storage period according to the applicable, currently-effective U.S. Department of Transportation (USDOT) regulations regarding hazardous wastes, 49 CFR Part 172 and 10 CSR 25-5.262(2)(C)1.A., except for assigning manifest numbers, or according to 10 CSR 25-5.262(2)(C)1.B.
3. In lieu of labeling individual containers with USDOT labels, as required by Special Permit Condition I.C.2 above, the Permittee may place U.S. Department of Defense (USDOD) placards at exits and entrances of storage buildings and areas for hazardous wastes that will not be shipped off-site. Such storage shall be in accordance with the following:
  - a. Hazardous waste contained in the placarded storage buildings must be produced and managed on site;
  - b. Hazardous wastes may not have been in storage in excess of one year;
  - c. USDOD placarding displayed on individual storage buildings must apply to each waste type located within the subject storage area;
  - d. All vehicles used for on-site transportation of these hazardous wastes must also be appropriately placarded per USDOD requirements. Placards displayed on individual vehicles must apply to each waste type being transported on-site at any given time.

D. Compatibility of Waste with Containers [40 CFR 264.172]

1. The Permittee shall use a container made of, or lined with, materials that will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

2. Containers used for storage of hazardous waste on-site shall be in compliance with USDOT standards or USDOD standards, as noted in the approved permit application. Specifically, storage of hazardous waste outside of USDOT-approved containers shall be in accordance with the following:
  - a. Munitions may be stored in ammunition containers; and
  - b. Explosive wastes that require desensitizing by storing completely submerged in water may be stored in open top, 40-quart steel stockpots, stainless steel buckets, or velostat buckets.

E. Management of Containers [40 CFR 264.173]

1. A container holding hazardous waste shall always be closed during storage, except when it is necessary to add or remove waste, or when reactive waste is stored underwater and closing the container would create an unsafe condition. A container holding hazardous waste shall not be opened, handled, or stored in a manner that may rupture the container or cause it to leak or spill.
2. The Permittee shall store containers in a manner that ensures physical stability and allows for visual inspection of each container and each container's label, except:
  - a. For visual inspection of containers not containing free liquids where container size prohibits the inspection of center containers when palletized, provided the outermost containers are clearly labeled as to the total amounts, codes, and names of hazardous waste on the pallet; and
  - b. For visual inspection of containers containing free liquids where container size prohibits the inspection of center containers when palletized provided:
    - (1) The hazardous wastes within a pallet are all the same material;

- (2) If a container on the pallet leaks, the pallet is unloaded and the spill is remedied according to the approved permit application; and
    - (3) The outermost containers are clearly labeled as to the total amounts, codes, and name of hazardous waste on the pallet.
  3. Containers shall not be stacked in a manner that causes leaks or spills of hazardous waste.
    - a. Class 1 flammable liquids, as defined in the National Fire Protection Association's "Flammable and Combustible Liquids Code" (NFPA 30, as revised 1996) shall be stacked no higher than five feet.
    - b. Class II combustible liquids, as defined in the National Fire Protection Association's "Flammable and Combustible Liquids Code" (NFPA 30, as revised 1996) shall be stacked no higher than ten feet.
  4. The aisle space between rows shall be maintained to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation.
- F. Inspections [40 CFR 264.174]
  1. At least weekly, and according to the schedules in the approved permit application, the Permittee shall inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors.
- G. Containment [40 CFR 264.175]
  1. The Permittee shall design and operate containment systems for Container Storage Areas BLDG 49BB Cell A1, BLDG 49BB Cell A3, and BLDG 13D as follows:

- a. A base shall underlie the containers, which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.
- b. The base shall be sloped or the containment system shall be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids.
- c. The containment system shall have sufficient capacity to contain ten percent of the volume of all containers or 100 percent of the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination.
- d. Run-on into the containment system shall be prevented unless the collection system has sufficient excess capacity in addition to that required in Special Permit Condition I.G.1.c. of this Permit, to contain any run-on that might enter the system.
- e. Spilled or leaked waste shall be removed from the sump or collection area, and the area shall be cleaned up, in as timely a manner as is necessary to prevent overflow of the collection system.

H. Staging [40 CFR 262.34]

A container holding hazardous waste shall not be staged, stored, or managed in an area not specified in this Permit for a period that exceeds 24 hours, unless the area is being operated as a less than 90-day storage area.

I. Special Requirements for Ignitable or Reactive Waste [40 CFR 264.176 and 10 CSR 25-7.264(2)(I)]

Containers holding ignitable or reactive waste shall be located at least 50 feet from the facility's property line.

J. Special Requirements for Incompatible Waste [40 CFR 264.177]

1. The Permittee shall not place incompatible wastes or materials in the same container, unless such action complies with the requirements of 40 CFR 264.17(b).
2. The Permittee shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material.
3. The Permittee shall separate by device (i.e., a dike or other physical means) containers of incompatible waste or materials. No incompatible waste or materials may be stored together in the container storage areas without providing separation sufficient to prevent the mixing of any spilled materials that may be incompatible.

K. Closure [40 CFR 264.178]

At closure, the Permittee shall remove all solid and hazardous waste and hazardous waste residues from the container storage areas and containment systems and close according to the Closure Plan included in the approved permit application. If the Permittee is unable to close according to the Closure Plan, the Permittee shall submit a permit modification to the Department, in accordance with 40 CFR 270.42.

II. Incinerator Requirements [40 CFR Part 264 Subpart O]

A. Description of the Incinerator

The Explosive Waste Incinerator (EWI) consists of a rotary kiln with an air pollution control system consisting of an afterburner, evaporative cooler, carbon injection system, and baghouse. The rotary kiln is designed to treat waste munitions and similar explosives.

The Permittee has demonstrated compliance with the Maximum Achievable Control Technology (MACT) requirements of 40 CFR Part 63 Subpart EEE, by conducting a comprehensive performance test and submitting to the Director a copy of the Notification of Compliance under 40 CFR 63.1207(j) and 63.1210(d). The Permittee completed these activities in January 2004.

B. Closure [40 CFR Part 264 Subpart G]

At closure, the Permittee shall remove all hazardous waste and hazardous waste residues from the incinerator and associated equipment and close according to the Closure Plan in the approved permit application. If the Permittee is unable to close according to the Closure Plan, the Permittee shall submit a permit modification to the Department, in accordance with 40 CFR 270.42.

III. Waste Minimization

Pursuant to 40 CFR 264.73(b)(9), as incorporated by reference in 10 CSR 25-7.264(1), the facility operating record shall contain a certification by the Permittee, made no less often than annually, that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that the Permittee generates to the degree determined by the Permittee to be economically practicable; and the proposed method of treatment, storage, or disposal is that practicable method currently available to the Permittee which minimizes any present and future threats to human health and the environment.

IV. 100-Year Floodplain Requirements [40 CFR 264.18(b)]

The Permittee submitted information, as required in 40 CFR 270.14(b)(11)(iii) and 40 CFR 270.28, that identifies the active portion of the facility as not being located in a 100-year floodplain. The Permittee shall maintain this information in the facility operating record.

V. Post-Closure [40 CFR Part 264 Subpart G]

The Permittee shall comply with all applicable requirements of 40 CFR Part 264 Subpart G, as incorporated by reference in 10 CSR 25-7.264(1), and all provisions of this Permit.

A. Post-Closure Care and Use of Property [40 CFR 264.117]

1. According to 40 CFR 264.117(a)(1), post-closure care begins after the acceptance of the closure certification of the hazardous waste management unit and continues for 30 years after that date, unless modified according to 40 CFR 264.117(a)(2) or otherwise specified by the Department.
  - a. Oil and Grease Trenches: The Department accepted the closure certification on March 22, 1989, starting the post-closure care

period. The post-closure care plan was received on June 16, 1989, and approved, with modifications, on April 10, 1990. This post-closure plan is hereby incorporated by reference.

- b. East Industrial Wastewater Treatment Plant Impoundments: The Department accepted the closure certification on March 22, 1989, starting the post-closure care period. The post-closure care plan was received on June 16, 1989, and approved, with modifications, on April 10, 1990. This post-closure plan is hereby incorporated by reference.
  - c. West Industrial Wastewater Treatment Plant Impoundments: The Department accepted the closure certification on March 22, 1989, starting the post-closure care period. The post-closure care plan was received on June 16, 1989, and approved, with modifications, on April 10, 1990. This post-closure plan is hereby incorporated by reference.
  - d. Explosive Wastewater Lagoons: The Department accepted the closure certification for four explosive wastewater lagoons on September 21, 1990, starting the post-closure care period. The post-closure care plan was submitted on May 22, 1990. This post-closure plan is hereby incorporated by reference.
  - e. Explosive Wastewater Impoundments: The Department accepted the closure certification for seven explosive Wastewater Impoundments on February 21, 1989, starting the post-closure care period. The post-closure care plan was submitted on March 14, 1990. This post-closure plan is hereby incorporated by reference.
  - f. Area 8 Landfill: The Department accepted the closure certification on April 19, 2016, starting the post-closure care period. The post-closure care plan, dated June 2008, was approved, with modifications, on August 21, 2008. This post-closure plan is hereby incorporated by reference.
2. During the post-closure care period, the Permittee shall comply with the applicable maintenance, monitoring, and reporting requirements of 40 CFR Part 264 Subparts F, G, K, and N, as incorporated by reference in 10 CSR 25-7.264(1).

3. During the post-closure care period, the Permittee shall comply with the requirements of 40 CFR 264.310, including, but not limited to:
  - a. Maintaining the integrity and effectiveness of the final covers;
  - b. Continuing to operate the leachate collection system (LCS) as outlined in the approved permit application (if applicable);
  - c. Maintaining and monitoring the leak detection system (LDS) and complying with all applicable LDS requirements as outlined in the approved permit application (if applicable);
  - d. Maintaining and monitoring the groundwater monitoring system and complying with all applicable requirements of 40 CFR Part 264 Subpart F (if applicable);
  - e. Preventing run-on and runoff from eroding or otherwise damaging the final covers; and
  - f. Protecting and maintaining surveyed benchmarks used to comply with 40 CFR 264.309.
  
4. In the event that a significant ground subsidence or collapse occurs within 1000 feet of any active hazardous waste management (regulated) unit, SWMU, AOC, or area under post-closure care, the Permittee shall notify the Department verbally or in writing within five calendar days of becoming aware of a subsidence or collapse feature. The Permittee shall also notify the Department of any subsidence or collapse within the facility property boundary that alters surface or groundwater flows to or from any land-based units closed with waste in place. The Permittee shall allow the Department to inspect the feature in order to evaluate the subsidence or collapse prior to conducting any repairs. The Permittee shall, within 30 calendar days of the Department's written request, prepare and submit a plan for repair of the feature to the Department for review and approval. Any repair plan submitted to the Department shall contain post-repair reporting provisions that include providing detailed documentation of the location, repair work conducted, before and after photographs, etc., in a final report to the Department.



5. The Permittee shall continue to provide for the proper operation and maintenance of any engineering controls implemented as part of the approved permit application. These actions are necessary to prevent human exposure to soils and/or groundwater contaminated with hazardous wastes or hazardous constituents in concentrations exceeding applicable risk-based criteria. The engineering controls shall not be disturbed and shall remain in place and be effective unless or until the Department provides written approval to alter, modify, eliminate, or otherwise cease operation and maintenance of such controls.
6. Post-closure use of the property shall be restricted by the Permittee to prevent disturbance of the integrity of the final cover of each closed landfill and to prevent damage to the monitoring systems. The Department may approve a use of the property that disturbs the integrity of the final covers if it is necessary for the proposed use of the property and will not increase the potential hazard to human health or the environment, or if it is necessary to reduce a threat to human health or the environment.
7. The Permittee may submit a request to the Department to shorten the post-closure care period. Justification for shortening the post-closure care period shall accompany any such request. The Department may approve the request if it determines that a shortened post-closure care period is sufficient to protect human health and the environment. Approval to shorten the post-closure care period shall be according to the applicable permit modification procedures in 40 CFR Part 270, 10 CSR 25-7, and 10 CSR 25-8.124.

B. Post-Closure Plan and Amendments [40 CFR 264.118]

1. Post-closure care shall be conducted according to the post-closure care plans included in the approved permit application and all conditions of this Permit.
2. The post-closure care plan(s) may be amended at any time during the active life of the facility or the post-closure care period. Amendments are subject to the applicable permit modification requirements of 40 CFR Part 270 Subpart D and 10 CSR 25-8.124. Written requests for amendments shall be submitted at least 60 calendar days before the proposed change in post-closure operations, or not later than 60 calendar days after the occurrence of an unexpected event that has affected the

post-closure care plan(s). The Department may request modifications to the post-closure care plan(s) if changes in operations at the facility affect the approved post-closure care plan(s). The Permittee shall submit the modified post-closure care(s) plan no later than 60 calendar days after receipt of the Department's request. Any modifications requested by the Department are subject to the applicable permit modification requirements of 40 CFR Part 270 Subpart D and 10 CSR 25-8.124.

3. During the post-closure care period, the facility contact shall keep the approved post-closure care plan(s) for the post-closure care period, as required by 40 CFR 264.118(c).

C. Future Removal of Hazardous Wastes [40 CFR 264.119(c)]

If the Permittee wishes to remove hazardous wastes, hazardous waste residues, contaminated soils, or contaminated sludges from within the boundaries of the landfills or surface impoundments, the Permittee shall request a modification of this Permit, according to the applicable requirements in 40 CFR Part 270 Subpart D and 10 CSR 25-8.124. The modification request shall include a demonstration that the proposed action(s) will not increase potential hazards to human health or the environment, or the action(s) is necessary to reduce threats to human health or the environment, in accordance with 40 CFR 264.117(c). By removing contaminants, the Permittee may become a generator of hazardous waste and shall manage any removed material according to all applicable laws, regulations, and ordinances.

D. Certification of Completion of Post-Closure Care [40 CFR 264.120]

No later than 60 calendar days after the completion of the post-closure care period(s) (including any necessary extensions), the Permittee shall submit to the Department, by certified mail, a certification that the post-closure care period was performed according to the approved post-closure plan(s). The certification shall be signed by the Permittee and a professional engineer registered in Missouri, and shall include documentation supporting the certification.

VI. Groundwater Monitoring and Corrective Action [40 CFR Part 264 Subpart F]

- A. Groundwater Monitoring and Corrective Action for Post-Closure Units
1. Groundwater monitoring, groundwater protection standards, and corrective action for releases of hazardous waste or hazardous constituents from hazardous waste management units subject to post-closure care have been deferred to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) program. This deferral shall continue as long as those actions being conducted under CERCLA are consistent with and otherwise address the substantive requirements that would otherwise apply pursuant to 10 CSR 25-7.264(1), which incorporates by reference 40 CFR 264.90 through 40 CFR 264.100. If, at any time, the Department determines that all corrective action issues are not being addressed in accordance with these requirements, the Department shall notify the Permittee in writing and this Permit may be modified pursuant to 40 CFR 270.41 or 40 CFR 270.42, as applicable, to address the requirement(s) in question.

VII. Air Emission Standards for Tanks, Surface Impoundments, and Containers

- A. The Permittee shall comply with the applicable requirements of 40 CFR Part 264 Subpart CC, as incorporated by reference in 10 CSR 25-7.264(1), for all units identified in Table 1.

**Table 1 - Units Subject to Subpart CC Standards**

<b>Unit Identification</b>	<b>Unit Type</b>	<b>Subpart CC Control Option</b>
BLDG 13D	Container Storage	40 CFR 264.1086

## **CORRECTIVE ACTION CONDITIONS**

The Permittee shall comply with all applicable closure, post-closure care, and corrective action requirements contained in 40 CFR Part 264 Subparts F, G, H, and S, as incorporated by reference in 10 CSR 25-7.264(1) and all provisions of this Permit, for any newly-identified SWMUs, AOCs, and releases identified pursuant to the provisions of this Permit.

### **I. Identification of SWMUs and AOCs [40 CFR 264.101]**

- A. Corrective action requirements for known SWMUs and AOCs and known releases from those SWMUs and AOCs have been deferred to the CERCLA program through the Lake City Army Ammunition Plant 120 Inter-Agency Agreement. This deferral applies to the units identified in the approved Permit application. This deferral shall continue as long as those actions being conducted under CERCLA are consistent with and otherwise address the substantive requirements that would otherwise apply pursuant to 10 CSR 25-7.264(1), which incorporates by reference 40 CFR 264.101. If, at any time, the Department determines that all corrective action issues are not being addressed in accordance with these requirements, the Department shall notify the Permittee in writing and this Permit may be modified pursuant to 40 CFR 270.41 or 40 CFR 270.42, as applicable, to address the requirement(s) in question.

### **II. Notification Requirements for, and Assessment of, Newly-Identified SWMUs and AOCs**

- A. The Permittee shall notify the Department and EPA, in writing, no later than 15 calendar days after discovery (e.g., visual observations, laboratory test results, or information not previously available) or after discovery should have been made, of any new SWMU(s) or AOC(s) identified after the issuance of this Permit.
- B. The Department may require the Permittee to conduct an investigation of any newly-identified SWMU(s) or AOC(s). The Department shall notify the Permittee, in writing, of this decision. Within 30 calendar days after receipt of the Department's request to conduct an investigation, the Permittee shall prepare and submit a SWMU/AOC Assessment Work Plan to the Department and EPA for review and approval. The SWMU/AOC Assessment Work Plan shall include, but not be limited to, the following:
  - 1. A discussion of past hazardous wastes management practices related to the unit(s).

2. A detailed investigation approach for surface and subsurface soils, surface water, groundwater, and air as necessary to:
    - a. Determine if a release of hazardous wastes or hazardous constituents has occurred or is occurring at the unit(s);
    - b. Yield reliable, representative samples and results;
    - c. Determine impacts or potential impacts to human health and the environment; and
    - d. Sufficiently assess all hazardous wastes and hazardous constituents related to the unit(s).
  3. A proposed schedule for implementing the SWMU/AOC Assessment Work Plan, which is predicated on the date of Departmental approval of the plan.
  4. Identification of all data to be collected necessary to provide for a complete SWMU/AOC Assessment Report, as specified below.
- C. The Department shall review and approve the SWMU/AOC Assessment Work Plan according to the procedures described in Corrective Action Condition XIII. of this Permit. The Permittee shall complete all activities described in the SWMU/AOC Assessment Work Plan according to the schedule contained in the approved plan.
- D. The Permittee shall submit a SWMU/AOC Assessment Report to the Department and EPA according to the schedule specified in the approved SWMU/AOC Assessment Work Plan. The SWMU/AOC Assessment Report shall present and discuss the information obtained under the approved SWMU/AOC Assessment Work Plan. At a minimum, the SWMU/AOC Assessment Report shall provide the following information for each newly-identified SWMU or AOC:
1. The location of the newly-identified SWMU or AOC in relation to other SWMU(s) and AOC(s);
  2. The type and function of the SWMU or AOC;

3. The general dimensions, capacities, and structural description of the SWMU or AOC;
  4. The period during which the SWMU or AOC was operated;
  5. The physical and chemical properties of all wastes that have been or are being managed at the SWMU or AOC, to the extent possible;
  6. The results of any sampling and analysis conducted;
  7. Past and present operating practices;
  8. Previous uses of the area occupied by the SWMU or AOC;
  9. Amounts of waste handled;
  10. Drainage areas and/or drainage patterns near the SWMU or AOC; and
  11. A recommendation as to whether further action is necessary and justification for the recommendation. If further action is recommended, the SWMU/AOC Assessment Report shall include a proposal for additional investigation or corrective action, as appropriate.
- E. The Department shall review and approve the SWMU/AOC Assessment Report according to the procedures described in Corrective Action Condition XIII. of this Permit. Based on the findings of this report and any other available information, the Department shall determine the need for additional investigation, including interim/stabilization measures or a RCRA Facility Investigation (RFI), at specific unit(s) identified in the SWMU/AOC Assessment Report.
- F. If the Department determines that additional investigations are needed, the Department may require the Permittee to prepare and submit for approval a work plan for such investigations according to the applicable Corrective Action Conditions of this Permit. The Department shall review and approve any such work plan according to the procedures described in Corrective Action Condition XIII. of this Permit. The Permittee shall complete all activities described in the work plan according to the schedule contained in the approved plan.

III. Notification Requirements for, and Assessment of, Newly-Identified Releases from Previously-Identified SWMUs and AOCs

- A. The Permittee shall notify the Department and EPA, in writing, no later than 15 calendar days after discovery (e.g., visual observations, laboratory test results, or information not previously available) or after discovery should have been made, of any newly-identified release(s) of hazardous wastes or hazardous constituents from any previously-identified SWMU(s) or AOC(s) at the facility, including those being investigated and reported as part of the corrective action process that are discovered during the course of groundwater monitoring, field investigation, environmental auditing, or other activities undertaken after issuance of this Permit. The Department may examine the Facility's inspection records to determine if the Permittee should have known such a release has occurred.
- B. The Department may require the Permittee to conduct an investigation of the newly-identified release(s). The Department shall notify the Permittee, in writing, of this decision. Within 30 calendar days after receipt of the Department's request to conduct an investigation, the Permittee shall prepare and submit a Newly-Identified Release Work Plan to the Department and EPA for review and approval. The Newly-Identified Release Work Plan shall include, but not be limited to, the following:
1. A discussion of the hazardous waste/chemical management practices related to the release(s);
  2. A detailed investigation approach for groundwater, land surface and subsurface soils, surface water, and air as necessary to:
    - a. Define the extent of the release area(s);
    - b. Yield reliable, representative samples and results;
    - c. Determine impacts or potential impacts to human health and the environment; and
    - d. Sufficiently assess all hazardous wastes and hazardous constituents related to the release(s).

3. A proposed schedule for implementing the Newly-Identified Release Work Plan, which is predicated on the date of Departmental approval of the plan; and
  4. Identification of all data to be collected necessary to provide for a complete Newly-Identified Release Report, as specified below.
- C. The Department shall review and approve the Newly-Identified Release Work Plan according to the procedures described in Corrective Action Condition XIII. of this Permit. The Permittee shall complete all activities described in the Newly-Identified Release Work Plan according to the schedule contained in the approved plan.
- D. The Permittee shall submit a Newly-Identified Release Report to the Department and EPA according to the schedule specified in the approved Newly-Identified Release Work Plan. The Newly-Identified Release Report shall present and discuss the information obtained under the approved Newly-Identified Release Work Plan. At a minimum, the report shall provide the following information for each newly-identified release:
1. The location of the newly-identified release in relation to the SWMU(s) or AOC(s) under investigation and to any other SWMU(s) and AOC(s);
  2. The general dimensions of the release;
  3. The period during which the release is suspected to have occurred;
  4. The physical and chemical properties of all wastes that have been determined to comprise the release;
  5. The results of any sampling and analysis conducted;
  6. Past and present operating practices near and at the location of the release;
  7. Previous uses of the area(s) occupied near and at the location of the release;
  8. Amounts of waste handled near and at the location of the release;



9. Drainage areas and/or drainage patterns near and at the location of the release; and
  10. A recommendation as to whether further action is necessary and justification for the recommendation. If further action is recommended, the Newly-Identified Release Report shall include a proposal for additional investigation or corrective action, as appropriate.
- E. The Department shall review and approve the Newly-Identified Release Report according to the procedures described in Corrective Action Condition XIII. of this Permit. Based on the findings of the report and any other available information, the Department shall determine the need for additional investigation, including interim/stabilization measures or an RFI, at specific releases(s) identified in the Newly-Identified Release Report.
- F. If the Department determines that additional investigation is needed, the Department may require that the Permittee prepare and submit for approval a work plan for such investigations in accordance with the applicable Corrective Action Conditions of this Permit. The Department shall review and approve any such work plan according to the procedures described in Corrective Action Condition XIII. of this Permit. The Permittee shall complete all activities described in the work plan according to the schedule contained in the approved plan.

IV. Interim/Stabilization Measures

- A. Should the Permittee become aware of a situation that may require Interim Stabilization Measures (ISMs) that may be necessary to protect human health or the environment, the following conditions shall apply:
1. The Permittee shall notify the Department and EPA within 24 hours after becoming aware or should have become aware of a situation that may require ISMs to protect human health or the environment. The Department may examine the Facility's inspection records to determine if the Permittee should have known that ISMs might be required and notification should have occurred.
  2. If, during the course of any activities initiated under this Permit, the Permittee or the Department determines that a release or potential release of hazardous wastes or hazardous constituents poses a threat to human

health or the environment, the Department may require ISMs to slow or stop the further spread of contamination until final corrective action measures are implemented. The Department shall determine the specific action(s) that shall be taken to implement ISMs, including potential permit modifications, and the schedule for implementing the ISMs. The Department shall notify the Permittee, in writing, of decisions regarding the action(s). This requirement shall not preclude the Permittee from responding to an emergency situation without direction from the Department.

3. In cases where releases or potential releases present minimal exposure concerns and/or the remedial solution is relatively uncomplicated, the Permittee may propose ISMs to the Department for review and approval. These ISMs shall be consistent with and may supplement or satisfy the requirements for a final remedy(s) in specific areas. Proposed ISMs that are determined by the Department to be significant (e.g., those which are anticipated to make up a substantial part of the final remedy) may be subject to public review and comment before final approval by the Department. Proposed ISMs that are determined by the Department not to be significant will be reviewed and approved according to the procedures described in Corrective Action Condition XIII. of this Permit.
4. The Permittee shall notify the Department and EPA, in writing, no later than ten calendar days after determining or after a determination should have been made, that the ISMs are not effectively limiting or stopping the further spread of contamination. The Department may require the ISMs be revised to make them effective in limiting or stopping the spread of contamination, or that additional corrective action measures are required to address the contaminated media.

V. Contingent RCRA Facility Investigation (RFI) Work Plan

- A. If the Department determines that additional investigations are needed, the Department may require the Permittee to conduct an RFI. The Department shall notify the Permittee, in writing, of this decision. Within 60 calendar days after receipt of the Department's request to conduct an RFI, and after meeting with the Department to discuss the content of the Work Plan, the Permittee shall prepare and submit an RFI Work Plan to the Department and EPA for review and approval.

- B. The RFI Work Plan shall be designed to investigate releases of hazardous wastes and hazardous constituents to all appropriate media of concern including surface and subsurface soils, surface water, sediment, groundwater, and air, as necessary. In order to substantiate future corrective action decisions, the RFI Work Plan shall contain provisions that are sufficient to meet the following objectives and a proposed schedule for implementing the RFI Work Plan, which is predicated on the date of Departmental approval of the plan:
1. Full characterization of the nature, vertical and horizontal extent, and rate of migration of releases of hazardous wastes and hazardous constituents from SWMUs and AOCs, or groups of SWMUs and AOCs, or newly-identified release(s) at the facility and the actual or potential receptors of such releases; and
  2. Collection of any other pertinent data that may be utilized to substantiate future corrective action decisions.
- C. The RFI Work Plan shall be appropriate for site-specific conditions and shall be consistent with and address all applicable investigation elements described in the EPA document entitled, RCRA Facility Investigation (RFI) Guidance, EPA 530/SW-89-031, May 1989, or the most recent version. At a minimum, the RFI Work Plan shall detail all proposed activities and procedures to be conducted at the facility, including, but not limited to, the following:
1. A description of current conditions;
  2. The schedule for implementing and completing such investigations and for submission of reports (including the RFI Report);
  3. The qualifications of personnel performing or directing the investigations, including contractor personnel; and
  4. The overall management of the RFI activities.
- D. The RFI Work Plan shall include a Quality Assurance Project Plan (QAPP). The QAPP shall present the policies, organization, objectives, functional activities, and specific quality assurance and quality control activities designed to achieve the data quality goals of the RFI. It shall include, at a minimum, the RFI objectives, sampling procedures, analytical methods, field and laboratory quality control samples, chain-of-custody procedures, and data review, validation, and

reporting procedures. The Permittee shall follow the EPA document entitled, EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5, March 2001, (reissued May 2006) or the most recent version.

- E. The Permittee shall prepare and maintain a Health and Safety Plan during the project that assures the RFI activities are conducted in a manner that is protective of human health and the environment.
- F. Due to the complexity of defining the extent of contamination, the Permittee may be required to use a phased approach that requires the submittal of supplemental RFI Work Plans.
- G. The Department shall review and approve the RFI Work Plan(s) according to the procedures described in Corrective Action Condition XIII. of this Permit. The Permittee shall complete all activities described in the RFI Work Plan(s) according to the schedules contained in the approved plan(s).

VI. Contingent RCRA Facility Investigation (RFI) Report

- A. Should the submittal of an RFI Work Plan become necessary, the Permittee shall submit an RFI Report to the Department and EPA, according to the schedule specified in the approved RFI Work Plan described in Corrective Action Condition V. of this Permit. The RFI Report shall present all information obtained under the approved RFI Work Plan, along with a brief facility description and map showing the property boundary and all SWMUs and AOCs. The RFI Report shall contain adequate information to support additional corrective action decisions at the facility. Information contained in the RFI Report shall be presented in a format that is consistent with Section 5 of the EPA document entitled, RCRA Facility Investigation (RFI) Guidance, EPA 530/SW-89-031, May 1989, or the most recent version.
- B. The RFI Report shall provide an interpretation of the RFI information gathered, supported with adequate documentation, to enable the Department to determine whether additional ISMs or a Corrective Measures Study (CMS) may be necessary. The RFI Report shall describe the procedures, methods, and results of all investigations of SWMUs and AOCs and associated releases, including, but not limited to, the following, as appropriate:

1. Characterization of the nature, concentration(s), horizontal and vertical extent, and direction/rate of migration of releases from SWMUs and AOCs at the facility;
2. Characterization of the environmental setting of the facility, including:
  - a. Hydrogeological conditions;
  - b. Climatological conditions;
  - c. Soil and bedrock characteristics;
  - d. Surface water and sediment quality; and
  - e. Air quality and meteorological conditions.
3. Characterization of SWMUs and AOCs from which releases have been or may be occurring, including unit and waste characteristics;
4. Descriptions of human and environmental receptors and associated risks to the receptors which are, may have been, or, based on site-specific circumstances, could be exposed to release(s) from SWMUs and AOCs;
5. Assessment of potential risks to the human and environmental receptors exposed to release(s) from SWMUs and AOCs;
6. Extrapolations of future contaminant migration including description of contaminant fate and transport mechanisms, and pathways for human and environmental exposure;
7. Laboratory, bench-scale, pilot-scale and/or appropriate tests or studies to determine the feasibility or effectiveness of treatment technologies or other technologies that may be appropriate in implementing remedies at the facility;
8. Statistical analyses to aid in the interpretation of data;
9. Results of any ISMs previously implemented; and

10. Evaluation of data quality that may affect the nature and scope of a CMS, as well as the evaluation of corrective measures alternatives thereunder (e.g., identification of any potential bias in the RFI data and documentation of its precision, accuracy, representativeness, completeness, comparability, validation, etc.)
- C. The Department shall review and approve the RFI Report according to the procedures described in Corrective Action Condition XIII. of this Permit. If the Department determines that the objectives of the RFI have not been met, the Department may require additional investigation. Upon approval of the RFI Report, the Department shall notify the Permittee of the next step in the corrective action process, which may include submission of a CMS Work Plan or equivalent, as described in Corrective Action Condition VII. of this Permit.

VII. Contingent Corrective Measures Study (CMS) Work Plan

- A. If the Department determines that there has been a release of hazardous waste or hazardous constituents from newly- or previously-identified SWMUs or AOCs that may pose a threat to human health or the environment, the Department may require the Permittee to conduct a CMS or remedy evaluation. The Department shall notify the Permittee, in writing, of this decision. The notice shall identify the hazardous constituent(s) of concern and may specify remedial alternatives to be evaluated by the Permittee.
- B. As part of the CMS or remedy evaluation, the Department may require the Permittee to evaluate one or more specific remedial alternatives for removal, containment, and treatment of hazardous wastes and hazardous constituents in contaminated media based on the objectives established for the corrective action. These remedial alternatives may include a specific technology or combination of technologies that, in the Department's judgment, may be capable of achieving standards for protection of human health and the environment.
- C. Within 30 calendar days after receipt of the Department's request to conduct a CMS or remedy evaluation, the Permittee shall meet with the Department to discuss the necessity for preparation and submission of a CMS Work Plan or Remedy Evaluation Plan to the Department and EPA for review and approval. If required, the CMS Work Plan or Remedy Evaluation Plan shall be consistent with the EPA document entitled, RCRA Corrective Action Plan (Final), OSWER Directive 9902.3-2A, May 1994, or the most recent version. At a minimum, the CMS Work Plan or Remedy Evaluation Plan shall provide the following

information, as appropriate, and a proposed schedule for implementing the CMS Work Plan or Remedy Evaluation Plan, which is predicated on the date of Departmental approval of the plan:

1. A description of the general approach to investigating and evaluating potential remedial alternatives or combinations of alternatives.
  2. A definition of the specific objectives of the study/evaluation.
  3. A description of the remedial alternative or combination of alternatives that will be studied.
  4. A description of those potentially viable remedial alternatives that were initially considered, but were dropped from further consideration, including the rationale for elimination.
  5. The specific plans for evaluating remedial alternatives or combination of alternatives to ensure compliance with applicable remedy selection threshold/balancing criteria and cleanup standards.
  6. The schedule for conducting the study/evaluation and submitting a CMS Report or preferred remedy proposal.
  7. The proposed format for ranking remedial alternatives or combination of alternatives in support of a preferred remedial alternative or combination of alternatives.
  8. Identification of laboratory, bench-scale, pilot-scale and/or other appropriate tests or studies that will be used to determine the feasibility or effectiveness of treatment technologies, or other technologies that may be appropriate in implementing remedial alternatives at the facility.
- D. The Department shall review and approve the CMS Work Plan or Remedy Evaluation Plan according to the procedures described in Corrective Action Condition XIII. of this Permit. The Permittee shall complete all activities described in the CMS Work Plan or Remedy Evaluation Plan according to the schedule contained in the approved plan.

VIII. Contingent Corrective Measures Study (CMS) Report

- A. If the Department determines that a CMS or Remedy Evaluation is necessary to address a release(s) of hazardous waste or hazardous constituents from newly- and/or previously-identified SWMUs or AOCs, the Permittee shall submit a CMS or Remedy Evaluation Report to the Department and EPA according to the schedule specified in the approved CMS Work Plan or Remedy Evaluation Plan described in Corrective Action Condition VII. of this Permit. The CMS or Remedy Evaluation Report shall present all information obtained under the approved CMS Work Plan or Remedy Evaluation Plan and shall be consistent with guidance contained in the EPA document entitled, RCRA Corrective Action Plan (Final), OSWER Directive 9902.3-2A, May 1994, or the most recent version.
- B. The CMS or Remedy Evaluation Report shall describe and discuss each remedial alternative or combination of alternatives that was evaluated, including any bench-scale or pilot tests conducted. The CMS or Remedy Evaluation Report shall include, but not be limited to, the following information:
1. Evaluation of the performance, reliability, ease of implementation, and potential impacts of each remedial alternative or combination of alternatives, including safety impacts, cross media impacts, overall carbon footprint, and control of exposure to any residual contamination;
  2. Assessment of the effectiveness of each remedial alternative or combination of alternatives in terms of achieving adequate control of contaminant sources and cleanup of hazardous waste and/or hazardous constituents released from the SWMU(s) and AOC(s);
  3. Estimation of the time required to begin and complete implementation of each remedial alternative or combination of alternatives, and an estimate of the time required to meet the proposed remediation objectives contained in the CMS or Remedy Evaluation Report;
  4. Estimation of the costs to implement, operate, monitor and maintain each remedial alternative or combination of alternatives;
  5. Recommendation of a preferred remedial alternative or combination of alternatives, and rationale for the proposed selection; and



6. Assessment of institutional requirements that may be needed (e.g., state or local permits), discussion of other environmental or public health requirements or institutional controls that may substantially affect implementation of the preferred remedial alternative or combination of alternatives (e.g., local ordinances), and a draft of any site-specific institutional controls that are proposed as part of the preferred remedial alternative or combination of alternatives (e.g., a draft environmental covenant containing specific activity and use limitations prepared pursuant to the Missouri Environmental Covenants Act).
- C. The CMS or Remedy Evaluation Report shall contain information that is sufficient to facilitate the Department's development of a Statement of Basis in support of the final remedy decision-making process.
- D. The Department shall review and approve the CMS or Remedy Evaluation Report according to the procedures described in Corrective Action Condition XIII. of this Permit. Upon approval of the CMS or Remedy Evaluation Report, the Department will approve a final remedy as specified in Corrective Action Condition IX. of this Permit.

IX. Final Remedy Selection and Approval

- A. Following the approval of the CMS or Remedy Evaluation Report, if required, as described in Corrective Action Condition VIII. of this Permit, the Department shall, in coordination with the Permittee, prepare a Statement of Basis summarizing the remedial alternatives evaluated by the Permittee and the Department's basis of support for the proposed final remedy.
- B. Following the Department's preparation of the Statement of Basis, a permit modification shall be initiated in accordance with 40 CFR 270.41 or 270.42(c), as applicable, to facilitate public review and comment on the Statement of Basis and proposed final remedy, final remedy approval by the Department, and implementation of the approved final remedy by the Permittee.
- C. Upon completion of the public participation activities associated with the permit modification to implement the proposed final remedy, the Department shall approve a final remedy that shall:
  1. Be protective of human health and the environment;

2. Control and/or eliminate the source(s) of contaminants so as to reduce or eliminate, to the maximum extent practicable, further contaminant releases, exposures or migration that may pose a threat to human health and the environment; and
3. Meet all applicable federal, state, and local laws and regulations.

X. Semi-Annual Progress Reports

- A. Should “active” corrective action become necessary under Corrective Action Conditions V. through IX. of this Permit, the Permittee shall prepare and submit Semi-Annual Progress Reports to the Department and EPA, summarizing all permitted corrective action activities undertaken during the previous calendar half-year (i.e., January through June and July through December). Semi-Annual Progress Reports are due by March 1 and September 1 of each calendar year for the previous calendar half-year. The Semi-Annual Progress Reports shall continue to be submitted until the Permittee’s corrective action activities (including any long-term operation, maintenance, and monitoring activities) are complete.
- B. The Semi-Annual Progress Reports shall include the following information for the time period being reported:
  1. A description of the work completed;
  2. Summaries of all findings, including summaries of laboratory data;
  3. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems;
  4. Projected work for the next reporting period; and
  5. Any instances of noncompliance with the corrective action requirements of this Permit not otherwise required to be reported elsewhere in this Permit.
- C. If the Department determines that further corrective action is required under Corrective Action Conditions II. through IX. of this Permit, the frequency of

progress report submittals may increase. If an increase in reporting frequency is necessary, the Department shall provide written notification of the new reporting frequency to the Permittee.

- D. Any detailed technical information that is part of any additional corrective action activities undertaken pursuant to this Permit and required to be submitted as part of ISMs, RFI and/or CMS work plans and reports, need not be reproduced as part of the Permittee's Semi-Annual Progress Reports.
- E. Copies of other reports (e.g., inspection reports), information, or data shall be made available to the Department and EPA upon request.

XI. Supplemental Data

All uninterpreted data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken pursuant to this Permit shall be maintained by the Permittee during the term of this Permit, including the term of any continued or reissued permits.

XII. Closure/Post Closure Care and Corrective Action Cost Estimates and Financial Assurance

- A. Pursuant to 10 CSR 25-7.264(1), which incorporates 40 CFR 264.140(c) by reference, the Lake City Army Ammunition Plant is exempt from the financial requirements of 40 CFR Part 264 Subpart H because it is a Federal facility.
  - 1. The closure cost estimate specified in 40 CFR 264.142 and financial assurance for closure contained in 40 CFR 264.143 do not apply and are not required.
  - 2. The post-closure cost estimate specified in 40 CFR 264.144 and financial assurance for post-closure care contained in 40 CFR 264.145 do not apply and are not required.
- B. Pursuant to 10 CSR 25-7.264(1), which incorporates 40 CFR 264.101(b) by reference, the financial requirements of 40 CFR 264.101(b) only apply to the Lake City Army Ammunition Plant if "active" corrective action (that which is beyond the actions being handled under the CERCLA deferral) should become required pursuant to the terms of this Permit. If, and when, "active" corrective action should become necessary, this Permit shall be modified pursuant to

40 CFR 270.41 or 40 CFR 270.42, as appropriate, to establish facility-specific corrective action cost estimate and financial assurance requirements.

XIII. Review and Approval Procedures

- A. Following submission of any plan, report, or extension request pertaining to corrective action activities (excluding the Semi-Annual Progress Reports), the Department shall review and either approve or provide written comments on the plan, report, or request. If the Department does not approve the plan, report, or request, the Department shall notify the Permittee, in writing, of the plan, report, or request's deficiencies and specify a due date for submittal of a revised plan, report, or activity.
- B. If the Department does not approve the revised plan, report, or associated activity schedule, the Department may modify the plan, report, or schedule and notify the Permittee of the modifications. The plan, report, or schedule, as modified by the Department, shall be the approved plan, report, or schedule.
- C. If the Permittee disagrees with any Department-initiated plan, report, or schedule modifications, and a mutually acceptable resolution of such modifications cannot be informally reached, the Permittee may file an appeal of the Department-initiated modifications according to 10 CSR 25-2.020, and Sections 260.395.11 and 621.250, RSMo.

XIV. Document and Activity Extension Requests

If the Permittee requires additional time to submit a scheduled document or perform other activities required by this Permit, the Permittee shall submit a written extension request to the Department. The Department shall receive the extension request at least 15 calendar days before the scheduled due date of the document or activity. The Permittee's extension request shall specify the amount of additional time needed and shall be accompanied by the Permittee's justification for the extension. The Department shall review and approve the extension request according to the procedures described in Corrective Action Condition XIII. of this Permit.

**FACILITY SUBMISSION SUMMARY**

**Table 2 - Planned Submittal Requirements  
 Pursuant to this Permit and Schedule of Compliance**

<b>Submittal Requirements</b>	<b>Due Date*</b>	<b>Permit Condition</b>
Two paper copies and one searchable electronic copy of the consolidated permit application	Within 60 calendar days after effective date of this Permit.	Schedule of Compliance Item I.A.
Certification that Permittee has read and understands all permit conditions in this Permit	Within 60 calendar days after effective date of this Permit.	Schedule of Compliance Item I.B.
Check or money order for any outstanding engineering review costs	Within 60 calendar days after effective date of this Permit.	Schedule of Compliance Item I.C.
Check or money order for each year this Permit is to be in effect beyond the first year	Within 60 calendar days after effective date of this Permit.	Schedule of Compliance Item I.D.
Biennial Report with information required by 40 CFR 264.75	March 1 of each even numbered calendar year.	General Permit Condition I.
Permit Renewal Application	Within 180 calendar days of expiration date of this Permit.	Standard Permit Condition I.

\*Extensions may be requested and approved by the Department for cause without modifying this Permit.

**Table 3 - Contingent Corrective Action Submittal Requirements  
Pursuant to the Corrective Action Conditions of this Permit**

<b>Contingent Submittal Requirements</b>	<b>Due Date</b>	<b>Corrective Action Condition</b>
Written notification of newly-identified SWMU(s) and AOC(s)	No later than 15 calendar days after discovery.	II.A.
SWMU/AOC Assessment Work Plan	Within 30 calendar days after notice by the Department that a work plan is required.	II.B.
SWMU/AOC Assessment Report	According to the schedule in the approved SWMU/AOC Assessment Work Plan.	II.D.
Written notification of newly-identified releases from previously-identified SWMU(s) and AOC(s)	No later than 15 calendar days after discovery.	III.A.
Newly-Identified Release Work Plan	Within 30 calendar days after notice by the Department that a work plan is required.	III.B.
Newly-Identified Release Report	According to the schedule in the approved Newly-Identified Release Work Plan.	III.D.
Notification of interim/stabilization measures	Within 24 hours after discovery of need for stabilization.	IV.A.1
Notification of interim/stabilization measures not effective	Within ten calendar days after determination.	IV.A.4.
RCRA Facility Investigation (RFI) Work Plan	Within 60 calendar days of notice by the Department that a work plan is required.	V.A.
RCRA Facility Investigation (RFI) Report	According to the schedule in the approved RFI Work Plan.	VI.A.

<b>Contingent Submittal Requirements</b>	<b>Due Date</b>	<b>Corrective Action Condition</b>
Corrective Measures Study (CMS) or Remedy Evaluation Work Plan	According to the schedule developed during the meeting following notice by the Department that a work plan is required.	VII.C.
Corrective Measures Study (CMS) or Remedy Evaluation Report	According to the schedule in the approved CMS or Remedy Evaluation Work Plan.	VIII.A.
Semi-Annual Progress Reports	By March 1 and September 1 of each calendar year.	X.A.

**FIGURES**

**Figure 1 – Facility Location**

**Figure not available due to size.  
Please see hard copy.**



**Figure 2 – Facility Property Boundaries**

**Figure not available due to size.  
Please see hard copy.**