

STATE OF MISSOURI

**DEPARTMENT OF NATURAL RESOURCES**



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

**PERMIT NUMBER: MOD985798164**

**PERMITTEE**

Owner and Operator: EBV Explosives Environmental Company  
dba General Dynamics Ordnance and Tactical Systems  
Munition Services  
P.O. Box 1386  
Joplin, MO 64802

**FACILITY LOCATION**

4174 County Road 180  
Carthage, MO 64836  
Jasper County  
North Latitude – 37°06'16"  
West Longitude – 94°22'49"

**FACILITY DESCRIPTION**

EBV Explosives Environmental Company, dba General Dynamics Ordnance and Tactical Systems Munition Services (GD-OTS MS), is a reactive waste management company. GD-OTS MS analyzes, packages, and treats reactive wastes for their facility located near Joplin, Missouri. GD-OTS MS operates two incinerators and ten thermal treatment units (TTU) for the sole purpose of treating reactive (explosive) wastes. The explosives manufacturing industry, a variety of other manufacturing companies, users of explosive devices and materials, and government

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agencies, such as the Department of Defense, generate the reactive wastes, which are accepted for treatment by incineration.

**PERMITTED ACTIVITIES**

This Permit allows for the storage, miscellaneous treatment and incineration of “characteristic” hazardous waste as well as storage of various “F, K, P, and U” listed hazardous wastes as specified in the Part A application. The hazardous wastes include explosive/reactive materials, explosive and energetic devices, propellants, pharmaceutical materials containing nitroglycerin, ammunition, and materials contaminated with explosive/reactive waste. The Permit also contains contingent corrective action conditions to address releases to the environment from Solid Waste Management Units and/or Areas of Concern, as necessary and appropriate.

EFFECTIVE DATES OF PERMIT: October 23, 2002 to October 23, 2012\*

\*The permit has been continued in accordance with 40 CFR 270.51.

January 11, 2018

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Modified Date

[Original signed by Edward B. Galbraith]

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Edward B. Galbraith, Director  
DIVISION OF ENVIRONMENTAL QUALITY

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## **INTRODUCTION**

After public notice in accordance with 10 CSR 25-8.124 and 40 CFR Part 124 and review of the EBV Explosives Environmental Company's Hazardous Waste Facility Permit Application (hereafter "Application"), the Missouri Department of Natural Resources (hereafter "Department") has determined that the application substantially conforms to the provisions of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (hereinafter "RCRA"), and corresponding regulations promulgated by the United States Environmental Protection Agency (hereinafter "EPA"), and the Missouri Hazardous Waste Management Law and corresponding rules and regulations. In accordance with Section 260.375.13, RSMo, and the Solid Waste Disposal Act, the Department hereby approves the application and issues Permit Number MOD985798164 to the EBV Explosives Environmental Company (hereafter "Permittee") for the construction and operation of the hazardous waste facility as set forth in the application and this Permit. This Permit also addresses corrective action requirements for solid waste management units and the requirements of the Hazardous and Solid Waste Amendments of 1984 (hereinafter "HSWA") as administered and enforced by the Department. Applicable regulations are found in 40 CFR Parts 124, 260 through 264, 266, 268, and 270, as specified in this Permit. All portions of the Part I Permit are issued under state authority, with the exception of Part II which is issued by EPA to address regulatory requirements of the HSWA for which the state is not yet authorized. The Part I Permit shall remain in effect even if Part II is terminated or expires.

The following will collectively be referred to as the "approved permit application":

- The permit application submitted by the Permittee January 16, 2001, and all revisions dated March 7, 2001, May 25, 2001, August 3, 2001, August 22, 2001, November 5, 2001, and December 5, 2001;
- Class 3 modification permit application submitted by the Permittee February 22, 2008, and all revisions dated May 29, 2008, June 30, 2008, July 14 2008, August 4, 2008, September 24, 2008, and January 28, 2009;
- Class 3 modification permit application submitted by the Permittee September 9, 2008, and all revisions dated November 18, 2008, March 3, 2009, and March 13, 2009;
- The final health profile dated January 2, 2002;
- The habitual violator disclosure statement dated January 16, 2001;

- The revised Class 3 Permit modification dated July 30, 2012;
- The Comprehensive Performance Testing of a Propellant Thermal Treatment System Report dated July 2012, and revisions dated September 27, 2012;
- The Human Health Risk Assessment Work Plan and Screening Level Ecological Risk Assessment Work Plan dated September 7, 2012; and
- Class 3 Permit modification request submitted by the Permittee, dated August 22, 2014, and revisions dated February 6, 2015, January 5, 2016, and August 3, 2016.

The “consolidated permit application” is defined as the “approved permit application,” along with all of the additional documents to be submitted under Schedule of Compliance, Item I.A. The Department is not requiring an updated consolidated permit application as part of the permit modification. The Permittee shall maintain all the documents outlined above with the original consolidated permit application.

All permit application information shall be available to the public unless nondisclosure is requested in writing as set forth in Section 260.430, RSMo and 10 CSR 25-7.270(2)(B)2. The Permit and accompanying material will be available for review by the public at the Department’s central office in Jefferson City, Missouri, and the U.S. EPA Region VII office in Lenexa, Kansas.

The Permittee’s hazardous waste facility is located at 4174 County Road 180, Carthage, Missouri. The Permittee is permitted to operate the container storage facilities, miscellaneous treatment facilities and incinerator as specified in this Permit.

Construction and operation of this hazardous waste facility and any corrective action shall be in accordance with the provisions of this Permit, the Missouri Hazardous Waste Management Law (Sections 260.350 to 260.434, RSMo, and its corresponding rules and regulations as effective on the effective date of this Permit, all the final engineering plans, petitions, specifications, and operating procedures which were submitted to the Department during the permit application review process and which are included in the final version of the permit application, which is hereby approved by the Department, and any other conditions, changes, or additions to the plans, specifications, and procedures as specified in this Permit. The consolidated permit application, which includes engineering plans, specifications and operating procedures, is therefore incorporated by 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.

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Any inaccuracies found in information submitted may be grounds for the termination, revocation and re-issuance, or modification of this Permit in accordance with 40 CFR Part 270 Subpart D, incorporated by reference in 10 CSR 25-7.270(1) and modified in 10 CSR 25-7.270(2)(D), and for potential enforcement action. The Permittee shall inform the Department of any deviation from or changes in the information provided in the application that would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

When the Department receives any information pertaining to the terms and conditions set forth in the Permit (such as inspection results, information from the Permittee, or requests from the Permittee), the Department may decide, based on this information whether cause exists to modify, revoke and reissue, or terminate a facility's Permit. All such changes to the Permit will be in accordance with 10 CSR 25-7.270(2)(D), 10 CSR 25-8.124, and 40 CFR Part 270 Subpart D, as incorporated by reference in 10 CSR 25-7.270(1).

The Permittee is required to comply with all applicable environmental laws and regulations enforced by the Department. These environmental requirements are administered by the Air Pollution Control Program, the Hazardous Waste Program, the Land Reclamation Program, the Solid Waste Management Program, and the 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.

This Permit for operational, closure and corrective action activities is issued only to the Permittee named above. This Permit is issued for a period of ten years and expires at midnight on October 23, 2012. This Permit is subject to review and modification by the Department in accordance with Section 260.395.12, RSMo.

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

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 the instances where state regulations are more stringent, the appropriate state reference is given and shall apply.

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 Director of the Department's Hazardous Waste Program, P.O. Box 176, Jefferson City, MO 65102-0176.

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 for all releases of hazardous waste 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 prior to 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/operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action.

Further, 40 CFR 264.101(c), as incorporated by reference in 10 CSR 25-7.264(1), stipulates that the owner/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 will be determined on a case-by-case basis. In addition, assurances of financial responsibility for completing such corrective action must be provided.

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

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

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Part I of this Permit and are under state authority. Authority for other HSWA requirements for which the state is not authorized is retained by the EPA under Part II of this Permit.

## 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, the 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.

“Area of Concern (AOC)” means any area where an actual or potential release of hazardous waste or hazardous constituents, which 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 by reference in 10 CSR 25-7.270(1).

“Continuous monitor” means one which continuously samples the regulated parameter without interruption, evaluates the detector response at least once every 15 seconds, computes, and records a one minute average value for the parameter.

“Director” means the Director of the Missouri Department of Natural Resources.

“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 Corrective Action Conditions I. through XIII. of this Permit.

“Hazardous constituent” means any chemical compound listed in 40 CFR Part 261 Appendix VIII as incorporated 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.

“Hourly Rolling Average (HRA)” means the average of all the one minute average values over a one-hour time period.

“One Minute Average (OMA)” means the one minute average value determined for a parameter required to be continuously monitored by this Permit.

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

“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.

“Stabilization” 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.

“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 CONSTRUCTION AND COMPLIANCE**

- I. Within sixty (60) calendar days after the effective date of this Permit modification, the Permittee shall:
  - A. Submit to the Department a certification by the Permittee that the Permittee has read the Permit modification in its entirety and understands all Permit conditions contained herein.
  - B. Submit to the Department a check or money order payable to the State of Missouri for any outstanding engineering review costs.
- II. The Permittee has submitted a work plan for a Risk Assessment of emissions from the Building #6 Incinerators, the Building #1 Thermal Treatment Units, Building #1 Static Kilns and Building #3 Propellant Treatment Units dated September 7, 2012, in accordance with the 2005 Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities (HHRAP) and Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities. The Permittee shall revise and resubmit the work plan to include the Building #12 Nitrocellulose Propellant Thermal Treatment Units, in accordance with all of the Department's comments and current EPA risk assessment guidance documents. The Permittee shall complete the work and submit a risk assessment report within 180 days of the Department's approval of the work plan. The Permittee shall revise and resubmit the report in accordance with all of the Department's comments.
- III. The Permittee shall comply, as necessary, with all corrective action requirements of this Permit as specified in the Corrective Action Conditions section 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

- 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 Blvd.  
Lenexa, KS 66219

## **STANDARD PERMIT CONDITIONS**

- I. The Permittee shall comply with the requirements set forth in the Missouri Hazardous Waste Management Law and all corresponding rules and regulations, Section 260.350, et seq., RSMo, 40 CFR Part 264 Subpart H, 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.

## **GENERAL PERMIT CONDITIONS**

- I. The Permittee shall comply with the requirements set forth in 40 CFR Part 264 Subpart B, 40 CFR Part 264 Subpart C, 40 CFR Part 264 Subpart D, 40 CFR Part 264 Subpart E, 40 CFR Part 264 Subpart H, 40 CFR Part 268, and 40 CFR Part 270, as incorporated and modified in 10 CSR 25-7 and 10 CSR 25-8.

- 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, notify the Department's emergency response hotline at (573) 634-2436 and the National Response Center at 1-800-424-8802.

## **SPECIAL PERMIT CONDITIONS**

The Department has established the following additional permit conditions for the Permittee's hazardous waste facility.

### **I. Storage in Containers [40 CFR Part 264 Subpart I]**

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

The Permittee shall store in containers only the hazardous wastes identified in Part A of the permit application. All stored wastes are subject to the terms of this Permit.

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

The Permittee shall store only the following quantities of hazardous wastes in containers according to this Permit:

1. Storage at each of the four (4) magazines shall not exceed the lesser of:
  - a. 324 fifty-five gallon drums that contain free liquids; or
  - b. 17,820 gallons of free liquids; or
  - c. 100,000 pounds net explosive weight of Class 1.1 explosives; or 250,000 pounds net explosive weight of Class 1.3 explosives. When both Class 1.1 and Class 1.3 are stored in the same building, the 100,000 pound limit will be used and all the explosives stored in the magazine shall be counted toward this limitation; or
  - d. 284 cubic yards in total.
2. Storage at each of the Storage/Feed Handling Building and the Feed Room shall not exceed the lesser of:
  - a. Twenty 55 gallon drums that contain free liquids; or
  - b. 1,100 gallons of free liquids; or

- c. 2,400 lbs net explosive weight; or
    - d. Four (4) hours supply of hazardous waste that can be processed in the pre-processing operations.
  - 3. Storage in Magazine 2 and attached Annex 2A:
    - a. The Permittee shall only store ammunition, rocket motors, and/or their components in Annex 2A, where the explosive materials in the devices are fully-enclosed in containers and/or cases. The Permittee shall not store any containers, cases, or other storage media in Annex 2A that contains any free liquids, non-explosive solids, sludges, powders, trash, or other debris.
    - b. The Permittee shall store no more than 100,000 pounds (lbs) net explosive weight in Magazine 2 and the attached Annex 2A combined.
  - 4. Storage at Building #3 shall not exceed the lesser of:
    - a. 5196 lbs net explosive weight of Class 1.3 D explosives; or
    - b. Four hours supply of hazardous waste that can be processed in the pre-processing operations.
  - 5. Temporary management of hazardous waste at Building #12 shall not exceed:
    - a. A maximum of 3,000 lbs net explosive weight of Class 1.3 explosives; or
    - b. The quantity of Class 1.3 explosive material needed for one half of a work shift (twelve hour shift). This is equal to the hourly feed rate in Special Permit Conditions.II.Q times six.
- 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 from the container 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 waste must be labeled in accordance with 10 CSR 25-5.262(2)(C) during the entire storage period. [10 CSR 25-7.264(2)(I)1.]

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

1. The Permittee shall use a container that is 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. Only DOT-approved containers shall be used for storage of hazardous waste on-site.

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. 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 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 number of containers on the pallet.
3. Class 1 flammable liquids, as defined in the National Fire Protection Association's "Flammable and Combustible Liquids Code" (NFPA 30, as revised 1996) shall not be stacked over five (5) feet in height. Class II combustible liquids, as defined in the National Fire Protection Association's "Flammable and Combustible Liquids Code" (NFPA 30, as revised 1996) shall not be stacked over ten (10) feet in height.

F. Inspections [40 CFR 264.174]

At least weekly, 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]

The Permittee shall design and operate containment systems for the container storage areas as follows:

1. 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.
2. 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.
3. The containment system shall have sufficient capacity to contain 10% of the volume of all containers or 100% of the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination.
4. Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in Special Permit Condition I.G.3. above, to contain any run-on which might enter the system.
5. Spilled or leaked waste shall be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.

H. Temporary Management [10 CSR 25-7.270(1) incorporating 40 CFR 270.32(b)(2)]

A container holding hazardous waste shall not be temporarily managed in an area of the facility not addressed by this Permit for a period that exceeds twenty-four (24) consecutive hours.

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.

The Permittee shall maintain the minimum explosive safety arcs in the attached Figure 2 and limit activities within those explosive safety arcs as necessary to protect human health and the environment.

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 is in compliance 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 storage areas without providing separation sufficient to prevent the mixing of any spilled materials which may be incompatible.

K. Closure [10 CSR 25-7.264(2)(G)]

At closure, the Permittee shall remove all hazardous waste and hazardous waste residues from the container storage areas and containment systems and close in accordance with the closure plan in the approved permit application for the hazardous waste management facility. If the Permittee is unable to close

according to the closure plan, then the Permittee must submit a permit modification to the Department in accordance with 40 CFR 270.42.

II. Miscellaneous Units [40 CFR Part 264 Subpart X]

The term “miscellaneous unit” is used to address the devices and processes to be located in the buildings identified as the following:

A. Storage/Feed Handling Building

For the Storage/Feed Handling Building the processes are intended to mechanically treat, limit physical size, alter configuration, reduce the explosive nature, or repackage waste into appropriate units for introduction into the incinerator. The Storage/Feed Handling building is also subject to the requirements in Special Permit Condition I.

B. Building #1

For Building #1, the processes are intended to deactivate the explosive nature of the explosive by introducing it into the thermal treatment units, which is not incineration, located within the building.

1. Improved Conventional Munition (ICM) Thermal Treatment Units in Building #1

An ICM Thermal Treatment Unit system consists of two (2) treatment units in a pair that share a common air pollution control system for the thermal treatment of the bodies containing the explosive filler and the copper cone from M42, M46, or M77 United States military submunitions by igniting them and letting them burn within the burn chamber. Two complete systems are used for treatment. Both systems, as well as the two thermal treatment units within each system, may be used simultaneously. Each thermal treatment unit consists of a burn chamber and pilot/ignition flame used to ignite the explosives.

An air pollution control system (APCS) is used to control the discharge of air pollutants to the atmosphere from the treatment of explosive filler in the submunitions. The APCS utilizes filters for the control of particulate matter. From each pair of treatment units, the hot gases evolved from the

burning of the explosive filler, plus air drawn into the treatment unit to support treatment and to prevent fugitive emissions, are drafted in the common (of each pair) air pollution control equipment consisting of a cartridge filter bag house and a high-efficiency particulate air (HEPA) filter. An induced draft fan moves the gases evolved from the static kilns through the cartridge filter bag house, discharging the entire flow through the HEPA filter and a stack.

2. Static Kiln Thermal Treatment Units in Building #1

The Static Kiln Thermal Treatment Unit system consists of four (4) vertical static kilns all sharing a common air pollution control system.

An APCS is used to control the discharge of air pollutants to the atmosphere from the treatment of fuzes. The APCS utilizes filters for the control of particulate matter. From each static kiln, the hot gases evolved from the detonation of the fuze, plus air drawn into the treatment unit to support treatment and to prevent fugitive emissions, are drafted in the common air pollution control equipment consisting of a cartridge filter bag house and a HEPA filter. An induced draft fan moves the gases evolved from the static kilns through the cartridge filter bag house, discharging the entire flow through the HEPA filter and a stack.

C. Building #3

For Building #3, the processes are intended to treat the rocket motors of the M26 Multiple Launch Rocket System (MLRS) by cutting the motor, using a rocket motor saw, into 8 to 10 segments or slices. Each segment is introduced into a Propellant Thermal Treatment Unit, which is not incineration, located within the building. Extended Range MLRS (ER-MLRS) and Guided MLRS (GMLRS) Rocket Motors have been added to the feed materials permitted to be thermally treated in Building #3.

1. Rocket Motor Saw Units

- a. The Rocket Motor Saw Units consist of a total of two treatment units arranged as one unit in each line. Each Rocket Motor Saw Unit consists of a stainless steel tank, internal carrier, and saw used to cut the rocket motor into 8 to 10 segments. The segments are

removed from each tank by a transfer mechanism and placed on a transfer conveyor to be transferred to the transfer bay. The underwater saw is operated to prepare the rocket motor segments for combustion in the Propellant Thermal Treatment Units.

- b. Each tank shall meet the standards of 40 CFR 264.193 for secondary containment. Each tank will hold about 1320 gallons of water. Water from each tank will be removed at a number of specified locations. The water shall be filtered through a band filter or a cartridge filter to remove propellant and metal shavings and returned back to the tank. The shavings shall be incinerated in the rotary kiln as a hazardous waste. The Ammonium Perchlorate concentration in the water shall be monitored and recorded in the facilities operating record. Periodically the water shall be removed, filtered with the cartridge filter, and incinerated in the Car Bottom Furnace. Clean water is automatically added to each tank to control the level above the top of the rocket motor being cut.

## 2. Propellant Thermal Treatment Units in Building #3

The Propellant Thermal Treatment Units consist of a total of two treatment units arranged as a pair such that the pair shares a common air pollution control system to thermally treat United States military Multiple Launch Rocket System (MLRS) rocket motor segments by igniting them and letting them burn within the burn chamber. Only one thermal treatment unit in the pair shall be operated for the thermal treatment of rocket motor segments at a time. A thermal treatment unit consists of a burn chamber and pilot/ignition flame used to ignite a rocket motor segment and a quench chamber to reduce the temperature of the hot gases evolved from the burning of the rocket motor segment, plus air drawn into the treatment unit to support treatment and to prevent fugitive emissions.

An APCS is used to control the discharge of air pollutants to the atmosphere from the treatment of rocket motor segments. The APCS utilizes dry sorbent injection (sodium bicarbonate) and a wet scrubber for the control of acid gases, activated carbon injection for the control of dioxins and furans and a bag house filter for the control of particulate matter. Dry sorbent (sodium bicarbonate) is milled and injected into the

quench chamber on each treatment unit. From each quench chamber, the gases are drafted into the common air pollution control equipment consisting of a reaction chamber, six bag house modules, a quench vessel, and a wet scrubber. An induced draft fan moves the gases through the system discharging the entire flow through a stack.

The Permittee may use either Trona (trisodium hydrogencarbonate dihydrate) or hydrated lime instead of sodium bicarbonate if trial testing proves out their efficacy. A change to Trona or hydrated lime from sodium bicarbonate as sorbent in the APCD shall require the Permittee to obtain a Class 1 Permit modification with prior director approval.

D. Building #12

For Building #12, the process treats Nitrocellulose Propellants (NCP) by feeding small quantities of NCP into one of two Thermal Treatment Units, located within the building to thermally treat the material.

1. Nitrocellulose Propellant Thermal Treatment Units in Building #12

The Nitrocellulose Propellant Thermal Treatment Units (NCPTTU) consist of a total of two treatment units arranged as a pair sharing a common APCS to thermally treat NCP by igniting it on an electrically heated plate within the burn chamber and letting it burn. Only one thermal treatment unit shall be operated at any time. Hot gases evolved from the burning of the NCP, and air drawn into the treatment unit to support treatment are ducted into the APCS.

The APCS controls the discharge of air pollutants to the atmosphere from the treatment of NCP. The APCS for Building #12 shall consist of a baghouse and a wet scrubber for the control of acid gases, dioxins and furans and particulate matter. An induced draft fan moves the gases through the system discharging the entire flow through a stack.

E. Waste Identification [40 CFR 264.601]

All residues generated from the handling of reactive wastes are considered reactive wastes until such time that waste analysis demonstrates that they are not

reactive. These include any filters or sludges generated from dust hoods, wash down wastewater, deluged water, wipes, personal protective equipment, etc.

Scrap metal separated from treatment residues must meet Land Disposal Restriction standards for contaminated debris in 40 CFR 268.45 prior to their release to outside vendors as non-hazardous scrap metal.

1. Storage/Feed Handling Building

The Permittee shall treat only the hazardous wastes identified in the Part A Permit Application. All treatment processes, other than incineration, performed in accordance with this Permit shall be subject to the terms of Special Permit Condition II and shall only be performed in the “Storage/Feed Handling Building.”

2. Building #1

In Building #1, the Permittee shall treat only submunitions and components from Class 1.1 D military munitions.

3. Building #3

In Building #3, the Permittee shall treat only Arcadene 360B Propellant from the rocket motors of the M26 MLRS, Arcadene 360F Propellant from the rocket motors of the M26A1 ER-MLRS and Arcadene 361A Propellant from the rocket motors of the M30 GMLRS.

4. Building #12

In Building #12, the Permittee shall treat only Nitrocellulose Propellants listed in the approved permit application. These propellants are M2, M5, M10, M15, M17, M26, M26E1, M30, M30A1, M30A2, M31, M31A1, M31A1E1, JA-2 and DIGL.

- a. Proposed treatment of other propellants shall require an appropriate permit modification to add the new propellant to the approved propellant list. If the Permittee is proposing propellants that have:

- (1) Similar compositions to already approved propellants, with no new constituents, the Permittee shall submit a test burn plan to the Department for approval. The Permittee shall request a Class 1 Permit modification with prior director approval once a successful test burn is complete to add the tested propellants to the list of those that are allowed to be treated in the Building #12 units.
- (2) Different compositions to already approved propellants, with new RCRA regulated constituents or significantly higher concentrations of hazardous constituents, the Permittee shall submit a CPT work plan to the Department for approval. The Permittee shall submit a Class 2 Permit modification request to the Department for approval to treat the tested propellants. If the CPT results show the Unit can operate in compliance with emissions limits established by the Department's Air Pollution Control Program and this Permit, the Department will proceed with the approval of the Class 2 Permit modification.

F. Waste Quantities [40 CFR 264.601]

Storage/Feed Handling Building

1. The Permittee shall store and treat only the amount of hazardous waste that will be processed in the pre-processing operations within a four (4) hour period at the Storage/Feed Handling Building. At any given time, the Permittee may only treat a total volume of hazardous waste that is permitted to be incinerated in the facility's incinerator within a four (4) hour time period.
2. The Permittee shall not place more than 2,400 pounds net explosive weight of explosive materials in the Storage/Feed Handling Building. While hazardous waste or hazardous waste residues remain in the Storage/Feed Handling Building, the Permittee shall not place more than 425 pounds of Class 1.1 explosives within an individual bay during treatment operations within that bay.

3. The Permittee shall only store hazardous waste in the Storage/Feed Handling Building prior to or after treatment. Hazardous waste shall not be kept at the Storage/Feed Handling Building for more than eight (8) hours. Hazardous waste shall be returned to a permitted storage unit or taken to the Feed Room prior to exceeding the eight (8) hour storage limit.

#### Building #1

1. The Permittee shall not store hazardous waste prior to treatment in Building #1. In case of breakdown of the thermal treatment units, up to 100 lbs of hazardous waste may temporarily be managed for up to 4 hours, in a designated temporary management area, or until maintenance is complete. If maintenance is not completed within 4 hours, hazardous waste shall be containerized and removed from the temporary management area and sent to a permitted storage magazine. A breakdown shall include, but not limited to, any operations or equipment problem that does not allow the minimum feed of the conveyor into the unit itself, or completion of treatment of loaded material within 4 hours.
  - a. If hazardous waste is temporarily managed in Building #1 due to maintenance on the thermal treatment units, the owner/operator shall document in the operating record the time that the temporary management of hazardous waste begins and when the thermal treatment units were brought back online to demonstrate the total time that hazardous waste was temporarily managed in the building. The owner/operator shall also record in the operating record the time, quantity and reason for moving hazardous waste from the temporary management area to permitted storage.
2. The Permittee shall not burn in the Static Kiln Thermal Treatment Units, subject to all conditions in this Permit, more than the amount of net explosive weight of explosive material in fuzes generated from the disassembly of Class 1.1 D military munitions in Building #1 demonstrated during the latest approved CPT report.
3. The Permittee shall not burn in the ICM Thermal Treatment Units, subject to all conditions in this Permit, more than the amount of net explosive weight of explosive material in the grenades and components from the grenades generated from the disassembly of Class 1.1 D military

munitions in Building #1 demonstrated during the latest approved CPT report.

### Building #3

1. The Permittee shall store and treat only the amount of hazardous waste that will be processed in the pre-processing operations within a four-hour period at Building #3. At any given time, the Permittee may only treat a total volume of hazardous waste that is permitted to be thermally treated within the thermal treatment units located within this building within a four-hour time period.
2. The Permittee shall not place more than 5,196 pounds of net explosive weight of explosive materials in Building #3.
3. Hazardous waste shall not be kept at Building #3 for more than four (4) hours. Hazardous waste shall be returned to a permitted storage unit prior to exceeding the four (4) hour storage limit.
4. The Permittee shall not treat, by cutting the MLRS Rocket Motor into segments in each Rocket Motor Saw tank, more than 650 lbs per hour of net explosive weight of explosive material.
5. The Permittee shall not burn, in the Propellant Thermal Treatment Units, subject to all conditions of this Permit, more than the amount of net explosive weight of explosive material generated from the cutting of the MLRS Rocket Motors into segments in Building #3 demonstrated during the latest approved CPT report.

### Building #12

1. The Permittee shall not temporarily manage more than a maximum of 3,000 pounds of net explosive weight of Class 1.3 materials in Building #12.
2. The Permittee shall not treat more than 475 lbs per hour of net explosive weight of explosive material in the Building #12 NCPTTUs.

3. The quantity of Class 1.3 explosive material in the temporary management of hazardous waste area of Building #12 shall not exceed that needed for one half of a work shift (twelve hour shift). This is equal to the hourly feed rate in Special Permit Conditions.II.Q times six;
4. The Permittee shall not temporarily manage Class 1.3 explosives in Building #12 for longer than twenty-four (24) hours. Hazardous waste shall be returned to a permitted storage unit prior to exceeding the twenty-four (24) hour temporary management of hazardous waste limit.

G. Control of Fugitive Emissions

1. The Permittee shall operate, inspect and maintain all systems and equipment necessary to prevent fugitive emissions from the Building #1 Thermal Treatment Units. The Permittee shall not operate the treatment units if visible emissions are evident. The Permittee, at a minimum, shall operate each treatment unit burn chamber in accordance with “Procedure T – Criteria for and Verification of a Permanent or Temporary Total Enclosure” under 40 CFR § 52.741, Appendix B.
2. The Permittee shall operate, inspect and maintain all systems and equipment necessary to prevent fugitive emissions from the Building #1 Static Kiln Units. The Permittee shall not operate the treatment units if visible emissions are evident. The Permittee at a minimum shall operate each static kiln in accordance with “Procedure T – Criteria for and Verification of a Permanent or Temporary Total Enclosure” under 40 CFR § 52.741, Appendix B.
3. The Permittee shall operate, inspect and maintain all systems and equipment necessary to prevent fugitive emissions from the Building #3 Propellant Treatment Units. The Permittee shall not operate the treatment units if visible emissions are evident. The Permittee, at a minimum, shall operate each propellant burn chamber in accordance with “Procedure T – Criteria for and Verification of a Permanent or Temporary Total Enclosure” under 40 CFR § 52.741, Appendix B.
4. The Permittee shall operate, inspect and maintain all systems and equipment necessary to prevent fugitive emissions from the Building #12 NCP Treatment Units. The Permittee shall not operate the treatment units

if visible emissions are evident. The Permittee, at a minimum, shall operate each propellant burn chamber in accordance with “Procedure T – Criteria for and Verification of a Permanent or Temporary Total Enclosure” under 40 CFR § 52.741, Appendix B.

H. Containment [40 CFR 264.601 and 40 CFR 264.175]

The Permittee shall design and operate containment systems for the treatment areas as follows:

1. 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.
2. 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.
3. The containment system shall have sufficient capacity to contain 10% of the volume of all containers or 100% of the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination.
4. Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in Special Permit Condition I.G.3. above to contain any run-on, which might enter the system.
5. Spilled or leaked waste shall be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.
6. The Permittee shall comply with the siting and construction requirements contained in the newest version of the “DoD Contractors’ Safety Manual for Ammunition and Explosives” (the current version is dated March 13, 2008).

- I. Operating Requirements [10 CSR 25-7.264(1) incorporating 40 CFR 264.601]
  1. The Permittee shall comply with the procedures contained in the newest version of the “DoD Contractors’ Safety Manual for Ammunition and Explosives” (the current version is dated March 13, 2008).
  2. The Permittee shall not place hazardous waste or treatment reagents in the treatment units if they could cause any component of that treatment unit to rupture, leak or otherwise fail.
  3. The Permittee shall ensure operation of all automatic equipment that prevents spills and overflows from a treatment device or containment system.
  4. The Permittee shall use only the mechanical treatment devices that are specified in Appendix 4-2 of the approved permit application for feed preparation of hazardous waste.
  5. The Permittee shall only perform feed preparation activities in the Storage/Feed Handling Building and Building #3 as detailed in the approved permit application.
  6. The Permittee shall implement and maintain in the Operating Record, an Operations and Maintenance Plan, for each of the Miscellaneous Units in Permit Condition II. The plan shall be signed by a responsible corporate officer as defined in 40 CFR 270.11(a) and include the certification in 40 CFR 270.10(d)(1). The Permittee shall revise the plan whenever necessary to ensure the proper operation and maintenance of the treatment units, equipment, instrumentation and compliance with this Permit and submit the revised plan to the Department for review and approval as a Class 1 Permit modification without prior Director’s approval in accordance with 40 CFR 270.42.
  7. The Permittee shall implement and maintain in the Operating Record, a Startup, Shutdown and Malfunction Plan (SSMP) for each of the Miscellaneous Units in Permit Condition II. The plan shall be signed by a responsible corporate officer and include the certification in 40 CFR 270.11(d)(1). A responsible corporate officer shall be as defined in 40 CFR 270.11(a). The Permittee shall implement the plan whenever the

operating parameter limits for each treatment unit are exceeded. The Permittee shall document in the Operating Record all actions taken under the SSMP. The Permittee shall revise the plan whenever necessary to ensure the operation of the treatment units remains in compliance with the applicable emissions limits for each treatment unit at all times and submit the revised plan to the Department for review and approval as a Class 1 Permit modification without prior Director's approval in accordance with 40 CFR 270.42.

8. The Permittee shall implement and maintain in the Operating Record, an Operator Training and Certification Program for each of the Miscellaneous Units in Permit Condition II. The Permittee shall revise the plan whenever necessary to ensure the operation of the treatment units remains in compliance with this Permit at all times and submit the revised plan to the Department for review and approval as a Class 1 Permit modification without prior Director's approval in accordance with 40 CFR 270.42.

J. Building #1 - Thermal Treatment Unit Emission Standards

Each two (2) thermal treatment units which share common air pollution control equipment whether operated singly or together shall not discharge or cause combustion gases to be emitted into the atmosphere that contain:

1. Dioxins and furans in excess of 0.11 ng TEQ/dscm;
2. Mercury in excess of 8.1  $\mu\text{g/dscm}$ ;
3. Cadmium and lead in excess of 10  $\mu\text{g/dscm}$ ;
4. Arsenic, beryllium, and chromium in excess of 23  $\mu\text{g/dscm}$ ;
5. Hydrogen chloride and chlorine gas in excess of 21 ppmv;
6. Particulate in excess of 0.0015 gr/dscf; and

K. Building #1 - Thermal Treatment Unit Operating Parameter Limits

The Permittee shall comply with the Operating Parameter Limits (OPLs) and automatically initiate the indicated action whenever any of the specified limits are exceeded. The Permittee shall not resume hazardous waste feed until all OPLs are within the specified limits.

1. The following OPLs are determined from emissions testing and may not be changed by the Permittee without approval of a permit modification by the Department after conducting new emissions testing. If the CPT results in OPLs that are:
  - a. More restrictive (i.e. lower feed rate), the Permittee shall notify the Department through a Class 1 Permit modification without prior director approval.
  - b. Less restrictive (i.e. higher feed rate), the Permittee shall request a Class 1 Permit modification requiring prior director approval.

Parameter	Setpoint	Value	Tag # <sup>1</sup>	Action	Basis
TTU Feed Rate - High	1,120 for each TTU	Units	N/A	AWFCO <sup>2</sup>	HRA <sup>3</sup>
APCS-C1 & APCS-C2 Stack Flow - High	2,529	Nm3/h	AFS-C101 AFS-C102	AWFCO <sup>2</sup>	HRA <sup>3</sup>

<sup>1</sup> Unique number assigned to individual equipment parts.

<sup>2</sup> AWFCO = Automatic Waste Feed Cut-offs

<sup>3</sup> HRA = Hourly Rolling Average

2. The following OPLs are determined from manufacturer's specifications and may not be changed by the Permittee without approval of a permit modification by the Department.

Parameter	Setpoint	Value	Tag # <sup>1</sup>	Action	Basis
TTU-1,2,3,4 Pressure - High	-5	Pa	PI-C101-1 PI-C102-1 PI-C103-1 PI-C104-1	AWFCO <sup>2</sup>	OMA <sup>3</sup>

Parameter	Setpoint	Value	Tag # <sup>1</sup>	Action	Basis
PF-C101 & PF-C102 Primary Cartridge Filter Outlet Temp - High	275	° F	TI-C101-2 TI-C102-2	AWFCO <sup>2</sup>	HRA <sup>4</sup>
PF-C101 & PF-C102 Primary Cartridge Filter DP <sup>5</sup> - Low	0.5	mbar	PI-C101-2 PI-C102-2	AWFCO <sup>2</sup>	HRA <sup>4</sup>
FH-C101 & FH-C102 HEPA Filter DP <sup>5</sup> - Low	1.0	mbar	PI-C101-4 PI-C102-4	AWFCO <sup>2</sup>	HRA <sup>4</sup>
APCS-C1 & APCS-C2 Particulate Sensor	0.0005	gr/dscf	XSH-C101 XSH-C102	AWFCO <sup>2</sup>	HRA <sup>4</sup>
APCS-C1 & APCS-C2 Stack Flow - Low	2,250	Nm3/h HRA	AFS-C101 AFS-C102	AWFCO <sup>2</sup>	OMA <sup>3</sup>
TTU Doors open	No Signal	No Signal	N/A	AWFCO <sup>2</sup>	Instantaneous

<sup>1</sup> Unique number assigned to individual equipment parts.

<sup>2</sup> AWFCO = Automatic Waste Feed Cut-offs

<sup>3</sup> OMA = One Minute Average

<sup>4</sup> HRA = Hourly Rolling Average

<sup>5</sup> DP = Differential Pressure

3. The Permittee shall not continue to feed hazardous waste into a treatment unit if such hazardous waste feed causes an exceedance of any OPLs.

L. Building #1 - Static Kiln Treatment Unit Performance Standards

Each Static Kiln Treatment Unit whether operated singly or together shall not discharge or cause combustion gases to be emitted to the atmosphere that contain:

1. Dioxins and furans in excess of 0.11 ng TEQ/dscm;
2. Mercury in excess of 8.1 µg/dscm;
3. Cadmium and lead in excess of 10 µg/dscm;
4. Arsenic, beryllium, and chromium in excess of 23 µg/dscm;
5. Hydrogen chloride and chlorine gas in excess of 21 ppmv;

6. Particulate in excess of 0.0015 gr/dscf; and

M. Building #1 - Static Kiln Thermal Treatment Unit Operating Parameter Limits

Only one of the Static Kilns (designated as SK-1, SK-2, SK-3 and SK-4) shall operate to thermally treat hazardous waste at any one time. The Permittee shall comply with the OPLs and automatically initiate the indicated action whenever any of the specified limits are exceeded. The Permittee shall not resume hazardous waste feed until all OPLs are within the specified limits.

1. The following OPLs are determined from emissions testing and may not be changed by the Permittee without approval of a permit modification by the Department after conducting new emissions testing. If the CPT results in OPLs that are:
  - a. More restrictive (i.e. lower feed rate) the Permittee shall notify the Department through a Class 1 Permit modification without prior director approval.
  - b. Less restrictive (i.e. higher feed rate) the Permittee shall request a Class 1 Permit modification requiring prior director approval.

Parameter	Setpoint	Value	Tag # <sup>1</sup>	Action	Basis
SK Feedrate HRA <sup>3</sup> - High	4,853	Units	N/A	AWFCO <sup>2</sup>	HRA <sup>3</sup>
APCS-S1 Stack Flow - High	618	Nm3/h	AFS_S101	AWFCO <sup>2</sup>	HRA <sup>3</sup>

<sup>1</sup> Unique number assigned to individual equipment parts.

<sup>2</sup> AWFCO = Automatic Waste Feed Cut-offs

<sup>3</sup> HRA = Hourly Rolling Average

2. The following OPLs are determined from manufacturer’s specifications and may not be changed by the Permittee without approval of a permit modification by the Department.

Parameter	Setpoint	Value	Tag # <sup>1</sup>	Action	Basis
SK-1,2,3,4 Pressure - High	-5	Pa	PI-S101 PI-S102 PI-S103 PI-S104	AWFCO <sup>2</sup>	OMA <sup>3</sup>
SK-1,2,3,4 Temperature - Low	550	° F	TI-S101 TI-S102 TI-S103 TI-S104	AWFCO <sup>2</sup>	OMA <sup>3</sup>
PF-S101 Primary Cartridge Filter DP <sup>5</sup> - Low	0.5	mbar	PI-S101-1	AWFCO <sup>2</sup>	HRA <sup>4</sup>
PF-S101 Primary Cartridge Filter Outlet Temp - High	200	° F	PI-S101-1	AWFCO <sup>2</sup>	HRA <sup>4</sup>
FH-S101 HEPA Filter DP <sup>5</sup> - Low	1.0	mbar	PI-S101-2	AWFCO <sup>2</sup>	HRA <sup>4</sup>
APCS-S1 Particulate Sensor	0.0005	gr/dscf	XSH-S101	AWFCO <sup>2</sup>	HRA <sup>4</sup>
APCS-S1 Stack Flow - Low	360	Nm3/h	AFS-S101	AWFCO <sup>2</sup>	OMA <sup>3</sup>

<sup>1</sup> Unique number assigned to individual equipment parts.

<sup>2</sup> AWFCO = Automatic Waste Feed Cut-offs

<sup>3</sup> OMA = One Minute Average

<sup>4</sup> HRA = Hourly Rolling Average

<sup>5</sup> DP = Differential Pressure

3. The Permittee shall not continue to feed hazardous waste into a treatment unit if such hazardous waste feed causes an exceedance of any OPLs.

N. Building #3 - Propellant Thermal Treatment Unit Performance Standards

Only one of the Propellant Treatment Units (designated as East PTTU and West PTTU) shall operate at any one time.

The Permittee shall not discharge or cause combustion gases to be emitted to the atmosphere from operation of either Propellant Thermal Treatment Units that contain:

1. Dioxins and furans in excess of 0.11 ng TEQ/dscm;

2. Mercury in excess of 8.1 µg/dscm;
3. Cadmium and lead in excess of 10 µg/dscm;
4. Arsenic, beryllium, and chromium in excess of 23 µg/dscm;
5. Hydrogen chloride and chlorine gas in excess of 21 ppmv;
6. Particulate in excess of 0.0015 gr/dscf; and

O. Building #3 - Propellant Treatment Unit Operating Parameter Limits

Only one of the Propellant Treatment Units (designated as East PTTU and West PTTU) shall operate at any one time. The Permittee shall comply with the OPLs and automatically initiate the indicated action whenever any of the specified limits are exceeded. The Permittee shall not resume hazardous waste feed until all OPLs are within the specified limits.

1. The following OPLs are determined from emissions testing and may not be changed by the Permittee without approval of a permit modification by the Department after conducting new emissions testing. If the CPT results in OPLs that are:
  - a. More restrictive (i.e. lower feed rate) the Permittee shall notify the Department through a Class 1 Permit modification without prior director approval.
  - b. Less restrictive (i.e. higher feed rate) the Permittee shall request a Class 1 Permit modification requiring prior director approval.

Parameter	Setpoint	Units	Tag # <sup>1</sup>	Action	Basis
Waste Feed Weight to PTTC HRA <sup>3</sup> - High	1,964	lb/hr	PLC Calc	AWFCO <sup>2</sup>	HRA <sup>3</sup>
AC <sup>4</sup> Feed Rate HRA <sup>3</sup> - Low	18	lbs/hr	M-10 PLC Calc	AWFCO <sup>2</sup>	HRA <sup>3</sup>
Packed Bed pH HRA <sup>3</sup> - Low	8.2	pH	pH-200-1	AWFCO <sup>2</sup>	HRA <sup>3</sup>

Parameter	Setpoint	Units	Tag # <sup>1</sup>	Action	Basis
Packed Bed NaCl Level HRA <sup>3</sup> - High	11.3	% NaCl	CON-200-2	AWFCO <sup>2</sup>	HRA <sup>3</sup>
Stack Gas Flow Rate HRA <sup>3</sup> - High	23,348	acfm	FT-173	AWFCO <sup>2</sup>	HRA <sup>3</sup>

- <sup>1</sup> Unique number assigned to individual equipment parts.  
<sup>2</sup> AWFCO = Automatic Waste Feed Cut-offs  
<sup>3</sup> HRA = Hourly Rolling Average  
<sup>4</sup> AC = Activated Carbon

2. The following OPLs are determined from manufacturer’s specifications and may not be changed by the Permittee without approval of a permit modification by the Department.

Parameter	Setpoint	Units	Tag # <sup>1</sup>	Action	Basis
Flame Sensor	No Signal	No Signal	Sensor	AWFCO <sup>2</sup>	Instantaneous
PTTC Pressure OMA <sup>3</sup> - High	-0.20	in. w.c.	PT-117 PT-118	AWFCO <sup>2</sup>	OMA <sup>3</sup>
SBC <sup>5</sup> Feed Rate HRA - Low	25	Lbs/min	M-2 PLC Calc	AWFCO <sup>2</sup>	HRA <sup>4</sup>
SBC <sup>5</sup> Blower Operating	Off	On/Off	M-4	AWFCO <sup>2</sup>	Instantaneous
SBC <sup>5</sup> Particulate Sensor	Off	On/Off	FS-101 FS-102	AWFCO <sup>2</sup>	Instantaneous
AC <sup>6</sup> Blower Operating	Off	On/Off	M-10	AWFCO <sup>2</sup>	Instantaneous
Baghouse Inlet Temperature HRA <sup>4</sup> - High	350	° F	TT-124	AWFCO <sup>2</sup>	HRA <sup>4</sup>
Broken Bag Detectors	On	On/off	BBD-153 BBD-159 BBD-165 BBD-204 BBD-210 BBD-216	AWFCO <sup>2</sup>	Instantaneous

Parameter	Setpoint	Units	Tag # <sup>1</sup>	Action	Basis
Quench Vessel NaCl Level HRA <sup>4</sup> - High	12.0	% NaCl	CON-100-2	AWFCO <sup>2</sup>	HRA <sup>4</sup>
Quench Vessel pH HRA <sup>4</sup> - Low	6.0	pH	CON-100-1	AWFCO <sup>2</sup>	HRA <sup>4</sup>
Quench Vessel DP <sup>7</sup> - Low	1.0	in. w.c.	DPIT-100	AWFCO <sup>2</sup>	HRA <sup>4</sup>
Quench Vessel Recycle Water Flow Rate - Low	100	gpm	FIT-200	AWFCO <sup>2</sup>	OMA <sup>3</sup>
Packed Bed DP <sup>7</sup> - Low	2.0	in. w.c.	DPIT-200	AWFCO <sup>2</sup>	HRA <sup>4</sup>
Packed Bed Recycle Water Flow Rate - Low	200	gpm	FIT-300	AWFCO <sup>2</sup>	OMA <sup>3</sup>
Stack Gas Flow Rate OMA <sup>3</sup> - Low	19,000	acfm	FT-173	AWFCO <sup>2</sup>	OMA <sup>3</sup>
Stack HCl Level HRA <sup>4</sup> - High	21	ppm	CEMS-2	AWFCO <sup>2</sup>	HRA <sup>4</sup>

<sup>1</sup> Unique number assigned to individual equipment parts.

<sup>2</sup> AWFCO = Automatic Waste Feed Cut-offs

<sup>3</sup> OMA - One Minute Average

<sup>4</sup> HRA = Hourly Rolling Average

<sup>5</sup> SBC = Sodium Bicarbonate

<sup>6</sup> AC = Activated Carbon

<sup>7</sup> DP = Differential Pressure

3. The Permittee shall use Solvay Chemicals SOLVAir Select 300 Sodium Bicarbonate 99% purity as a dry sorbent for the control of acid gases and may not be changed by the Permittee without approval of a permit modification by the Department.

The Permittee may use Trona (trisodium hydrogendicarbonate dihydrate) or hydrated lime instead of sodium bicarbonate if trial testing proves out their efficacy. A change to Trona or hydrated lime from sodium bicarbonate as sorbent in the APCD shall require the Permittee to obtain a Class 1 Permit modification with prior director approval.

4. The Permittee shall use General Carbon Corp. GC Powdered-FG Activated Carbon as a dry sorbent for the control of dioxins and furans and may not be changed by the Permittee without approval of a permit modification by the Department.
5. The Permittee shall not continue to feed hazardous waste into a treatment unit if such hazardous waste feed causes an exceedance of any OPLs.

P. Building #12 - NCP Thermal Treatment Unit Performance Standards

Only one of the NCP Treatment Units (designated as East NCP TTU and West NCP TTU) shall receive hazardous waste feed at any one time.

The Permittee shall not discharge or cause combustion gases to be emitted into the atmosphere from operation of either NCP Thermal Treatment Unit that contain:

1. Dioxins and furans in excess of 0.11 ng TEQ/dscm;
2. Mercury in excess of 8.1 µg/dscm;
3. Cadmium and lead in excess of 10 µg/dscm;
4. Arsenic, beryllium, and chromium in excess of 23 µg/dscm;
5. Hydrogen chloride and chlorine gas in excess of 21 ppmv;
6. Particulate in excess of 0.0015 gr/dscf; and

Q. Building #12 - NCP Treatment Unit Operating Parameter Limits

The Permittee shall comply with the OPLs and automatically initiate the indicated action whenever any of the specified limits are exceeded. The Permittee shall not resume hazardous waste feed until all OPLs are within the specified limits.

1. The following OPLs are determined from emissions testing and may not be changed by the Permittee without approval of a permit modification by the Department after conducting new emissions testing. If the CPT results in OPLs that are:

- a. More restrictive (i.e. lower feed rate) the Permittee shall notify the Department through a Class 1 Permit modification without prior director approval.
- b. Less restrictive (i.e. higher feed rate) the Permittee shall request a Class 1 Permit modification requiring prior director approval.

Parameter	Setpoint	Units	Tag # <sup>1</sup>	Action	Avg
High Waste Feed Weight to TTC	475	Lb/hr	PLC	AWFCO <sup>2</sup>	HRA <sup>3</sup>
High TTC Pressure	-0.10	in. w.c.	PT-101 PT-201	AWFCO <sup>2</sup>	OMA <sup>4</sup>
Low Venturi DP	22	in. w.c.	PT-305	AWFCO <sup>2</sup>	HRA <sup>3</sup>
Low Venturi Recycle Water Flow	84	gpm	FT-302	AWFCO <sup>2</sup>	HRA <sup>3</sup>
High Recycle Water TSS/Salt Level	5	%	CON-301	AWFCO <sup>2</sup>	12 HRA <sup>3</sup>
Low Recycle Water pH	5.9	pH	PH-301	AWFCO <sup>2</sup>	HRA <sup>3</sup>
Low Stack Gas Flow Rate	4,000	acfm	FT-304	AWFCO <sup>2</sup>	OMA <sup>4</sup>
High Stack Gas Flow Rate	6,251	acfm	FT-304	AWFCO <sup>2</sup>	HRA <sup>3</sup>

<sup>1</sup> Unique number assigned to individual equipment parts.  
<sup>2</sup> AWFCO = Automatic Waste Feed Cut-offs  
<sup>3</sup> HRA = Hourly Rolling Average  
<sup>4</sup> OMA = One Minute Average

2. The following OPLs are determined from manufacturer's specifications and may not be changed by the Permittee without approval of a permit modification by the Department.

Parameter	Setpoint	Value	Tag # <sup>1</sup>	Action	Avg
TTC Exit Temperature High	1,500	° F	TT-301	AWFCO <sup>2</sup>	HRA <sup>4</sup>
High Baghouse Inlet Temp	410	° F	TT-601	AWFCO <sup>2</sup>	HRA <sup>4</sup>
Broken Bag Detectors	On	On/Off	BBD-601	AWFCO <sup>2</sup>	
Baghouse DP Low	1.5	In. w.c	PT-601	AWFCO <sup>2</sup>	HRA <sup>4</sup>
Low Quench Recycle Water Flow	12	gpm	FT-301	AWFCO <sup>2</sup>	HRA <sup>4</sup>

Parameter	Setpoint	Value	Tag # <sup>1</sup>	Action	Avg
Quench Exit Temperature High	300	° F	TT-302	AWFCO <sup>2</sup>	HRA <sup>4</sup>
Cyclone Water Level Low	20	%	LT-301	AWFCO <sup>2</sup>	OMA <sup>3</sup>

<sup>1</sup> Unique number assigned to individual equipment parts.

<sup>2</sup> AWFCO = Automatic Waste Feed Cut-offs

<sup>3</sup> OMA - One Minute Average

<sup>4</sup> HRA = Hourly Rolling Average

3. The Permittee shall discontinue feeding hazardous waste into a thermal treatment unit if such hazardous waste feed causes an exceedance of any OPLs established for Building #12.

R. Bag Leak Detection System Requirements

The outlet of each of the three (3) high-efficiency particulate filters at Building #1, each of the six (6) bag houses at Building #3, and the bag house at Building #12 shall be equipped with a bag leak detection system certified by the manufacturer to be capable of continuously detecting and recording particulate matter concentrations of 0.0005 grains per cubic foot.

The bag leak detection system shall provide output of relative or absolute particulate matter loadings;

The bag leak detection system shall be equipped with an alarm system that will sound an audible and visual alarm when an increase in particulate matter loadings over 0.0005 gr/dscf.

S. Monitoring Requirements

The Permittee shall maintain, calibrate, and operate continuous monitors which monitor and record the operating parameters and conditions used to verify compliance with all limits and operating parameters specified in this Permit, including any parameters used in calculations.

1. The Permittee shall record in the operating record, all OMA and HRA continuous monitor system data used to monitor operating parameters, initiate automatic waste feed cutoffs, initiate other system actions and to document all system actions required by Permit Condition II.K. and all

continuous monitoring system data specified in the application for the Building # 1 Thermal Treatment Units.

2. The Permittee shall record in the operating record, all OMA and HRA continuous monitor system data used to monitor operating parameters, initiate automatic waste feed cutoffs, initiate other system actions and to document all system actions required by Permit Condition II.M. and all continuous monitoring system data specified in the application for the Building # 1 Static Kiln Units.
3. The Permittee shall record in the operating record, all OMA and HRA continuous monitor system data used to monitor operating parameters, initiate automatic waste feed cutoffs, initiate other system actions and to document all system actions required by Permit Condition II.O. and all continuous monitoring system data specified in the application for the Building # 3 Propellant Treatment Units.
4. The Permittee shall maintain, calibrate, and operate continuous emission monitors (CEMS) for HCl to monitor the concentration of HCl in the Building #3 stack. The Permittee shall follow the specifications and test procedures for the HCL CEMS in accordance with Performance Specification Z: Specifications and Test Procedures for HCL Continuous Emission Monitoring Systems at Stationary Sources dated October 2006.
5. The Permittee shall record in the operating record, all OMA and HRA continuous monitor system data used to monitor operating parameters, initiate automatic waste feed cutoffs and to initiate other system actions. The Permittee shall record data used to document all system actions necessary to show compliance with Permit Condition II.P. and all continuous monitoring system data specified in the permit modification request for the Building # 12 NCP Thermal Treatment Units.

T. Response to Leaks or Spills [40 CFR 264.601 and 40 CFR 264.196]

1. In the event of a leak or a spill from a treatment system, or from a secondary containment system, or if a system becomes unfit for continued use, the Permittee shall remove the system from service immediately and complete the following actions:

- a. Stop the flow of hazardous waste into the system, remove existing waste and inspect the system to determine the cause of the release.
- b. Remove waste from the system within twenty-four (24) hours of the detection of the leak to prevent further release and to allow inspection and repair of the system. If the Permittee finds that it will be impossible or impractical to meet this time period, the Permittee shall notify the Director and demonstrate that the longer time period is required.

If the collected material is a hazardous waste, it must be managed in accordance with all applicable requirements of 40 CFR Parts 262, 263, 264, 266 and 270. The Permittee shall note that if the collected material is discharged through a point source to public waters or to a publicly owned treatment works, it is subject to requirements to the Clean Water Act.

- c. The Permittee shall immediately conduct a visual inspection of all releases to the environment and based on that inspection:
    - 1) prevent further migration of the leak or spill to soils or surface water;
    - 2) remove and properly dispose of any visible contamination of the soil or surface water; and
    - 3) determine the extent of contamination to the soil, surface water and/or groundwater.
2. In the event of equipment failure:
- a. For a release caused by a spill that has not damaged the integrity of the treatment system, the Permittee shall remove the released waste and make any necessary repairs to fully restore the integrity of the system before returning the treatment system to service.
  - b. For a release caused by a leak from a treatment unit to the secondary containment system, the Permittee shall repair the treatment unit prior to returning it to service. The material released shall be thoroughly removed from the affected area.
  - c. If the Permittee replaces a component of the treatment system to eliminate the leak, that component must satisfy the requirements

for new tank systems or components in 40 CFR 264.192 and 40 CFR 264.193.

3. For all major repairs to eliminate leaks or restore the integrity of the treatment system, the Permittee must obtain a certification by an independent, qualified, registered professional engineer in Missouri prior to returning the system to service which states that the repaired system is capable of handling hazardous wastes permitted for treatment within the unit without release for the intended life of the system.

U. Inspection Schedules and Procedures [40 CFR 264.602]

1. The Permittee shall inspect each of the Miscellaneous Units in Permit Condition II in accordance with the Inspection Schedule specified in the approved permit application.
2. The Permittee shall inspect once each operating day:
  - a. All visible portions of each of the units to detect corrosion, fugitive emissions or releases of waste or treatment residues;
  - b. Data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges) to ensure that each of the units are being operated according to its design and this Permit;
  - c. Floors for any residual waste material that has not been removed.
3. The Permittee shall visually inspect equipment used to manage liquids daily for leaks, spills or other releases of hazardous waste.

V. Recordkeeping and Reporting [40 CFR 264.602]

1. The Permittee shall report to the Director, within twenty-four (24) hours of detection, when a leak or spill occurs from the treatment systems or secondary containment system to the environment, except for:
  - a. A leak or spill of one (1) pound or less of hazardous waste, that is immediately contained and cleaned-up within four (4) hours; and

- b. Releases that are contained within a secondary containment system and cleaned up within twenty-four (24) hours of release.
2. Within thirty (30) days of detecting a release to the environment from the treatment system or secondary containment system, the Permittee shall report the following information to the Director:
  - a. Likely route of migration of the release;
  - b. Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet this time period, the Permittee shall provide the Director with a schedule of when the results will be available. This schedule must be provided before the required thirty (30) day submittal period expires;
  - c. Proximity of down gradient drinking water, surface water, and populated areas;
  - d. Description of response actions taken or planned; and
  - e. Description of countermeasures needed to preclude migration to or in any and all media including but not limited to information specified in all provisions of 40 CFR 264.601(a), (b) or (c) as deemed appropriate by the Director.
3. The Permittee shall submit to the Director all certifications of major repairs, which shall be consistent with the specifications found in the permit application to correct leaks within seven (7) days of the treatment system being returned to use.
4. The Permittee shall obtain, and keep on file at the facility, the written statements by those persons required to certify the design and installation of the treatment system.
5. The Permittee shall keep on file at the facility the written assessment of the system's integrity.

6. The Permittee shall maintain at the facility a record of the results of leak tests and integrity tests conducted, in accordance with Special Permit Condition II.G.
  7. The Permittee shall maintain, calibrate and operate all continuous monitoring systems used to monitor operating parameters required by Special Permit Condition II.M. and all continuous monitoring systems specified in the application for the Building # 1 Static Kiln Units.
  8. The Permittee shall maintain, calibrate and operate all continuous monitoring systems used to monitor operating parameters required by Special Permit Condition II.K. and all continuous monitoring systems specified in the application for the Building # 1 Thermal Treatment Units.
  9. The Permittee shall maintain, calibrate and operate all continuous monitoring systems used to monitor operating parameters required by Special Permit Condition II.O. and all continuous monitoring systems specified in the application for the Building # 3 Propellant Treatment Units.
  10. The Permittee shall maintain, calibrate and operate all continuous monitoring systems used to monitor operating parameters required by Special Permit Condition II.P. and all continuous monitoring systems specified in the application for the Building # 12 NCP Treatment Units.
- W. Special Requirements for Ignitable or Reactive Wastes [40 CFR 264.601 and 40 CFR 264.17]
1. The Permittee shall not place ignitable or reactive waste in the treatment system or in the secondary containment system, unless the procedures specified in the approved permit application are followed.
  2. The Permittee shall comply with the requirements for the maintenance of protective distances between the waste management areas and any public ways, streets, alleys, or an adjoining property line that can be built upon, as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" and ATF and Department of Defense Explosives Safety Board quantity distance requirements.

X. Special Requirements for Incompatible Wastes [40 CFR 264.601 and 40 CFR 264.17]

1. The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same treatment system or the same secondary containment system, unless the procedures that are specified in the newest version of the “DoD Contractors’ Safety Manual for Ammunition and Explosives” (the current version is dated March 13, 2008) are followed.
2. The Permittee shall not place hazardous waste in a treatment system that has not been decontaminated and that previously held an incompatible waste or material, unless the procedures specified in the newest version of the “DoD Contractors’ Safety Manual for Ammunition and Explosives” (the current version is dated March 13, 2008) are followed.
3. The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same treatment system or the same secondary containment system, unless such action is in compliance with the requirements of 40 CFR 264.17(b).

Y. Closure [10 CSR 25-7.264(1) incorporating 40 CFR 264.601]

At closure of a miscellaneous unit, the Permittee shall remove or decontaminate all hazardous waste and hazardous residues from the miscellaneous unit, including, but not limited to: contaminated tank system components (liners, etc.), contaminated soils, and contaminated equipment and structures, and shall close in accordance with the Closure Plan in the approved permit application. If the Permittee is unable to close according to the Closure Plan, then the Permittee must submit a permit modification to the Department in accordance with 40 CFR 270.42. The Closure Plan, closure activities, cost estimates for closure, and financial responsibility for the miscellaneous units shall meet all of the requirements specified in 40 CFR Part 264 Subparts G and H, [10 CSR 25-7.264(1) incorporating 40 CFR 264(G) and (H)].

Z. Testing

Within 60 days of a request from the Department, the Permittee shall submit a test plan, conduct sampling and analysis of the hazardous waste, residues, and emissions. The Department may request a new or revised plan for the conduct of

such testing. The Department shall review and approve any test plan prior to its implementation. The Permittee shall provide written notice of testing to the Department at least 30 days prior to its initiation. The testing shall be completed within 30 days of its initiation and the results reported within 90 days of its conclusion.

- a. If the Department disapproves the plan or report, the Department will notify the Permittee in writing of the plan's deficiencies and specify a due date for submittal of a revision.
- b. If the Department disapproves the revised plan or report, the Department may modify the plan or report and will notify the Permittee of any modifications. The plan or report, as modified by the Director, is the approved plan or report.

AA. Emissions Testing

Upon the request of the Director, the Permittee shall conduct sampling and analysis of the hazardous waste (and other fuels as appropriate), residues, and exhaust emissions to verify that the operating requirements established in this Permit achieve the performance standards of Special Permit Conditions II.J-P. If requested, the Permittee shall submit a test plan to the Director for review and approval by the Director. The Permittee shall modify and revise the test plan as necessary to respond to comments from the Director. The testing and test report shall be completed by the schedule determined by the Director.

The Permittee shall conduct tests to verify that the conditions and limits required by this Permit achieve the performance standards of Special Permit Conditions II.J-P. This testing shall be conducted at no less than 5 year intervals beginning 5 years from the initial test dates of May 2012 for Building #3 and June 2012 for Building #1 and September 2016 for Building #12. The Permittee shall submit a test plan to the Director no later than 12 months prior to the required testing date for review and approval by the Director. The Permittee shall modify and revise the test plan as necessary to respond to comments from the Director. The data collected from these tests and the report prepared shall be submitted to the Director within 90 days of the completion of the testing. In the event that the performance standards are not being met, the Permittee must re-test under different operating conditions designed to meet the performance standards. In the event that subsequent testing shows that the performance standards cannot be met,

the Permittee shall cease burning of hazardous wastes and close the treatment unit in accordance with the requirements of 40 CFR Part 264, Subpart G and Special Permit Condition II.Y.

### III. Incinerator Requirements [40 CFR Part 264 Subpart O]

#### A. Description of the Incinerator

The incinerator consists of a rotary kiln and a car bottom furnace with an air pollution control system consisting of a secondary combustor, a spray dryer, a baghouse, two induced draft fans and an exhaust stack. The rotary kiln is designed to incinerate configured munitions and bulk explosives. The car bottom furnace is used intermittently, while the rotary kiln is not operating, for treatment of large, unusual or irregular shaped metal pieces, and for incineration of contaminated waste materials such as rags, soiled uniforms, manufacturing wastes, and packaging materials.

The Permittee has demonstrated compliance with the Maximum Achievable Control Technology (hereinafter “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) that is submitted to the Administrator documenting compliance with those requirements.

#### B. Waste Quantities

The Permittee shall incinerate only the following quantities of hazardous wastes in the Rotary Kiln and the Car Bottom furnace according to this Permit. The Permittee shall submit a Class 1 Permit modification without Director’s approval in accordance with 40 CFR 270.42, for an informational change, if these capacities are to be changed or modified by the Air Pollution Control Program:

1. Incineration of hazardous waste in the Rotary Kiln shall not exceed 3055 lbs per hour; and
2. Incineration of hazardous waste in the Car Bottom Furnace shall not exceed 10,005 lbs per hour.

C. Closure [10 CSR 25-7.264(1) incorporating 40 CFR 264 Subpart G]

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

IV. Off-Site Requirements

A. Traffic Routes

The Permittee and other hazardous waste transporters presently use the following routes within Jasper County and Newton County, in the vicinity of the facility site, for the transportation of hazardous wastes generated outside those counties to the facility and for the transportation of hazardous wastes from the facility:

1. That part of U.S. 71 from the Barton County/Jasper County line to U.S. Interstate 44 in Jasper County;
2. That part of U.S. 71 from the McDonald County/Newton County line to U.S. Interstate 44 in Newton County;
3. U.S. Interstate 44;
4. That part of Missouri Route 249 between U.S. Interstate 44 and Missouri Route 66;
5. That part of Missouri Route 66 between Missouri Route 249 and U.S. Interstate 44; and
6. That part of Jasper County Road 180 between Missouri Route 66 and the facility.

Effective the date the new four-lane U.S. 71 is opened to traffic between the city of Carthage in Jasper County and U.S. 60 in Newton County, the Permittee shall then use the following routes within Jasper County and Newton County for the

transportation of hazardous wastes generated outside those counties to the facility and for transportation of hazardous wastes from the facility:

1. U.S. 71;
2. U.S. Interstate 44;
3. That part of Missouri Route 66 between U.S. 71 and U.S. Interstate 44; and
4. That part of Jasper County Road 180 between Missouri Route 66 and the facility. Use of these routes and any other routes shall conform to U.S. Department of Transportation regulations as well as any and all other applicable federal, state and local laws and regulations.

B. Off -Site Emergency Response

The Permittee shall provide supplemental emergency response off site at the request of any local government unit within the limits of Jasper and Newton Counties. The Permittee shall provide supplemental emergency response resources off-site only for incidents involving the transportation of hazardous wastes to or from the facility, or for incidents involving hazardous waste at the facility. The supplemental emergency response resources shall include those capabilities of the facility emergency response team which are requested by the local government unit, but which are not being utilized in another incident response. The Permittee shall comply with all applicable federal, state and local laws involving such response activity. The Permittee shall provide its emergency contact phone number(s) and comprehensive information on handling explosive cargo in transportation incidents to all Jasper and Newton County response organizations who have responsibility along the permitted transportation routes, as noted in Special Permit Condition IV.A. A copy of the information provided along with a mailing list must be maintained and updated yearly and must be placed in the facility operating record.

C. Arrangements with Local Authorities

The Permittee shall attempt to enter into an arrangement with an emergency response agency (e.g., a local fire department) to provide emergency services at the facility site as a back-up to the emergency services provided by the Duenweg

Fire Department. Such an arrangement shall be in effect prior to the facility conducting operations. However, if an emergency response agency refuses to enter into such an arrangement, the Permittee shall document said refusal. In the event of a documented refusal, the facility’s operation shall not be contingent upon such an arrangement with an emergency response agency being in effect.

V. Waste Minimization

Pursuant to 40 CFR 264.73(b)(9), 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 he generates to the degree determined by the Permittee to be economically practicable; and the proposed method of treatment, storage, or disposal is the practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment.

VI. Seismic Evaluation Requirements [10 CSR 25-7.270(2)(B)4.]

The Permittee has demonstrated compliance with the seismic requirements, as certified by an independent professional engineer registered in the state of Missouri. The Permittee shall maintain the seismic evaluation in the operating record.

VII. Air Emission Standards for Tanks, Surface Impoundments, and Containers  
[10 CSR 25-7.264(1)]

The Permittee shall comply with the applicable requirements of 40 CFR Part 264 Subpart CC, as amended December 8, 1997, 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>
Four (4) Magazines	Container Storage	40 CFR 264.1086
Storage/Feed Handling Building	Container Storage	40 CFR 264.1086
Building #3	Container Storage	40 CFR 264.1086

## **CORRECTIVE ACTION CONDITIONS**

### **I. Identification of Solid Waste Management Units (hereinafter “SWMUs”) and Areas of Concern (hereinafter “AOCs”) [40 CFR 264.101]**

In 1992, Woodward-Clyde Consultants (WCC) conducted a Field Investigation of the facility. The goal of the investigation was to identify a clean site for the construction of the incinerator facility. WCC completed a comprehensive field sampling effort designed to characterize the types of potential contamination and the horizontal and vertical extent of any contamination found. The sampling plan was based partially on the results of previous fieldwork at the site. The 1990, Environmental Investigation of the Atlas Environmental Services Site (Fluor Daniel, 1990) included results from explosives analysis of soil samples collected during that field effort. Based on the WCC Field Investigation, there was no evidence that the facility was contaminated with explosives or volatiles in a systematic way.

On April 18, 2000, the U.S. EPA conducted a visual site inspection to identify SWMUs and AOCs at the facility. This site inspection was prompted by a request to modify the hazardous waste management Permit to transfer it to a new owner. The results of the site inspection can be found in a draft memorandum to the facility file at U.S. EPA Region VII. During the visual site inspection, the U.S. EPA identified 12 SWMUs and/or AOCs. The Permittee identified 15 SWMUs that have been created since the facility began operation. These SWMUs are identified in Section 1.13 and Table 1-2 of the approved permit application. The Permittee also indicated that at that time there had been no releases of hazardous waste or hazardous constituents from any of the units. Based on the above information, the Department determined that, at the time this Permit was originally issued (October 23, 2002), the Permittee was not required to conduct any active corrective action. However, this Permit contains contingent provisions that can be triggered at any time, if the Department determines that corrective action is required at any previously identified SWMUs or AOCs, and/or any newly identified SWMUs or AOCs, with such action being taken in accordance with the corrective action conditions of this Permit, including any necessary permit modifications.

Subsequent to the previous determinations above, a Department letter to the Permittee dated September 26, 2014, triggered submission of a Newly-Identified Solid Waste Management Unit/Area of Concern Investigation Work Plan pursuant to Corrective Action Condition II.B. of this Permit, to assess potential releases to the environment at the facility. Following Department approval of the Permittee’s extension requests for work plan submission and the Permittee’s submission of a revised work plan, the revised work plan was approved with conditions/comments on February 10, 2016. Initial

investigation was conducted by the Permittee and a *Preliminary Assessment Report for Areas of Potential Concern* based on that investigation was received by the Department on September 8, 2016. Any further investigations or remediation that may be required based on the Department's review of the subject report shall be pursuant to the Corrective Action Conditions II.E. of this Permit. In addition to any future corrective action that may be necessary, the Permittee is required to comply with the following conditions:

- A. The Permittee shall grant full access to the facility for actions related to the December 29, 1989, Administrative Order on Consent between EPA and Atlas Powder Company, which became ICI Explosives USA and is now Expert Management Inc. (EMI), and any future actions required by any federal or state permit, order or other agreement governing corrective action at the EMI facility. The order was replaced by a Missouri Hazardous Waste Management Facility Part I Permit for Post-Closure and Corrective Action and an EPA Part II Permit issued to EMI both effective February 15, 2005.
- B. The Permittee shall conduct monitoring of the Runoff Water Sump/TK-103 and Storm Water Pond as identified in Figure 1-3 of the approved permit application. This monitoring shall be conducted in accordance with the procedures described in the approved permit application.

II. Notification Requirements for, and Assessment of, Newly Identified SWMU(s) and AOC(s)

- A. The Permittee shall notify the Department and EPA in writing of any SWMU(s) or AOC(s) identified subsequent to the issuance of this Permit no later than fifteen (15) days after discovery.
- B. The Department may require a SWMU/AOC Assessment Work Plan for conducting an investigation of any newly identified SWMU(s) or AOC(s). Within thirty (30) days after receipt of the Department's request for a SWMU/AOC Assessment Work Plan, the Permittee shall submit a SWMU/AOC Assessment Work Plan which shall include a discussion of past waste management practices at the unit, as well as a sampling and analysis program for groundwater, land surface and subsurface strata, surface water and/or air, as necessary to determine whether a release of hazardous waste, including hazardous constituents, from such unit(s) has occurred, or is occurring. The sampling and analysis program shall be capable of yielding representative samples and must include monitoring parameters sufficient to assess the release of hazardous waste and/or hazardous

constituents from the newly identified SWMU(s)/AOC(s) to the environment. The SWMU/AOC Assessment Work Plan shall specify any data to be collected to provide for a complete SWMU/AOC Assessment Report, as specified below, and shall contain a schedule for implementation of the work plan which is predicated on the date of Departmental approval of the plan.

- C. The SWMU/AOC Assessment Work Plan will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIII. The Permittee shall complete implementation in accordance with 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 from implementation of 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/AOC:

1. The location of the newly identified SWMU/AOC in relation to other SWMUs/AOCs;
2. The type and function of the unit;
3. The general dimensions, capacities, and structural description of the unit;
4. The period during which the unit was operated;
5. The physical and chemical properties of all wastes that have been or are being managed at the SWMU/AOC, to the extent available;
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/AOC;
9. Amounts of waste handled; and

10. Drainage areas and/or drainage patterns near the SWMU(s)/AOC(s).
- E. The SWMU/AOC Assessment Report will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIII. Based on the findings of this report, the Department will determine the need for further investigations, including stabilization 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. This work plan for additional investigations will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIII. The Permittee shall complete implementation in accordance with the schedule contained in the approved plan.
- III. Notification Requirements for, and Assessment of, Newly Identified Releases From Previously Identified SWMU(s) and AOC(s)
- A. The Permittee shall notify the Department and EPA, in writing, of any release(s) of hazardous waste, including hazardous constituents from previously identified SWMUs and/or AOCs, discovered during the course of groundwater monitoring, field investigation, environmental auditing, or other activities undertaken after issuance of this Permit, no later than fifteen (15) days after discovery.
  - B. The Department may require a Newly Identified Release Work Plan for conducting an investigation of the newly identified release(s). Within thirty (30) days after receipt of notice that the Department requires a Newly Identified Release Work Plan, the Permittee shall submit a Newly Identified Release Work Plan which shall include a discussion of the waste/chemical management practices related to the release; a sampling and analysis program for groundwater, land surface and subsurface strata, surface water or air, as necessary to determine whether the release poses a threat to human health or the environment; and a proposed schedule for implementation and completion of the Newly Identified Release Work Plan. The sampling and analysis program shall be capable of yielding representative samples and must include monitoring parameters sufficient to assess the release of hazardous waste and/or hazardous constituents to the environment. The Newly Identified Release Work Plan shall specify any data to be collected to provide for a complete Newly Identified Release Report, as

specified below and shall contain a schedule for implementation of the work plan which is predicated on the date of Departmental approval of the plan.

- C. The Newly Identified Release Work Plan will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIII. The Permittee shall complete implementation in accordance with 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 during implementation of 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 other SWMU(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; and
  - 9. Drainage areas and/or drainage patterns near and at the location of the release.
- E. The Newly Identified Release Report will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIII. Based on the findings of the report and any other available

information, the Department will determine the need for further investigation, including stabilization or a RCRA Facility Investigation.

IV. Interim/Stabilization Measures

- A. If the Permittee becomes aware of a situation that may require interim/stabilization measures to protect human health or the environment, the Permittee shall notify the Department and EPA within twenty-four (24) hours of the time the Permittee becomes aware or should have become aware of the situation.
- B. If during the course of any activity initiated under this Permit, the Permittee or the Department determines that a release or potential release of hazardous waste, including hazardous constituents, poses a threat to human health or the environment, the Department may require interim/stabilization measures to slow or stop the further spread of contamination until final corrective action measures can be implemented. The Department will determine the specific action(s) that must be taken to implement interim/stabilization measures, including potential permit modifications and the schedule for implementing the interim/stabilization requirements and will inform the Permittee of decisions regarding the action(s) in writing. This requirement shall not preclude the Permittee from responding to an emergency situation without direction of the Department.
- C. If, at any time, the Permittee determines or should have known that the interim/stabilization measures program is not effectively limiting or stopping the further spread of contamination, the Permittee shall notify the Department in writing no later than ten (10) days after such a determination is made. The Department may require that the interim/stabilization measures program be revised to make it effective in limiting or stopping the spread of contamination; or that final corrective action measures are required to remediate the contaminated media.
- D. In cases where releases present minimal exposure concerns and/or the remedial solution is straightforward, the Permittee may propose interim/stabilization measures for review and approval by the Department. These interim/stabilization measures shall be consistent with and may supplement and/or satisfy the requirements for a final remedy(s) in specific areas.

V. RCRA Facility Investigation (hereinafter “RFI”) Work Plan

- A. If the Department determines that additional investigations are needed, the Department may require the Permittee to prepare and submit for approval an RFI Work Plan. The Permittee shall submit an RFI Work Plan to the Department and EPA within sixty (60) days of the notification of the requirement to conduct an RFI Work Plan. The RFI Work Plan shall be designed to investigate releases of hazardous waste, including hazardous constituents, to all appropriate media of concern including soil, sediment, bedrock, groundwater, surface water, and/or air. In order to substantiate future corrective action decisions, the RFI Work Plan shall contain provisions which are sufficient to meet the following objectives and shall contain a schedule for implementation of the 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 waste and/or hazardous constituents from SWMUs and AOCs, or groups of SWMUs 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.
- B. 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 most recent version (currently May 1989) of the EPA guidance document entitled, RCRA Facility Investigation Guidance; EPA 530/SW-89-031. At a minimum, the RFI Work Plan shall detail all proposed activities and procedures to be conducted at the facility, a description of current conditions, the schedule for implementing and completing such investigations, and for submission of reports (including the final RFI Report), the qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the RFI.
- C. 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 the RFI objectives, sampling procedures, analytical methods, field and laboratory quality control samples, chain-of-custody procedures and data review, validation and reporting procedures.

- D. 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.
- E. 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.
- F. The RFI Work Plan(s) will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIII. The Permittee shall complete implementation in accordance with the schedules contained in the approved plan(s).

VI. RCRA Facility Investigation (RFI) Report

- A. The Permittee shall submit a RFI Report to the Department and EPA according to the schedule contained in the approved RFI Work Plan. The RFI Report shall present all information gathered under the approved RFI Work Plan along with a brief facility description and map showing the property boundary and all SWMUs/AOCs. The RFI Report must contain adequate information to support further 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 most recent version (currently May 1989) of the EPA Publication entitled, RCRA Facility Investigation Guidance; EPA 530/SW-89-031.
- B. The RFI Report shall provide an interpretation of the RFI information gathered, supported with documentation, to enable the Department to determine whether additional stabilization and/or a Corrective Measures Study may be necessary. The RFI Report shall describe the procedures, methods, and results of all Investigations of SWMUs/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 movement of releases from SWMUs/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/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/AOCs;
  5. Assessment of potential risks to the human and environmental receptors exposed to release(s) from SWMUs/AOCs;
  6. Extrapolations of future contaminant movement 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 interim/stabilization measures previously implemented; and
  10. Evaluation of data quality which may affect the nature and scope of a Corrective Measure Study 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 RFI Report will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIII. After review

of the RFI Report, 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 by the Department, the Department shall advise the Permittee as to the next step in the corrective action process that may include submittal of a Corrective Measures Study Work Plan pursuant to Corrective Action Condition VII.

VII. Corrective Measures Study (hereinafter “CMS”) Work Plan

- A. If the Department determines that there has been a release of hazardous waste and/or hazardous constituents from a SWMU and/or AOC that may present a threat to human health or the environment, the Department may require a CMS and will notify the Permittee in writing of this decision. This notice will identify the hazardous constituent(s) of concern and may specify remedial alternatives to be evaluated by the Permittee during the CMS.
- B. The Department may require the Permittee to evaluate, as part of the CMS, one or more specific potential remedies. These remedies 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. The Permittee shall submit a CMS Work Plan to the Department and EPA within forty-five (45) days of notification of the requirement to conduct a CMS. The CMS Work Plan shall be consistent with guidance contained in the EPA document entitled: RCRA Corrective Action Plan (Final), May 1994, OSWER Directive 9902.3-2A. At a minimum, the CMS Work Plan shall provide the following information and shall contain a schedule for implementation of the work 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 remedies;
  2. A definition of the specific objectives of the study;
  3. A description of the remedies which will be studied;

4. A description of those potential remedies that were preliminarily considered, but were dropped from further consideration including the rationale for elimination;
  5. The specific plans for evaluating remedies to ensure compliance with remedy standards;
  6. The schedules for conducting the study and submitting a Corrective Measures Study Report;
  7. The proposed format for the presentation of information; and
  8. 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.
- D. The Department will review the CMS Work Plan in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XIII. The Permittee shall complete implementation in accordance with the schedule contained in the approved plan.

VIII. Corrective Measures Study (CMS) Report

- A. The Permittee shall submit a CMS Report to the Department and the EPA according to the schedule contained in the approved CMS Work Plan. The CMS Report shall present all information gathered under the approved CMS Work Plan and shall be consistent with guidance contained in the EPA document entitled, RCRA Corrective Action Plan (Final), May 1994, OSWER Directive 9902.3-2A. The CMS Report shall summarize the results of the investigations for each remedy studied and of any bench-scale or pilot tests conducted. The CMS Report shall include, but not be limited to, the following information:
1. Evaluation of performance, reliability, ease of implementation, and potential impacts of each remedy studied, including safety impacts, cross media impacts, and control of exposure to any residual contamination;

2. Assessment of the effectiveness of each remedy in achieving adequate control of sources and cleanup of the hazardous waste or hazardous constituents released from the SWMU(s)/AOC(s);
  3. Assessment of the time required to begin and complete each remedy;
  4. Estimation of the costs of implementing each remedy;
  5. Recommendation of remedy and rationale for selection; and
  6. Assessment of institutional requirements, such as state or local permit requirements, or other environmental or public health requirements which may substantially affect implementation of the remedy.
- B. The CMS Final Report shall contain adequate information to support the Department in the remedy approval decision-making process.
- C. The CMS Final Report will be reviewed in accordance with the procedures set forth in Review and Approval Procedures, Corrective Action Condition XII. Upon approval thereof by the Department, the Department will approve a final remedy as specified in Corrective Action Condition IX.

IX. Final Remedy Approval

Following approval of the CMS Final Report, the Department will prepare a Statement of Basis (hereinafter “SB”) summarizing the corrective measures alternatives that were evaluated by the Permittee, including justification for the proposed final remedy selected by the Department.

Following preparation of the SB by the Department, a permit modification will be initiated pursuant to 40 CFR 270.41 or 270.42(c), as applicable, to implement the final remedy.

Upon completion of the public participation activities associated with the permit modification to implement the proposed final remedy, the Department will approve a final remedy that will: 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

might pose a threat to human health and the environment; and 3) meet all applicable federal, state, and local laws and regulations.

X. Corrective Action Cost Estimates and Financial Assurance

The Permittee shall comply with the requirements set forth in the Missouri Hazardous Waste Management Law and all standards, rules, and regulations adopted under this act, Section 260.350, et seq., RSMo, 40 CFR Part 264 Subpart H, 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.

A. Cost Estimates

1. Corrective Action Cost Estimate

Within sixty (60) days of the final remedy permit modification, the Permittee shall submit a detailed written cost estimate, in current dollars, of the cost of hiring a third party to perform the corrective action activities required by this Permit.

- a. The cost estimate shall account for the total costs of the work activities including any necessary long-term costs, such as operation, maintenance, five year review, and monitoring costs.
- b. A third party is a party who:
  - (1) Is neither a parent nor a subsidiary of the Permittee; and
  - (2) Does not share a common parent or subsidiary with the Permittee.
- c. The cost estimates shall not include any salvage value that may be realized from the sale of wastes, facility structures or equipment, land or other assets associated with the facility.
- d. Discounting is not allowed

The Permittee shall submit each corrective action cost estimate for review and approval by the Department. The Department will

review each cost estimate and notify the Permittee, in writing, of the Department's approval, rejection, or modification of the cost estimate in accordance with Corrective Action Permit Condition XIII. If the Department does not approve the cost estimate, the Department will notify the Permittee in writing of the estimate's deficiencies and specify a due date for submittal of a revised cost estimate.

2. Revisions to the Corrective Action Cost Estimate

a. Annual Adjustment for Inflation

The Permittee shall adjust annually the corrective action cost estimate for inflation until all corrective action activities required by this Permit are complete. The inflation adjustment shall be determined by using the procedures described in 40 CFR 264.142(b) except that the inflation factor should be derived from the most recent annual Implicit Price Deflator for the Gross Domestic Product instead of the Gross National Product. The cost estimate is due within sixty (60) days before the anniversary date of the establishment of the financial assurance instrument used to comply with this section.

b. Additional Corrective Action Activities

The Permittee shall increase the corrective action cost estimate if:

- (1) The Permittee or the Department determines that any additional corrective action activities are required; or
- (2) If any other conditions increase the estimated cost of the corrective action activities to be performed under this Permit.

If the Department determines that a new cost estimate is required, the Department will notify the Permittee of this requirement.

The Permittee shall submit each revised corrective action cost estimate for review and approval by the Department. The

Department will review each revised cost estimate and notify the Permittee, in writing, of the Department's approval, rejection, or modification of the cost estimate in accordance with Corrective Action Permit Condition XIII. If the Department does not approve the revised cost estimate, the Department will notify the Permittee in writing of the estimate's deficiencies and specify a due date for submittal of a new revised cost estimate.

B. Financial Assurance

In order to provide for the full and final completion of the corrective action activities required by this Permit, the Permittee shall establish and maintain financial assurance for the benefit of the Department in the amount at least equal to the most recent Department-approved corrective action cost estimate. The Permittee may use one or more of the financial assurance forms generally described in Corrective Action Condition X.B.11. All financial assurance instruments provided pursuant to this Permit shall be satisfactory in form and substance as determined by the Department. The Department reserves the right to limit the choices of the Permittee to one or more of the instruments described in Corrective Action Condition X.B.11., on a case-by-case basis, in order to ensure the full and final completion of the corrective action activities required by this Permit.

1. Timeframes for Financial Assurance Instruments

- a. Within thirty (30) days after the Department's approval of the Permittee's corrective action cost estimate(s) pursuant to this Permit, the Permittee shall submit draft financial assurance instruments and related documents to the Department for review and approval.
- b. Within ten (10) days after Department approval of the draft financial assurance instrument(s), the Permittee shall execute or otherwise finalize all instruments or other documents required in order to make the selected financial assurance legally binding. The instruments or other documents must be in a form identical to the financial assurance documents reviewed and approved by the Department.

- c. Within thirty (30) days after receiving Department approval of the draft financial assurance instrument(s), the Permittee shall submit all original executed and/or otherwise finalized instruments or other documents to the Department. The Permittee must submit original executed or otherwise finalized instruments or documents. Facsimiles or photocopies are not acceptable.

2. Certified Mail

The Permittee shall submit all financial assurance instruments and related required documents by certified mail to the Department.

3. Multiple Instruments

The Permittee may combine more than one mechanism to demonstrate financial assurance for the corrective action activities required by this Permit. However, mechanisms guaranteeing performance rather than payment may not be combined with other instruments.

4. Inadequate Financial Assurance Instrument

- a. If at any time the Department determines that a financial assurance instrument provided pursuant to this Permit is inadequate, or no longer satisfies the requirements, the Department shall notify the Permittee in writing. This applies whether there is an increase in the estimated cost of the corrective action activities required by this Permit or for any other reason.

- (1) Within thirty (30) days of receipt of such notice, the Permittee shall submit draft financial assurance instruments and related documents to the Department for review and approval. The draft financial assurance instruments and related documents shall address the inadequacies outlined in the Department's notice.
- (2) Within ten (10) days after Department approval of the draft financial assurance instrument(s), the Permittee shall execute or otherwise finalize all instruments or other documents required in order to make the selected financial

assurance legally binding. The instruments or other documents must be in a form identical to the financial assurance documents reviewed and approved by the Department.

- (3) Within thirty (30) days after receiving Department approval of the draft financial assurance instrument(s), the Permittee shall submit all original executed and/or otherwise finalized instruments or other documents to the Department. The Permittee must submit original executed or otherwise finalized instruments or documents. Facsimiles or photocopies are not acceptable.
    - b. Within ten (10) days, the Permittee shall notify the Department in writing if at any time the Permittee becomes aware of information indicating that any financial assurance instrument provided pursuant to this Permit is inadequate or no longer satisfies the requirements set forth or incorporated by reference herein. This applies whether due to an increase in the estimated cost of the corrective action activities required by this Permit or for any other reason. The Permittee shall follow the procedures in Corrective Action Permit Condition X.B.4.(a) to replace the financial assurance instrument.
5. Obligation to Complete Corrective Action Activities

The Permittee's inability or failure to establish or maintain financial assurance for completion of the corrective action activities required by this Permit shall in no way excuse performance of any other requirements of this Permit, including, without limitation, the obligation of the Permittee to complete all necessary corrective action activities in strict accordance with the terms of this Permit.

6. Automatic Renewal

All financial assurance instruments shall automatically renew at the time of their expiration unless the financial assurance provider notifies both the Permittee and the Department by certified mail of a decision to cancel, terminate, or not renew a financial assurance instrument. The Permittee

and the Department must receive such notification at least one hundred and twenty (120) days before expiration, cancellation, or termination of the instrument. Under the terms of the financial assurance instrument, the one hundred and twenty (120) days will begin on the date of receipt of the notice by certified mail by both the Permittee and the Department. Within ninety (90) days following receipt of such notice by both the Permittee and the Department, the Permittee must provide alternate financial assurance and obtain written approval for such alternate financial assurance.

7. If the Permittee fails to provide alternate financial assurance within ninety (90) days, the Department will notify the financial assurance provider in writing before the expiration of the instrument. The notification to the financial assurance provider shall instruct the financial assurance provider to immediately deposit the remaining funds obligated under the financial assurance into the standby trust fund or a newly created trust fund approved by the Department.
8. Modification of Amount and/or Form of Financial Assurance
  - a. Reduction of Amount of Financial Assurance

If the Permittee believes that the estimated cost to complete the corrective action activities required by this Permit has diminished below the amount covered by the existing financial assurance provided under this Permit, the Permittee may submit a written proposal to the Department to reduce the amount of the financial assurance provided under this Permit. The amount of the financial assurance proposed must at least be equal to the estimated cost of the remaining corrective action activities required by this Permit. The written proposal shall specify, at a minimum, the cost of the remaining corrective action activities to be performed and the basis upon which such cost was calculated. In seeking approval of a revised financial assurance amount, the Permittee shall follow the procedures set forth in Corrective Action Permit Condition X.B.8.b.(2) of this Section. The Department shall notify the Permittee of its approval in writing. The Permittee may reduce the amount of the financial assurance after receiving the Department's written approval but only in accordance with and to the extent permitted by such written approval. No change to the

form or terms of any financial assurance provided under this Section, other than a reduction in amount, is authorized except as provided in Corrective Action Permit Condition X.B.8.b.

b. Change of Form of Financial Assurance

- (1) If the Permittee wishes to change the form or terms of financial assurance, the Permittee may submit a written proposal to the Department to change the form of financial assurance. The submission of such a proposal shall be as provided in Corrective Action Permit Condition X.B.8.b.(2). The approval of a proposal submitted under this Corrective Action Permit Condition X.B.8. shall be made at the Department's sole discretion.
- (2) A written proposal for a revised or alternative form of financial assurance shall specify, at a minimum:
  - (a) The cost of the remaining corrective action activities to be performed;
  - (b) The basis upon which such cost was calculated; and
  - (c) The proposed revised form of financial assurance, including all proposed instruments or other documents required in order to make the proposed financial assurance legally binding.

The proposed revised or alternative form of financial assurance shall satisfy all requirements set forth or incorporated by reference in this Permit. The Department shall notify the Permittee in writing of its decision to accept or reject a revised or alternative form of financial assurance submitted pursuant to this paragraph.

Within ten (10) days after receiving written approval of the proposed revised or alternative financial assurance, the Permittee shall execute and/or otherwise finalize all instruments or other documents required in order to make the selected financial

assurance legally binding and effective in a form identical to the documents submitted to the Department.

Within thirty (30) days of receiving written approval of the proposed revised or alternative financial assurance, the Permittee shall submit to the Department all original executed and/or otherwise finalized instruments or other documents required in order to make the selected financial assurance legally binding.

The Department shall release, cancel, or terminate the prior existing financial assurance instruments only after the Permittee has submitted all executed and/or otherwise finalized new financial assurance instruments or other required documents to the Department.

9. Performance Failure

a. In the event the Department determines the Permittee

- (1) Has ceased to implement any of the corrective action activities required by this Permit;
- (2) Is significantly or repeatedly deficient or late in its performance of the corrective action activities required by this Permit; or
- (3) Is implementing the corrective action activities required by this Permit in a manner that may cause an endangerment to human health or the environment;

the Department may issue a written notice (“Performance Failure Notice”) of the Permittee’s failure to perform to both the Permittee and the financial assurance provider. The notice will specify the grounds upon which it was issued and will provide the Permittee a period of ten (10) days to remedy the circumstances.

b. If the Permittee fails to remedy the relevant Performance Failure to the Department’s satisfaction before the expiration of the ten-day notice period specified in Corrective Action Permit

Condition X.B.9.a, the Department shall have immediate access to and benefit of the financial assurance provided. The Department may, at any time thereafter, direct the financial assurance provider to immediately

- (1) Deposit into the standby trust fund, or a newly created trust fund approved by the Department, the remaining funds obligated under the financial assurance instrument; or
- (2) Arrange for performance of the corrective action activities required by this Permit.

c. The Department shall give the Permittee written notice if:

- (1) The Department determines that any of the circumstances described in Special Permit Condition X.B.9.a.(1), (2), or (3) have occurred; and
- (2) The Department is nevertheless unable, after reasonable efforts, to secure the payment of funds or performance of the corrective action activities required by this Permit from the financial assurance provider.

d. Within ten (10) days of receiving such written notice, the Permittee shall provide cash to fund the standby trust fund, or a newly created trust fund approved by the Department. The funds must at least equal the cost of the remaining corrective action activities required by this Permit. The deposit shall be made in immediately available funds and without setoff, counterclaim, or condition of any kind.

#### 10. Release of Financial Assurance

The Permittee may submit a written request to the Department to release the Permittee from the requirement to maintain financial assurance after the Department and the Permittee have mutually agreed that all corrective action activities required by this Permit are complete. The Department shall notify both the Permittee and the provider(s) of the financial assurance if and when the Permittee is released from all financial

assurance obligations under this Permit. The Permittee shall not release, cancel, or terminate any financial assurance provided pursuant to this Permit except as provided in this paragraph or Corrective Action Permit Condition X.B.8.b.

11. Financial Assurance Instruments

To the extent possible, the wording of the financial assurance documents shall meet the requirements of 40 CFR 264.143 and 40 CFR 264.151, as incorporated and modified in 10 CSR 25-7. All financial assurance instruments provided pursuant to this Permit shall be satisfactory in form and substance as determined by the Department.

a. Trust Fund

The trust fund shall be:

- (1) Established for the benefit of the Department;
- (2) Administered by a trustee who has the authority to act as a trustee under federal or state law and whose trust operations are regulated and examined by a federal or state agency;
- (3) Acceptable in all respects to the Department

The trust agreement shall provide that the trustee shall make payments from the fund as the Department shall direct in writing;

- (4) To reimburse the Permittee for expenditures made by the Permittee for corrective action activities performed in accordance with this Permit; or
- (5) To pay any other person whom the Department determines has performed or will perform the corrective action activities required by this Permit.

The trust agreement shall further state that the trustee shall not refund to the grantor any amounts from the fund until the Department has advised the trustee in writing that the corrective action activities performed in accordance with this Permit have been completed to the satisfaction of the Department.

b. Surety Bond

A surety bond must unconditionally guarantee either:

- (1) Payment at the direction of the Department into a standby trust fund that meets the requirements of the trust fund in Corrective Action Permit Condition X.B.11.a.; or
- (2) Performance of the corrective action activities required by this Permit. The Surety Company issuing the bond shall, at a minimum, be among those listed as acceptable sureties on Federal Bonds as set forth in Circular 570 of the U.S. Department of the Treasury.

If the Permittee seeks to establish financial assurance by using a surety bond, the Permittee shall, at the same time, establish and maintain a standby trust fund. The standby trust fund must meet the requirements of Corrective Action Permit Condition X.B.11.a. Funds from the surety bond shall be deposited into the standby trust fund if the Department directs the financial assurance provider to do so, pursuant to Corrective Action Permit Condition X.B.11, of this section.

c. Irrevocable Letter of Credit

An irrevocable letter of credit shall be payable at the direction of the Department into a standby trust fund that meets the requirements of Corrective Action Permit Condition X.B.10.a. The letter of credit shall be issued by a financial institution:

- (1) That has the authority to issue letters of credit; and

- (2) Whose letter of credit operations are regulated and examined by a federal or state agency.

If the Permittee seeks to establish financial assurance by using a letter of credit, the Permittee shall, at the same time, establish and maintain a standby trust fund. The standby trust fund must meet the requirements of Corrective Action Permit Condition X.B.11.a. Funds from the letter of credit shall be deposited into the standby trust fund if the Department directs the financial assurance provider to do so, pursuant to Corrective Action Permit Condition X.B.11.

d. Policy of Insurance

A policy of insurance shall:

- (1) Provide the Department with rights as a beneficiary which are acceptable to the Department; and
- (2) Be issued by an insurance carrier that
  - (a) Has the authority to issue insurance policies in Missouri; and
  - (b) Whose insurance operations are regulated and examined by a federal or state agency.
- (3) The insurance policy shall be issued for a face amount at least equal to the current approved corrective action cost estimate for the corrective action activities to be performed under this Permit, except where costs not covered by the insurance policy are covered by another financial assurance instrument, as permitted in Corrective Action Permit Condition X.B.3. of this section.
- (4) The insurance policy shall state that the insurer shall make payments up to an amount equal to the face amount of the policy as directed by the Department in writing:

- (a) To reimburse the Permittee for expenditures made by the Permittee for corrective action activities performed in accordance with this Permit; or
  - (b) To pay any other person whom the Department determines has performed or will perform the corrective action activities required by this Permit.
- (5) The insurance policy shall also state that it may not be canceled, terminated or non-renewed and the policy shall remain in full force and effect in the event that:
- (a) The Permittee is named as a debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or
  - (b) The Department notifies the insurer of the Permittee's failure to perform, under Corrective Action Permit Condition X.B.9.

XI. Annual Progress Reports

- A. In the event the Permittee is required to perform corrective action, the Permittee shall submit to the Department and EPA signed Annual Progress Reports summarizing all permitted corrective action activities undertaken during each calendar year. Each Annual Progress Report shall be due to the Department by March 1 of each calendar year for the preceding calendar year.

The Annual Progress Reports shall continue to be submitted until such time as the Permittee's corrective action activities (including any long-term operation, maintenance and monitoring activities) are complete. The 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.
- B. If the Department determines that further corrective action is required pursuant to Corrective Action Conditions II. through X., the frequency of submittal of progress reports may increase. If an increase in reporting frequency is necessary, the Department will provide written notification of the new reporting frequency to the Permittee.

As part of any additional corrective action activities undertaken pursuant to this Permit, detailed technical information required to be submitted as part of interim/stabilization measures, RFI and/or CMS reports and work plans need not be reproduced as part of the Permittee's Progress Reports.

- C. Copies of other reports (e.g., inspection reports), information or data shall be made available to the Department and EPA upon request.

## XII. Supplemental Data

All raw 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 reissued Permits.

## XIII. Review and Approval Procedures

Following submission of any plan or report pertaining to corrective action activities (excluding the Annual Progress Reports), the Department will review and either approve or disapprove the plan or report in writing. If the Department does not approve the plan or report, the Department will notify the Permittee in writing of the plan or report's deficiencies and specify a due date for submittal of a revised plan or report.

If the Department does not approve the revised plan or report, the Department may modify the plan or report and notify the Permittee of the modifications. The plan or report as modified by the Department is the approved plan or report.

If the Permittee disagrees with any Department-initiated plan or report modifications, and a mutually acceptable resolution of such modifications cannot be informally reached, any appeal of the Department initiated modifications shall be filed in accordance with Section 260.400, RSMo, and 10 CSR 25-8.

**FACILITY SUBMISSION SUMMARY**

**Table 2 - Summary of the Planned Submittal Requirements  
 Pursuant to this Permit**

<b>Submittal Requirements</b>	<b>Due Date</b>	<b>Permit Condition</b>
Biennial Report with information required by 40 CFR 264.75	March 1 of each even numbered calendar year.	General Permit Condition I.
Certification that Permittee has read and understands this Permit and all permit modifications.	Within 60 calendar days of effective date of this Permit modification.	Schedule of Construction and Compliance Item I.A.
Check or money order for all outstanding engineering review costs.	Within 60 calendar days of effective date of this Permit modification.	Schedule of Construction and Compliance Item I.B.
Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities (HHRAP) and Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities.	Within 180 days of the Department's approval of the work plans.	Schedule of Construction of Compliance Item II.

**Table 3 - Summary of the 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 fifteen (15) days after discovery.	II.A.
SWMU/AOC Assessment Work Plan	Within thirty (30) calendar days of notice by the Department that a work plan is required.	II.B.
SWMU/AOC Assessment Report	In accordance with the schedule in the approved SWMU/AOC Assessment Work Plan.	II.D.
Written Notification of Newly Identified Releases from SWMU(s) and AOC(s)	No later than fifteen (15) days after discovery.	III.A.
Newly Identified Release Work Plan	Within thirty (30) calendar days of notice by the Department that a work plan is required.	III.B.
Newly Identified Release Report	In accordance with the schedule in the approved Newly Identified Release Work Plan.	III.D.
Stabilization Notification	Within twenty-four (24) hours of discovery of need for stabilization.	IV.A.
Stabilization Not Effective Notification	Within ten (10) calendar days of determination by Permittee.	IV.C.
RCRA Facility Investigation (RFI) Work Plan	Within sixty (60) calendar days of notice by the Department that a RFI Work Plan is required.	V.A.
RCRA Facility Investigation (RFI) Report	In accordance with the schedule in the approved RFI Work Plan.	VI.A.
Corrective Measures Study (CMS) Report	In accordance with the schedule in the approved CMS Work Plan.	VIII.A.
Corrective Action Cost Estimate	Within 60 calendar days after the final remedy permit modification.	X.A.

<b>Contingent Submittal Requirements</b>	<b>Due Date</b>	<b>Corrective Action Condition</b>
Update Cost Estimate for Corrective Action	Annually, within 60 calendar days before the anniversary date of the establishment of the financial assurance instrument.	X.A.2.
Draft Financial Assurance Instrument	Within 30 calendar days of approval of Cost Estimate.	X.B.
Final Financial Assurance Instrument	Within 10 calendar days of approval of Draft Financial Assurance Instrument.	X.B.
Update Financial Assurance Instrument for Corrective Action	Annually, within 30 calendar days of approval of cost estimate.	X.B.
Annual Progress Report	March 1 of each calendar year.	XI.

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## **FIGURES**

**Figure 1 – Drawing No. 01-100, Figure 1-3**

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**Please see hard copy or separate electronic file online at  
[dnr.mo.gov/env/hwp/permits/mod985798164/20061011-figure1.pdf](http://dnr.mo.gov/env/hwp/permits/mod985798164/20061011-figure1.pdf)**

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**Figure 2 – Drawing No. 01-102, Figure 1-5**

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[dnr.mo.gov/env/hwp/permits/mod985798164/20110407-figure2.pdf](http://dnr.mo.gov/env/hwp/permits/mod985798164/20110407-figure2.pdf)**