

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE MANAGEMENT PERMIT

AET DESTRUCTION FACILITY

MIDDLETOWN, IOWA

RCRA ID# IAR000005876

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 USC 6901 et seq., commonly known as RCRA) and regulations promulgated thereunder by the U.S. Environmental Protection Agency (EPA) (codified and to be codified in Title 40 of the Code of Federal Regulations), a Permit is issued to AET Destruction Facility as operator and the United States Army as owner (hereafter together called the Permittee), to operate a hazardous waste treatment and storage facility located at the Iowa Army Ammunition Plant (IAAAP) in Middletown, Iowa, on 17571 State Highway 79, Middletown, Iowa, summarily described as follows:

The facility is a commercial treatment facility for hazardous wastes that exhibit the hazardous waste characteristic of reactivity. The reactive wastes to be treated are limited to those that have the potential to detonate or to have an explosive reaction or decomposition. The hazardous waste management activities will take place at several areas of IAAAP.

Storage of hazardous waste will occur in six open storage areas east of IAAAP s Line 8, two earth covered structures (igloos) in IAAAP Yard H and three storage buildings at IAAAP Line 5B. The total capacity of the storage units is 1,320,000 pounds of net explosive weight (as Trinitrotoluene, TNT ). The net explosive weight is the equivalent amount of TNT to equal the explosive force of the wastes stored. The total weight of hazardous wastes includes metal casings, drums, boxes, etc., and is limited to 4,280,000 pounds at any time.

Treatment of hazardous waste will occur in two buildings, Building 5B-26 and Building 600-84 located in the area of IAAAP Line 5B, each of which have three treatment units. Containers of hazardous waste shall be unloaded in the designated areas of the buildings and repackaged for treatment. The treatment units are used to burn the hazardous wastes. The total capacity of the six treatment units is 20 tons per day. The treatment units may be constructed sequentially starting with one unit at Building 600-84.

This Permit addresses the requirements for treatment in a miscellaneous hazardous waste thermal treatment unit and storage of hazardous waste. Applicable regulations are found in 40 CFR Parts 260 through 264, 266, 268, 270, and 124, as specified in this Permit.



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MODULE I - GENERAL PERMIT CONDITIONS

I.A. EFFECT OF PERMIT

The Permittee is allowed to treat and store hazardous waste in accordance with the conditions of this Permit. Any storage or treatment of hazardous waste not authorized in this Permit is prohibited. Subject to 40 Code of Federal Regulations (CFR) § 270.4, compliance with this Permit generally constitutes compliance, for purposes of enforcement, with Subtitle C of the Resource Conservation and Recovery Act (RCRA). Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize any injury to persons or property, any invasion of other private rights, nor any infringement of state or local law or regulations. [see 40 CFR §§ 270.4, 270.30(g), herein incorporated by reference] Compliance with the terms of this Permit does not constitute a defense to any order issued or any action brought under Sections 3008(a), 3008(h), 3013, or 7003 of RCRA; Sections 106(a), 104 or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 42 U.S.C. §9601 et seq., (CERCLA), or any other law providing for protection of public health or the environment.

I.B. PERMIT ACTIONS

I.B.1. Permit Modification, Revocation and Reissuance, and Termination by EPA

If at any time the EPA determines that modification, revocation and reissuance, or termination of the Permit is necessary, the EPA may initiate a modification to the Permit, revocation and reissuance of the Permit or termination of the Permit in accordance with 40 CFR §§270.41 and 270.43. The initiation of a modification to the Permit, revocation or reissuance of the Permit, or termination of the Permit does not stay the applicability or enforceability of any Permit Condition. [40 CFR §§270.4(a) and 270.30(f)<sup>1</sup>]

I.B.2. Modification of the Permit by the Permittee

Pursuant to the provisions of 40 CFR §270.42, the Permittee may request a modification of the Permit at any time. The filing of a request for a permit modification or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any Permit Condition. [40 CFR §§270.4(a) and 270.30(f)]

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<sup>1</sup> Citations to regulations which appear in square brackets, "[ ]", are provided for convenience only and do not constitute part of this Permit's provisions. Note also that where this Permit prescribes compliance with a Permit Attachment, provisions of that attachment shall constitute part of the provisions of this Permit. Note also that where this Permit incorporates by reference a regulation, it is generally preceded by "... in accordance with 40 CFR ..." or "as required by 40 CFR ..."



I.B.3. Permit Renewal

This Permit may be renewed as specified in 40 CFR §270.30(b) and Permit Condition I.E.2. Review of any application for a Permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicable regulations. [40 CFR §270.30(b), 42 U.S.C. §6925(c)(3)]

I.B.4. Permit Modifications

Modifications to the Permit do not constitute a reissuance of the Permit.

I.B.5. Permit Modification Correspondence File

The Permittee shall maintain a file that contains all correspondence relating to modifications made pursuant to Permit Condition I.B.2. This correspondence file shall be available for review by EPA or its designated representative(s) and the public. The file shall be made available during normal business hours and during comment periods (for class 2 or 3 modifications) during reasonable extended hours, i.e., evenings and weekends, to anyone requesting access. [40 CFR §270.30(m)]

- a. The Permittee shall reference the availability of this file in all notices made regarding permit modifications and include a contact person in order to view the file.
- b. The Permittee shall include in the correspondence file all modification requests, copies all permit modification notices sent out, the current permit modification mailing list, and all correspondence from EPA regarding modification requests.
- c. The Permittee shall notify EPA quarterly of any persons who request their addition to or deletion from the facility mailing list. With this notification, the Permittee shall provide copies of any notices which where returned by the post office as undeliverable.

I.B.6. Permit Appeals

This Permit may be appealed pursuant to the provisions of 40 CFR §124.19(a).

I.C. SEVERABILITY

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 circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. [40 CFR §124.16, 42 U.S.C. §6975]

I.D. DEFINITIONS

For purposes of this Permit, terms used herein shall have the same meaning as those in 40 CFR Parts 124, 260, 261, 264, 266, 268, and 270, unless this Permit specifically provides otherwise; where terms are not defined in the regulations or the Permit, 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.

**Annually** means one time per calendar year such that at least 11 months and no more than 13 months have elapsed since the last semi-annual event.

**Area of Concern** or **AOC** shall mean any area of the Facility under the control or ownership of the owner or operator where a release to the environment of hazardous waste(s) or hazardous constituents has occurred, is suspected to have occurred, or may occur, regardless of the frequency or duration of the release.

**Closure Plan** shall mean the plan described in Section I-1 of the Permit Application (as defined in this section) and any subsequent EPA approved revision or modification to the Closure Plan.

**Commercial Disposal Plan** shall mean the plan prepared, for each waste, that describes the testing required by the Waste Analysis Plan, handling requirements, maximum shift storage, packaging requirements for feeding into the treatment system, any special equipment needed for handling and treatment, the charge size, charge rate, temperature limits, ash, metal and chlorine constituent feed rate limits, waste specific automatic waste feed cutoff limits and all other operating limits or conditions to ensure compliance with the performance and operating standards in this Permit. The plan shall be approved by a responsible corporate officer as defined in 40 CFR §270.11(a) and include the certification found in 40 CFR §270.11(d)(1). The plan shall be available electronically in PDF format.

**Contingency Plan** shall mean the plan described in Section G of the Permit Application (as defined in this section) and any subsequent EPA approved revision or modification to the Contingency Plan.

**Corrective Action Schedule of Compliance** shall mean the activities for the investigation and clean up of SWMUs and AOCs in pertinent part of Permit Condition V.

**Daily** means once each calendar day.

**Data Quality Objectives** shall mean the qualitative or quantitative statements, the application of which is designed to ensure that data of known and appropriate quality are obtained.

**Director** means the Division Director of the Air, RCRA, and Toxics Division of the U.S. Environmental Protection Agency (EPA), Region VII, his or her designee, or an authorized representative.

**Environmental Management System (EMS)** shall mean a system designed to prevent pollution and negative impacts to the environment from operation of the treatment and storage facility. The

EMS shall be consistent with the requirements of ISO 14001 developed by the International Organization for Standardization.

EPA means the Air, RCRA, and Toxics Division Director of EPA, Region VII, his or her designee, or an authorized representative.

Facility means, for the purposes of corrective action in Permit Condition V., all contiguous property under the control of the owner or operator.

Hazardous Constituent means any constituent identified in Appendix VIII of 40 CFR Part 261 or any constituent identified in Appendix IX to 40 C.F.R. Part 264.

Hazardous Waste means any solid waste as defined in 40 CFR §261.2 which also meets any of the criteria of a hazardous waste as listed in 40 CFR §261.3.

Inspection Schedule shall mean the actions described in Section F-2 of the Permit Application (as defined in this section) and any subsequent EPA approved revision or modification to the Inspection Schedule.

Interim Measure means those actions taken to immediately control or abate threats or potential threats to human health or the environment from releases or potential releases of hazardous waste or hazardous constituents, which can be initiated before implementation of the final corrective measures for a Facility.

Monthly means 12 times per year (once per calendar month) such that at least 15 days and no more than 45 days have elapsed since the last monthly event.

PDF format means the Adobe Portable Document Format utilized by Adobe Acrobat 4.0 software developed by Adobe Systems Incorporated.

Permit Application means the permit application dated November 20, 1999 submitted by the Permittee including the Part A Permit Application dated January 19, 2000, the additional information submittals dated May 11, 2000 (two submittals) and December 4, 2000 and any subsequent revision or modification.

Quality Assurance Project Plan means a plan of the same name prepared consistent with the EPA's document titled EPA Requirements for Quality Assurance Project Plans (EPA QA/R-5) and any subsequent revisions or editions.

Quarterly means four times per calendar year such that at least 2 months and no more than 4 months have elapsed since the last quarterly event.

RCRA Corrective Action Plan means the document of the same name dated May 1994 and given the OSWER Directive Number 9902.3-2A and EPA Document Number 520-R-94-004 and any subsequent revisions or editions.

RCRA Facility Investigation Guidance means the document of the same name dated May 1989 and given the OSWER Directive Number 9502.00-6D and the EPA Document Number 530/SW-89-031.

Regional Administrator means the Regional Administrator of EPA, Region VII, or his or her designee.

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 and/or hazardous constituents.

Semi-Annually means two times per calendar year such that at least 5 months and no more than 7 months have elapsed since the last semi-annual event.

Solid Waste Management Unit or 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.

Standard Operating Procedure or SOP shall mean the document that establishes or prescribes methods to be followed in the operation of hazardous waste storage, treatment and disposal activities. All SOPs shall be approved by a responsible corporate officer as defined in 40 CFR §270.11(a) and include the certification found in 40 CFR §270.11(d)(1). The plan shall be available electronically in PDF format.

Waste Analysis Plan shall mean the plan described in Section C-1 through C-3 of the Permit Application (as defined in this section) and any subsequent EPA approved revision or modification to the Waste Analysis Plan.

"Weekly" means 52 times per calendar year such that no fewer than 5 days and no more than 10 days have elapsed since the last weekly event.

## I.E. DUTIES AND REQUIREMENTS

### I.E.1. Duty to Comply

The Permittee shall comply with all conditions of this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency Permit. Any Permit noncompliance, other than noncompliance authorized by an emergency Permit, constitutes a violation of RCRA and is grounds for enforcement action; for Permit

termination, revocation and reissuance, or modification; or for denial of a Permit renewal application. [40 CFR §270.30(a)]

I.E.2. Duty to Reapply

If the Permittee wishes to continue an activity allowed by this Permit after the expiration date of this Permit, the Permittee shall submit a complete application for a new Permit at least 180 days prior to Permit expiration. [40 CFR §§270.10(h), 270.30(b)]

I.E.3. Permit Expiration

Pursuant to 40 CFR §270.50, this Permit shall be effective for a fixed term not to exceed ten (10) years. As long as EPA is the Permit-issuing authority, this Permit and all conditions herein will continue in force under 5 U.S.C. §558(c), herein incorporated by reference, until the effective date of a new permit, if the Permittee has submitted a timely, complete application (see 40 CFR §§270.10, 270.13 through 270.29) and, through no fault of the Permittee, the EPA has not issued a new Permit, as set forth in 40 CFR §270.51.

I.E.4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee, in an enforcement action that it would have been necessary to halt or reduce the Permitted activity in order to maintain compliance with the conditions of this Permit. [40 CFR §270.30(c)]

I.E.5. Duty to Mitigate

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. [40 CFR §270.30(d)]

I.E.6. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit. [40 CFR §270.30(e)]

I.E.7. Duty to Provide Information

The Permittee shall furnish to the EPA, within a reasonable time, any relevant information which the EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to the EPA, upon request, copies of records required to be kept by this Permit. [40 CFR §§264.74(a), 270.30(h)]

I.E.8. Inspection and Entry

Pursuant to 40 CFR §270.30(i), the Permittee shall allow the EPA, or an authorized representative, upon the presentation of credentials and other documents, as may be required by law, to:

- a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations, regulated or required under this Permit; and
- d. Sample or monitor, at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.

I.E.9. Monitoring and Records

- a. Samples, measurements and/or analyses obtained for the purposes of monitoring shall be representative of the monitored activity. The method(s) used to obtain a representative sample and to analyze hazardous wastes must be the appropriate methods specified in the Waste Analysis Plan, Permit Attachment II-1. [40 CFR §270.30(j)(1)]
- b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this Permit, the certification required by 40 CFR §264.73(b)(9), and records of all data used to complete the application for this Permit for a period of at least three (3) years from the date of the sample, measurement, report, record, certification, or application. This period may be extended by request of the EPA at any time and is automatically

extended during the course of any unresolved enforcement action regarding this facility. [40 CFR §§264.74(b) and 270.30(j)(2)]

- c. Pursuant to 40 CFR §270.30(j)(3), records for monitoring information shall include:
  - i. The date(s), exact place, and time(s) of sampling or measurements;
  - ii. The individual(s) who performed the sampling or measurements;
  - iii. The date(s) analyses were performed;
  - iv. The individual(s) who performed the analyses;
  - v. The analytical techniques or methods used; and
  - vi. The results of such analyses.
- d. Review of analytical data to determine if it is adequate to meet the Data Quality Objectives (DQOs) in the Quality Assurance Project Plan (QAPP) [40 CFR §270.30(e)].

I.E.10. Reporting Planned Changes

The Permittee shall give written notice to the EPA, as soon as possible, of any planned physical alterations or additions to the Permitted facility. [40 CFR §270.30(l)(1)]

I.E.11. Reporting Anticipated Noncompliance

The Permittee shall give advance written notice to the EPA of any planned changes in the permitted facility or activity which may result in noncompliance with Permit requirements. [40 CFR §270.30(l)(2)]

I.E.12. Certification of Construction or Modification

The Permittee may not commence storage, treatment or disposal of hazardous waste in any newly constructed or modified hazardous waste management unit until the Permittee has submitted to the EPA, by certified mail, overnight mail service, or hand delivery, a letter signed by the Permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the Application and this Permit, and submittal of an as-built report and prove-out report for those unit(s). The as-built and prove-out reports shall include, at a minimum, the specifications to which the unit was constructed (including final as-built dimensions), all material and vendor certifications, results of all material acceptance testing,

operation and maintenance plans and requirements, prove-out and testing plans and results.

- a. Operation of a hazardous waste management unit shall not commence unless the EPA has inspected the newly constructed or modified hazardous waste management unit and finds it is in compliance with the Application and the conditions of this Permit; or
- b. Within fifteen (15) days of the date of submission of the letter submitted to EPA, if the Permittee has not received notice from the EPA of its intent to inspect, prior inspection is waived and the Permittee may commence operation of the newly constructed or modified hazardous waste management unit. [40 CFR §270.30(1)(2)]

I.E.13. Transfer of Permits

This Permit is not transferable to any person, except after notice to the EPA. The EPA may require modification or revocation and reissuance of the Permit, pursuant to 40 CFR §270.30(1)(3). Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner and/or operator in writing of the requirements of 40 CFR Parts 264 and 270 and this Permit. Before transferring ownership or operation of the facility during its operating life, the new owner and/or operator shall submit to the EPA a certification in accordance with Permit Condition I.F. that they have read the permit, understand its requirements and will comply with the terms and conditions therein. [40 CFR §§264.12(c) 270.30(1)(3), 270.40]

I.E.14. Twenty-Four Hour Reporting

- a. The Permittee shall report to the EPA Region 7 Spill Line [currently 913-281-0991] any noncompliance which may endanger health or the environment. Any such information shall be reported orally within 24 hours from the time the Permittee becomes aware of the circumstances. The report shall include the following:
  - i. Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies.
  - ii. Any information of a release or discharge of hazardous waste, or of a fire or explosion from the hazardous waste management facility, which could threaten the environment or human health outside the facility.
- b. The description of the occurrence and its cause shall include:
  - i. Name, address, and telephone number of the owner or operator;



- ii. Name, address, and telephone number of the facility;
  - iii. Date, time, and type of incident;
  - iv. Name and quantity of materials involved;
  - v. The extent of injuries, if any;
  - vi. An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
  - vii. Estimated quantity and disposition of recovered material that resulted from the incident.
- c. A written submission to the person identified in Permit Condition I.G. shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause that includes the items in Permit Condition I.E.14.b.; the period(s) of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and, if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The EPA may waive the five (5) day written notice requirement in favor of a written report within fifteen (15) days. [40 CFR §270.30(1)(6)]
- d. Compliance with Permit Condition I.E.14 does not alleviate the Permittee's obligation to report releases of hazardous substances under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Emergency Planning and Community Right-to-Know Act (EPCRA), or any other applicable federal or state law.

I.E.15. Other Noncompliance

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above in Permit Conditions I.E.10. through 14., at the time monitoring reports are submitted. The reports shall contain, but is not limited to, the information listed in Permit Condition I.E.14. [40 CFR §270.30(1)(10)]

I.E.16. Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the Permit application, or submitted incorrect information in a Permit application or in any

report to the EPA, the Permittee shall promptly submit such facts or information to EPA. [40 CFR §270.30(l)(11)]

I.F. SIGNATORY REQUIREMENT

All applications, reports, or information submitted to or requested by the EPA, his designee, or authorized representative, shall be signed and certified in accordance with 40 CFR §§270.11 and 270.30(k).

I.G. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE EPA

All written reports, notifications, or other submissions which are required by this Permit to be submitted to the EPA should be sent by certified mail, delivery service or hand delivered to:

US Environmental Protection Agency Region 7  
ATTN: Ken Herstowski, ARTD/RCAP  
901 North 5<sup>th</sup> St.  
Kansas City, Kansas 66101  
phone number - 913-551-7631  
facsimile number - 913-551-7946  
email address <<herstowski.ken@epa.gov>>

EPA may designate a new recipient in writing to the Permittee.

I.H. CONFIDENTIAL INFORMATION

In accordance with 40 CFR Part 2, the Permittee may claim confidential any information required to be submitted by this Permit. [40 CFR §270.12]

I.I. DOCUMENTS TO BE SUBMITTED PRIOR TO OPERATION

The Permittee shall submit the following documents to the EPA by the dates shown:

DOCUMENT	DUE DATE
Revised Part A and B Permit Application incorporating all changes necessary to add storage of hazardous waste in Igloos H-5 and H-12	90 Days after the Effective Date of this Permit
Revised Contingency Plan	90 Days after the Effective Date of this Permit
Compliance Test Plan	60 Days after the Effective Date of this Permit
Risk Assessment Emissions Test Plan	60 Days after the Effective Date of this Permit

Construction As-Built Report and Prove-Out Report	Prior to operation and no later than the notice in Permit Condition I.E.12. of each any newly constructed or modified hazardous waste management unit
Financial Assurance	Prior to operation and no later than the notice in Permit Condition I.E.12. of each any newly constructed or modified hazardous waste management unit
Liability Assurance	Prior to operation and no later than the notice in Permit Condition I.E.12. of each any newly constructed or modified hazardous waste management unit
EMS Certification	Prior to operation and no later than the notice in Permit Condition I.E.12. of each any newly constructed or modified hazardous waste management unit

I.J. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The Permittee shall maintain at the facility, until closure is completed and certified by an independent, registered professional engineer, the following documents and all amendments, revisions and modifications to these documents:

1. Waste Analysis Plan, as required by 40 CFR §264.13 and this Permit.
2. Inspection Schedule and inspection records, as required by 40 CFR §264.15(b)(2) and this Permit.
3. Personnel training documents and records, as required by 40 CFR §264.16(d) and this Permit, Module IV, Permit Conditions G.2.
4. Contingency Plan, as required by 40 CFR §264.53(a) and this Permit.
5. Operating record, as required by 40 CFR §264.73 and this Permit.
6. Closure Plan, as required by 40 CFR §264.112(a) and this Permit.
7. Annually-adjusted cost estimate for facility closure, as required by 40 CFR §264.142(d) and this Permit.
8. Permit Modification file, as required by this Permit.
9. Standard Operating Procedures, as required by this Permit.

10. Commercial Disposal Plants, as required by this Permit.
11. All other documents required by Module I, Permit Conditions B.5. and E.9.

I.K. DOCUMENTS INCORPORATED BY REFERENCE

The following are incorporated by reference into and are an enforceable part of this Permit. Failure to implement the plan in accordance with the requirements and schedules contained therein shall be deemed a violation of this Permit.

The Closure Plan found in Section I-1 of the Permit Application and any subsequent EPA approved revision or modification to the Closure Plan.

The Contingency Plan found in Section G of the Permit Application and any subsequent EPA approved revision or modification to the Contingency Plan.

The Inspection Schedule found in Section F-2 of the Permit Application and any subsequent EPA approved revision or modification to the Inspection Schedule.

The Waste Analysis Plan found in Sections C-1 through C-3 of the Permit Application and any subsequent EPA approved revision or modification to the Waste Analysis Plan.

I.L. ENVIRONMENTAL MANAGEMENT SYSTEM

The Permittee shall implement an environmental management system (EMS) for the operation of the treatment facility. The overall purpose of the EMS is to put a system in place that enables the Permittee to prevent pollution and negative impacts to the environment from operation of the treatment and storage facility. The EMS shall be consistent with the requirements of ISO 14001 developed by the International Organization for Standardization. The EMS shall be in place prior to the treatment or storage of any hazardous wastes at the facility. The Permittee shall submit a certification by a responsible corporate officer as defined in 40 CFR §270.11(a) and include the certification found in 40 CFR §270.11(d)(1) that the EMS system is in place, fully implemented and functioning properly.

\*\*\* END OF PERMIT MODULE I \*\*\*

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MODULE II - GENERAL FACILITY CONDITIONS

II.A. DESIGN AND OPERATION OF FACILITY

- II.A.1. The Permittee shall design, construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment. [40 CFR §264.31]
- II.A.2. The Permittee shall comply with all applicable or relevant and appropriate regulations and standards for design and operation of explosive storage, handling and treatment facilities including, but not limited to, the U.S. Department of Defense (DOD) Army Regulation (AR) 190-11, DOD 6055.9-STD and DOD 4145.26-M, the U.S. Department of Justice s Bureau of Alcohol, Tobacco & Firearms (ATF) in 27 CFR Chapter I, U.S. Department of Labor s Occupational Safety and Health Administration (OSHA), and parallel state or local agencies with jurisdiction over explosive materials. The Permittee shall provide to EPA copies of all inspection reports, notices of violation, or other review of the Permittee s storage, handling and treatment of explosives by any of these agencies or organizations within 5 working days of such inspection.
- II.A.3. The Permittee shall not begin operation of any portion of the facility until all the plans required by this Permit are approved by EPA.

II.B. REQUIRED NOTICES

II.B.1. Hazardous Waste Imports

- a. The Permittee shall notify the Regional Administrator in writing at least four weeks in advance of the date the Permittee expects to receive hazardous waste from a foreign source, as required by 40 CFR §264.12(a)(1). Notice of subsequent shipments of the same waste from the same foreign source in the same calendar year is not required.
- b. The Permittee shall follow the requirements for importers of hazardous waste in 40 CFR part 262, Subparts F and H, if the Permittee acts as the hazardous waste importer.

II.B.2. Hazardous Waste from Off-Site Sources

When the Permittee is to receive hazardous waste from an off-site source (except where the Permittee is also the generator), the Permittee must inform the generator in writing that the Permittee has the appropriate Permits, (one time per waste stream per generator), and will accept the waste the generator is shipping. The Permittee must keep a copy of this written notice as part of the operating record. [40 CFR §264.12(b)]

II.C. GENERAL WASTE ANALYSIS

The Permittee shall obtain analysis of hazardous wastes in accordance with 40 CFR §264.13 and as described in the Waste Analysis Plan. The Permittee shall verify the analysis of each waste stream annually as part of its quality assurance program, in accordance with the Quality Assurance Project Plan developed as part of the Waste Analysis Plan. At a minimum, the Permittee shall maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations. If the Permittee uses a contract laboratory to perform analyses, then the Permittee shall inform the laboratory in writing that it must operate under the waste analysis conditions set forth in this Permit.

II.D. SECURITY

The Permittee shall comply with the security provisions of 40 CFR §§264.14(b)(2) and 40 CFR 264.14(c) and as described in Section F of the Permit Application.

II.E. GENERAL INSPECTION REQUIREMENTS

In accordance with 40 CFR §264.15, the Permittee shall inspect the facility for malfunctions and deterioration, operator errors, discharges, or other condition that may be causing, or may lead to: (1) release of hazardous waste constituents to the environment, or (2) a threat to human health. Inspections shall be conducted to identify problems in time to correct them before they result in a release, or harm to human health or the environment.

- II.E.1. The Permittee shall follow the Inspection Schedule for the inspection of monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes, sump pumps, etc.) that are important to preventing, detecting, or responding to fires, explosions, releases and other environmental or human health hazards. At a minimum, the inspection schedule must provide for weekly inspections of each container storage area looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors; all other operating portions of the facility shall be inspected at least once each operating day looking for releases and for deterioration of the facility and treatment equipment.
- II.E.2. The Permittee shall remedy any deterioration or malfunction of equipment or structures discovered by an inspection which ensures that the problem does not lead to an environmental or human health hazard. The Permittee shall take immediate action, including cessation of hazardous waste management activities if necessary, where a hazard is imminent or has already occurred.
- II.E.3. Records of inspection and replacements or repairs shall be kept in accordance with 40 CFR §264.15(d). At a minimum, the Permittee shall record the date and time of the inspection, the name of the inspector, a notation of the

observations made, and the date and nature of any repairs or other remedial actions.

- II.E.4. The Permittee may suspend inspections at inactive hazardous waste management units that are in compliance with the following:
- a. All hazardous wastes and hazardous materials are removed from the unit including all visible signs of any residue, i.e., floors swept clean and washed down.
  - b. The Permittee places in the operating record the date that the unit has been taken out of service and the results of the final inspection of the unit. The Permittee shall provide notice to EPA of this date for each unit idled under this section.
  - c. The Permittee shall seal the unit and post a sign indicating that it has been taken out of service.
  - d. The Permittee shall inspect the seal(s) and sign(s) on a semi-annual basis based upon the date when the final inspection was placed in the operating record.
  - e. The Permittee shall not place the unit back into service until it is in compliance with all items in the inspection schedule, all applicable regulatory requirements and this Permit. All required equipment must also be inspected and if deficient, returned to their state of readiness. The Permittee shall provide written notice and opportunity for inspection of the unit to the Director. Waste management activities shall not re-commence until EPA or EPA's authorized representative inspects the unit or the Director declines such an inspection in writing.

II.F. PERSONNEL TRAINING

The Permittee shall conduct personnel training as required by 40 CFR §264.16 and as described in Section H of the Permit Application. This training program shall provide that facility personnel successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this Permit.

- II.F.1. A person trained in hazardous waste management procedures must direct this program, and must teach facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to their employment positions. At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by including instruction on operating procedures, emergency procedures,

emergency equipment, and emergency systems, including all of the following, where applicable:

- a. Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment.
- b. Key parameters for automatic waste feed cut-off systems.
- c. Communications or alarm systems.
- d. Response to fires or explosions.
- e. Response to ground water contamination incidents.
- f. Shutdown of operations.
- g. Use of Standard Operating Procedures.

II.F.2. The Permittee shall ensure that facility personnel must successfully complete the program required in this section within six months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired after the effective date of this Permit must not work in unsupervised positions until they have completed the training requirements of this permit condition.

II.F.3. The Permittee must ensure that facility personnel take part in an annual review of the initial training required in this section.

II.F.4. The Permittee shall maintain the following documents and records at your facility:

- a. The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job;
- b. A written job description for each position listed under this section. This description must include the requisite skill, education, or other qualifications, and duties of employees assigned to each position;
- c. A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under this section;
- d. Records that document that facility personnel have received and completed the training or job experience required under this section.

II.F.5. The Permittee shall keep training records on current personnel until final closure of the facility. The Permittee shall keep training records on former



employees for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the facility.

II.G. SPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The Permittee shall comply with the requirements of 40 CFR §264.17(a) and follow the procedures described in Section F of the Permit Application for the storage, handling and treatment of ignitable, reactive, and incompatible wastes. The Permittee shall prepare and follow written Standard Operating Procedures and take precautions to prevent accidental ignition or reaction of ignitable or reactive waste.

- II.G.1. When storing and handling these wastes, the Permittee shall separate them and protect them from sources of ignition or reaction such as: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition, and radiant heat.
- II.G.2. When treating these wastes, the Permittee shall take precautions to prevent reactions that:
  - a. Generate extreme heat or pressure, fire or explosions, or violent reactions.
  - b. Produce uncontrolled mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment.
  - c. Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions.
  - d. Damage the structural integrity of the device or facility.
  - e. Threaten human health or the environment in any similar way.

II.H. PREPAREDNESS AND PREVENTION

II.H.1. Required Equipment

At a minimum, the Permittee shall maintain at the facility the equipment required by 40 CFR §264.32 and described in Section F of the Permit Application. This equipment shall include all of the following:

- a. An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel.

- b. A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, American Ordnance, LLC, response teams, or State or local emergency response teams.
- c. Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), deluge systems, spill control equipment, and decontamination equipment.
- d. Water at adequate volume and pressure to supply water hose streams, or foam-producing equipment, or automatic sprinklers, or water spray systems.

#### II.H.2. Testing and Maintenance of Equipment

The Permittee shall test and maintain the required equipment in this section, as necessary, to assure its proper operation in time of emergency. [40 CFR §264.33]

#### II.H.3. Access to Communications or Alarm System

The Permittee shall maintain immediate access for all personnel to an emergency communication device or an internal alarm system in accordance with 40 CFR §264.34 whenever hazardous waste is being handled or treated.

#### II.H.4. Required Aisle Space

The Permittee shall prepare and follow written Standard Operating Procedures that will ensure that enough aisle space is maintained to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency. At a minimum, the Permittee shall maintain a minimum of 36 inches of aisle space between rows of containers in accordance with 40 CFR §264.35 and as described in Section F of the Permit Application. A row of containers shall not be more than one 36 inch by 36 inch pallet wide or, if pallets are not used, two containers wide. The Permittee shall not stack pallets more than three high, or stack containers more than two high when pallets are not used. No stack of containers shall exceed seven feet in height.

#### II.H.5. Arrangements with Local Authorities

The Permittee shall maintain arrangements with state and local authorities in accordance with 40 CFR §264.37 and as described in Section G of the Permit Application. If state or local officials refuse to enter into preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record.

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II.I. CONTINGENCY PLAN

II.I.1. Implementation of Plan

The Permittee shall immediately carry out the provisions of the Contingency Plan whenever there is a fire, explosion, or release of hazardous waste or constituents which could threaten human health or the environment. The purpose of the Contingency Plan is to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous constituents to air, soil, or surface water. [40 CFR §264.51(b)]

The Permittee shall include in the facility operating record the date, time and details of any verbal reports, and copies of written reports provided to response and regulatory agencies required by the Contingency Plan. The Permittee shall also include in the facility operating record the date, time and details of any fire, explosion or release of hazardous waste for which the Contingency Plan was not required to be implemented or for which the Permittee failed to implement the plan.

II.I.2. Copies of Plan

The Permittee shall comply with the requirements of 40 CFR §264.53.

II.I.3. Amendments to Plan

The Permittee shall review and immediately amend the Contingency Plan, if necessary pursuant to the requirements of 40 CFR §264.54, whenever:

- a. The facility permit is revised.
- b. The plan fails in an emergency.
- c. The facility changes (in its design, construction, operation, maintenance, or other circumstances) in a way that materially increases the potential for fires, explosions, or release of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency.
- d. A change to the list of emergency coordinators.
- e. A change to the list of emergency equipment.

II.I.4. Emergency Coordinator

A trained emergency coordinator shall be available at all times, either on the facility premises or on call in case of an emergency. This emergency coordinator must be thoroughly familiar with all aspects of the Contingency Plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of

all records within the facility, and the facility layout. This person must have the authority to commit the resources needed to carry out the Contingency Plan. [40 CFR §264.55]

II.I.5. Incidents in the Vicinity of the Facility

The Permittee shall respond to and, if necessary, implement the requirements of the Contingency Plan to any off-site incident involving its incoming or out-going shipments of explosive wastes or military munitions within a radius of 25 miles from the facility. The Permittee shall revise and maintain the Contingency Plan as necessary to respond to off-site incidents. The Permittee shall submit the revised plan pursuant to the schedule in Permit Condition I.I.

II.J. RECORD KEEPING AND REPORTING

In addition to the record keeping and reporting requirements specified elsewhere in this Permit, the Permittee shall do the following:

II.J.1. Operating Record

The Permittee shall maintain a written operating record at the facility, in accordance with applicable sections in 40 CFR §264.73.

II.J.2. Biennial Report

The Permittee shall comply with the applicable biennial reporting requirements of 40 CFR §264.75.

II.K. GENERAL CLOSURE REQUIREMENTS

II.K.1. Performance Standard

The Permittee shall close the facility, in accordance with 40 CFR §264.111 and the Closure Plan.

II.K.2. Amendment to the Closure Plan

The Permittee shall amend the Closure Plan, in accordance with 40 CFR §264.112(c), whenever necessary.

II.K.3. Notification of Closure

The Permittee shall notify the EPA, in writing, at least 45 days prior to the date on which he expects to begin partial or final closure of the facility. [40 CFR §264.112(d)]

II.K.4. Time Allowed For Closure

After receiving the final volume of hazardous waste, the Permittee shall treat, remove from the unit or facility, all hazardous waste and shall complete closure activities, in accordance with 40 CFR §264.113 and the schedules specified in the Closure Plan.

II.K.5. Disposal or Decontamination of Equipment, Structures, and Soils

The Permittee shall decontaminate and/or dispose of all contaminated equipment, structures, and soils, as required by 40 CFR §264.114 and the Closure Plan.

II.K.6. Certification of Closure

The Permittee shall certify that the facility has been closed in accordance with the specifications in the Closure Plan, in accordance with 40 CFR §264.115.

II.K.7. Partial Closure and Lay-away

- a. The Permittee may conduct partial closure activities in order to lay-away facilities for future use. The Permittee shall provide notice of partial closure and lay-away as required in this section. Such activities must include, at a minimum, decontamination of the affected facility and equipment in accordance with the Closure Plan. After partial closure activities are completed, the unit shall be sealed or otherwise secured (e.g., piping to tanks disconnected) to prevent un-authorized use of the facility. The Permittee shall also post a sign indicating that the unit has been closed or layaway completed and that it is not to be used for hazardous waste management.
- b. Units that have undergone partial closure and lay-away need not be included in the inspection schedule. In order to delete a hazardous waste management unit from the inspection schedule, the date that partial closure and lay-away activities were completed and the date it was sealed or otherwise secured shall be clearly recorded in the operating record.
- c. The Permittee shall inspect the seal(s) and sign(s) on a semi-annual basis based upon the date when the final inspection was placed in the operating record.
- d. The Permittee shall notify EPA that a unit which has undergone partial closure and lay-away will be re-activated. The Permittee shall provide written notice and opportunity for inspection of the unit to the Director. Waste management activities shall not re-commence until EPA or EPA's authorized representative inspects the unit or the Director declines such an inspection in writing.

- e. The unit being re-activated shall be inspected in accordance with the inspection schedule prior to its re-activation and be included in the inspection schedule thereafter.
- f. The unit being re-activated shall be in compliance with all items in the inspection schedule, all applicable regulatory requirements, and this Permit, prior to wastes being managed in that unit. In addition, all required equipment must also be inspected and if deficient, returned to their state of readiness.

## II.L. COST ESTIMATE FOR CLOSURE

The Permittee shall adjust the cost estimate for facility closure contained in the Closure Plan annually, as required by 40 CFR 264.142(b).

## II.M. FINANCIAL ASSURANCE REQUIREMENTS

### II.M.1. Facility Closure

The Permittee shall demonstrate continuous compliance with 40 CFR §264.143 by providing documentation of financial assurance, as required by 40 CFR §264.151, in at least the amount of the cost estimate required by 40 CFR §264.142 and this Permit. Changes in financial assurance mechanisms must be approved by the Director pursuant to 40 CFR §264.143.

### II.M.2. Liability Requirement

The Permittee shall demonstrate continuous compliance with the requirement of 40 CFR §264.147(a) to have and maintain liability coverage for sudden and accidental occurrences in the amount of at least \$1 million per occurrence, with an annual aggregate of at least \$2 million, exclusive of legal defense cost.

## II.N. LAND DISPOSAL RESTRICTIONS

II.N.1. The Permittee must comply with all applicable regulations implementing the land disposal prohibitions in 40 CFR Part 268. In addition, the Permittee must comply with all applicable future requirements or regulations which implement the land disposal prohibitions pursuant to 40 CFR §270.4 because these requirements are self-implementing provisions of HSWA. In short, the Permittee must comply with all present and upcoming land disposal prohibitions unless the applicable treatment standard is met, the waste is exempt under 40 CFR §268.1(c), or any other exemption in 40 CFR Part 268 applies.

II.N.2. If allowed under this Permit, the Permittee may store wastes to which the land disposal prohibition applies for up to one year unless EPA can demonstrate that such storage was not solely for the purpose of accumulation of such

quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal as provided in 40 CFR §268.50(b). The Permittee shall bear the burden of proving that storage of hazardous wastes for a length of time exceeding one year is solely for the purpose of accumulating such quantities of hazardous waste as is necessary to facilitate proper recovery, treatment, or disposal as provided in 40 CFR §268.50(c).

II.O. WASTE MINIMIZATION

II.O.1. Pursuant to 40 CFR §264.73(b)(9), and Section 3005(h) of RCRA, 42 U.S.C. 6925(h), the Permittee must submit to the EPA, at least annually, a waste minimization certification. This certification and all accompanying documentation shall be submitted annually within 14 days of the anniversary date of the effective date of this permit. The Permittee's submittal shall be consistent with EPA's The Waste Minimization National Plan, EPA 530-D-94-001, November 11, 1994, and EPA's Interim Final Guidance, Guidance to Hazardous Waste Generators on the Elements of a Waste Minimization Program published at 58 FR 31114, May 28, 1993.

II.O.2. The Permittee must certify that:

- a. A program is in place to reduce the volume and toxicity of hazardous waste generated to the degree determined by the Permittee to be economically practicable; and
- b. The proposed method of treatment, storage or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment.

II.O.3. Within one hundred and fifty (150) days of the effective date of this Permit, the Permittee shall prepare and keep on site a Waste Reduction Impact Statement. The Permittee shall include the following information in the Waste Reduction Impact Statement:

- a. An identification of the annual amount and types of hazardous waste that are generated;
- b. For each waste stream, an identification of the source of generation of these hazardous wastes;
- c. An analysis of technically and economically feasible hazardous waste reduction techniques for the facility, including a description of any techniques that were implemented since 1984, at a minimum; and

- d. A program and schedule for implementing the feasible hazardous waste reduction techniques.

II.O.4. In conjunction with the annual certification required by this section, the Permittee must submit an annual report to EPA on the status of waste reduction techniques, including those which have been implemented during the previous year and those specified in the Waste Reduction Impact Statement required by this section.

\*\*\* END OF PERMIT MODULE II \*\*\*



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## MODULE III - CONTAINERS

### III.A. MODULE HIGHLIGHTS

This highlights section provides a general discussion of the activities covered by this module and is intended for informational purposes only. These highlights do not authorize any hazardous waste management activities and do not contain operating conditions. The remainder of Permit Module III contains the specific requirements for the operation of container storage units with which the Permittee must maintain compliance. Compliance with this highlights section does not constitute compliance with the Permit.

Three magazines, Buildings 5B-25, 5B-55, and 5B-56, will be modified to store explosive waste. These magazines are existing structures that will be retrofitted with the addition of 6 inch thick concrete walls and a 4 inch thick concrete roof. The interior dimensions of the magazines will be approximately 9 feet by 8 feet 8 inches.

Two magazines, Igloos H-5 and H-12, will be modified to store explosive waste. The igloos are located in Yard H at Iowa Army Ammunition Plant (IAAAP). These magazines are existing structures with interior dimensions of 26 feet 6 inches by 40 feet 2 inches.

Six storage pads will be constructed to store explosive waste. They are to be located just west of an area known as Line 8 at IAAAP. Each storage pad will be surrounded with a U-shaped earthen berm. The opening in each of the berms will be closed with security fencing to prevent unauthorized access to the storage pad. Open storage pads may incorporate a pole-barn like structure to prevent precipitation from coming into contact and damaging explosive waste containers stored at a pad.

The Permittee may not substitute existing explosive storage buildings or igloos for these units or construct these units at other areas of the facility without a permit modification. Authorization to substitute or modify the design, construction and operation of storage units shall be requested by submitting a permit modification.

None of the storage areas are approved for containers which contain free liquids. Hazardous wastes will not be stored at the Transfer Station in the AET open storage pad area or in the treatment facility.

### III.B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

- III.B.1. The Permittee shall not accept for storage or treatment any wastes that do not exhibit the hazardous waste characteristic of explosive reactivity as defined by 40 CFR § 261.23(a)(6)-(8). In addition to exhibiting explosive reactivity, hazardous wastes may also exhibit other hazardous waste characteristics or be listed in 40 CFR part 261, Subpart D. Mixtures of solid wastes, characteristic hazardous wastes as defined in 40 CFR part 261, Subpart C, or wastes listed in 40 CFR part 261, Subpart D, and wastes exhibiting explosive reactivity may be accepted if the mixture continues to exhibit the characteristic of explosive reactivity.

III.B.2. The Permittee shall only accept hazardous wastes meeting the definition above in this section whose applicable EPA hazardous waste codes are in the following Table 1 and whose descriptions are contained in 40 CFR part 261, Subparts C and D.

Table 1 - Authorized EPA Hazardous Waste Codes

D001	D002	D003	D005	D006	D007	D008	D010	D011	D018	D023	D024
D025	D026	D027	D028	D029	D030	D033	D034	D035	D036	D040	D041
D042	D043	K044	K045	K046	K047	P009	P068	P081	P105	P112	U098
U099	U105	U106	U133	U171	U186						

III.B.3. The Permittee shall only store the authorized hazardous wastes in the storage units described in the Permit Application subject to the limits in the following Table 2. Substitution of igloo units in IAAAP Yard H for Storage Pads west of IAAAP Line 8 shall require a permit modification. An increase in the total net explosive weight or total weight limit shall require a permit modification.

Table 2 - Authorized Hazardous Waste Storage Limits

Unit Designation	Net Explosive Weight Limit (TNT <sup>1</sup> equivalents)	Total Weight Limit
Building 5B-25	10,000 pounds	40,000 pounds
Building 5B-55	50,000 pounds	200,000 pounds
Building 5B-56	10,000 pounds	40,000 pounds
Storage Pad #1	125,000 pounds	500,000 pounds
Storage Pad #2	125,000 pounds	500,000 pounds
Storage Pad #3	125,000 pounds	500,000 pounds
Storage Pad #4	125,000 pounds	500,000 pounds
Storage Pad #5	125,000 pounds	500,000 pounds
Storage Pad #6	125,000 pounds	500,000 pounds
Igloo H-5	250,000 pounds	500,000 pounds
Igloo H-12	250,000 pounds	500,000 pounds
Total	1,320,000 pounds	4,280,000 pounds

<sup>1</sup> TNT = Trinitrotoluene

- III.B.4 The Permittee is prohibited from storing hazardous waste that is not identified in this section.

III.C. CONDITION OF CONTAINERS

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 such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this Permit. [40 CFR §264.171]

III.D. COMPATIBILITY OF WASTE WITH CONTAINERS

Pursuant to 40 CFR §264.172, the Permittee shall assure that the ability of the container to contain the waste is not impaired.

III.E. MANAGEMENT OF CONTAINERS

The Permittee shall prepare and follow written Standard Operating Procedures for the management of containers.

- III.E.1. The Permittee shall always keep all containers closed during storage, except when it is necessary to add or remove waste, and shall not open, handle, or store containers in a manner which may rupture the container or cause it to leak. [40 CFR §264.173]
- III.E.2. The Permittee shall only store containers on a storage pad that has a permanent roof system and side walls to prevent precipitation from coming in contact with containers stored therein. However, the Permittee may store containers without a permanent roof system and side walls as follows:
- a. Military munitions may be stored in their original shipping containers which are designed and approved by the Department of Defense for outdoor munition storage using tarpaulins instead of a permanent roof system and side walls.
  - b. Containers may be stored within weather proof trailers at a storage pad without a permanent roof system and side walls.
- III.E.3. The contents of containers shall not be combined or transferred to another container at the storage facilities other than to overpack leaking or damaged containers.
- III.E.4. All containers shall be marked with their total weight and net explosive weight in TNT equivalents.

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III.F. DESIGN, CONSTRUCTION AND OPERATION

III.F.1. General Requirements

The Permittee shall modify and/or construct and operate the container storage units as described in the Permit Application. Their design, construction and operation shall comply with all applicable or relevant and appropriate DOD and ATF requirements for explosives storage including, but not limited to, AR 190-11, DOD 6055.9-STD and DOD 4145.26-M and 27 CFR part 55, Subpart K.

III.F.2. Containment Systems

The Permittee is not authorized to store containers of hazardous wastes that contain free liquids. To prevent contact of containers of hazardous waste with precipitation, the Permittee shall install and maintain containment systems to collect precipitation or storm water which may fall onto the storage pads. The systems shall be designed to collect the amount of precipitation from a 25-year, 24-hour rain event and to prevent run-on of stormwater. Containers shall be elevated to prevent their contact with the design level of precipitation. [40 CFR §264.175]

III.F.3. Specific Requirements

- a. All drain openings in Igloos H-5 and H-12 shall be permanently sealed. The floors shall be refinished with a sealant coating to facilitate cleanup of spilled materials, condensation, and washdown.
- b. The floors in Buildings 5B-25, 5B-55, and 5B-56 shall be refinished with a sealant coating to facilitate cleanup of spilled materials, condensation and washdown.

III.F.4. Operating Requirements

The Permittee shall operate the container storage units in a manner that prevents ignition, reaction, or release of the hazardous waste stored therein. The Permittee shall prepare and follow written Standard Operating Procedures for the proper operation of the container storage areas.

III.G. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall inspect the container area weekly, in accordance with the Inspection Schedule to detect leaking containers and deterioration of containers and the containment system, caused by corrosion and other factors. [40 CFR §264.174]

III.H. RECORDKEEPING

The Permittee shall place the results of all waste analyses in the facility operating record. [40 CFR §264.73]

III.I. CLOSURE

At closure of the container area, the Permittee shall remove all hazardous waste and hazardous waste residues from the container storage area and its containment system, in accordance with the procedures in the Closure Plan. [40 CFR §264.178]

III.J. SPECIAL CONTAINER PROVISIONS FOR IGNITABLE, REACTIVE OR INCOMPATIBLE WASTE

- III.J.1. The Permittee shall not place incompatible wastes in the same container or place a waste in a container which previously held incompatible wastes or materials. The Permittee shall not store incompatible waste in the same container storage unit. [40 CFR §264.177]
- III.J.2. The Permittee shall place containers holding ignitable or reactive waste at least fifteen (15) meters (50 feet) from the facility's property line. The Permittee shall comply with DOD and ATF standards for quantity and distance requirements for explosive waste storage including, but not limited to, DOD 6055.9-STD and 27 CFR part 55, Subpart K. [40 CFR §264.176]
- III.J.3. The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. The Permittee shall prepare and follow Standard Operating Procedures to implement the procedures described in the Permit Application for storage compatibility grouping when storing explosive wastes. All containers shall be marked with their compatibility grouping and stored together in accordance with their compatibility. [40 CFR §§264.17(a), (b) and 264.176]

\*\*\* END OF PERMIT MODULE III \*\*\*

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## MODULE IV - TREATMENT

### IV.A. MODULE HIGHLIGHTS

This highlights section provides a general discussion of the activities covered by this module and is intended for informational purposes only. These highlights do not authorize any hazardous waste management activities and does not contain operating conditions. The remainder of Permit Module IV contains the specific requirements for the operation of container storage units with which the Permittee must maintain compliance. Compliance with this highlights section does not constitute compliance with the Permit.

The Permittee will treat reactive [explosive] wastes in six treatment units. These units are designed to be continuous feed units with a maximum total treatment capacity of 20 tons per day for all six units combined. The actual treatment capacity per unit is subject to the specific conditions of this Permit Module. Only the first treatment unit has been issued an Air Quality Construction Permit pursuant to the Clean Air Act by the Iowa Department of Natural Resources. Therefore, this Permit only authorizes construction and operation of that first treatment unit which will be located at Building 600-84. Subsequent continuous feed treatment units can only be constructed after the Permittee has modified this Permit to add the additional units. Authorization in the form of an approved permit modification request shall be obtained prior to construction and operation of additional units. The Permittee may request a class 2 permit modification to add additional treatment units up to the six contemplated by this Permit.

Treatment or treatment testing of hazardous waste may only be conducted in units authorized by this Permit.

### IV.B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

- IV.B.1. The Permittee shall not treat any hazardous wastes which are not authorized for hazardous waste storage in Permit Condition III.B.
- IV.B.2. 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.
- IV.B.2. All residues generated from the treatment of reactive wastes are considered hazardous wastes. Waste residues shall include all EPA hazardous waste codes for all the hazardous wastes previously treated in the treatment unit. For example, if K044 wastes were previously treated, all residues from subsequent waste treatment shall also be considered K044.
- IV.B.3. Treatment residues are not considered to be newly generated wastes. Any subsequent storage and treatment of these treatment residues must be authorized in this permit. Treatment residues from different sources (for example, chamber debris and baghouse dust) shall not be mixed together.

- IV.B.4. Scrap metal separated from treatment residues must meet the Land Disposal Restriction standards for contaminated debris in 40 CFR §268.45 prior to their release to outside vendors as non-hazardous scrap metal.
- IV.B.5. Treatment of chemical munitions as defined in 50 U.S.C. §1521(j) is prohibited at the treatment facility. Treatment of non-military chemical agents such as riot control agents are prohibited at the treatment facility.
- IV.B.6. Treatment of hazardous wastes other than those generated by Iowa Army Ammunition Plant, EPA ID# IA7213820445, is prohibited unless allowed under a site license obtained from the state of Iowa pursuant to Chapter 150 of the Iowa Administrative Code for the Environmental Protection Commission [567].

#### IV.C. DESIGN AND CONSTRUCTION OF FACILITIES

The Permittee shall design and construct the treatment units and ancillary equipment according to the designs and specifications as described in the Permit Application. The final design of all the treatment units shall incorporate the following measures to ensure protection of human health and the environment.

- IV.C.1. The treatment vessel shall be installed using concrete saddles or similar devices to allow a thorough and detailed inspection of its entire exterior. The area beneath the treatment vessel shall be paved to facilitate exterior inspections of the vessel. Adequate provisions shall be made to collect any precipitation which may accumulate on or run-off from the paved areas.
- IV.C.2. The concrete pads installed in areas where air pollution control devices (e.g., baghouse, cyclone) are located shall be curbed to collect the precipitation from a 25-year, 24-hour storm event. The concrete pads shall be constructed with a smooth finish and sealed to facilitate cleanup of releases from the air pollution control devices. Containment buildings shall be constructed around the lower portion of the baghouse to enclose all dust handling equipment such as screw conveyors, double tipping valves, dust collection containers, etc. The containment building shall be maintained under negative pressure to prevent releases of fugitive emissions to the environment. Baghouse dust will be managed and removed from the system in a manner that minimizes fugitive emissions, trackout, or other releases into the environment. The Permittee shall develop and follow a SOP for operation of the containment building, prevention of fugitive emissions, elimination of trackout and/or other environmental releases during management of baghouse dust.
- IV.C.3. The feed preparation area shall be designed and constructed with containment systems to hold the full amount of water delivered by the emergency deluge system.

- IV.C.4. The walls, ceiling and floors in the feed preparation area, ash handling room, vestibule and feed room, shall be designed and/or modified and constructed as necessary to eliminate any cracks, gaps or other openings which could allow fugitive emissions from dust generated during hazardous waste handling and treatment and residue management. All interior surfaces of these areas shall be provided with a smooth finish and be sealed to facilitate their wash down and cleanup of hazardous waste, fugitive dusts from waste handling and treatment, and treatment residuals.
- IV.C.5. The dust control hoods shall be designed to exhaust a sufficient volume of air to maintain the feed preparation and ash handling room areas under negative pressure at all times when hazardous wastes and treatment residues are present in the feed preparation area, ash handling room, vestibule, and feed area.
- IV.C.6. The Propellant, Explosive and Pyrotechnic (PEP) Waste Shift Storage room shall have a floor designed, modified, and constructed as necessary to eliminate any cracks, gaps, or other openings. The floor shall have a smooth finish and be sealed to facilitate its wash down and cleanup of hazardous wastes.
- IV.C.7. All loading docks where hazardous wastes will be loaded or off-loaded shall be provided with sufficient paved areas which are designed, modified and constructed as necessary to eliminate any cracks, gaps, or other openings and to collect the precipitation from a 25-year, 24-hour storm event.

#### IV.D. PERFORMANCE STANDARDS

The Permittee shall design, modify, and construct the treatment units and ancillary equipment according to the designs and specifications as described in the application and such units and equipment shall be capable of meeting the following performance standards at all times when waste is being treated. The Permittee shall develop and follow SOP(s) for the inspection, operation and maintenance of all treatment units and ancillary equipment to ensure their compliance with these performance standards. Each SOP plan shall be approved by a responsible corporate officer as defined in 40 CFR §270.11(a) and include the certification found in 40 CFR §270.11(d)(1). The Permittee must immediately cease operation of treatment units that do not meet these performance standards. Operation may not resume until the Permittee demonstrates compliance with these performance standards.

- IV.D.1. The treatment units and all ancillary facilities used for the preparation of hazardous wastes and for the handling of treatment residues shall be designed and operated with no visible emissions using 40 CFR part 60, appendix A, Method 22 - Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares. The Permittee shall develop a SOP (or specifically include these provisions in an existing SOP) to ensure that there are no visible emissions from the handling and preparation of hazardous wastes for treatment and the collection and handling of treatment residuals.



- IV.D.2. Particulate emissions from any emission point (e.g., treatment system stack, dust hood exhaust, etc.) shall not exceed 34 milligrams per dry standard cubic meter.
- IV.D.3. The Permittee shall control the risk to human health from emissions from the facility. The total risk to human health from emissions of carcinogens shall not be greater than  $1 \times 10^{-5}$ . The risk to human health from emissions of non-carcinogens shall not exceed a hazard quotient of 0.25. Risk estimates shall be determined using EPA's most recent guidance on conducting human health risk assessments at hazardous waste combustors (currently Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, July 1998). The Permittee shall also control the risk to the environment as determined by the Director upon completion of an ecological risk assessment determined using EPA's most recent guidance (currently Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities, August 1999).
- IV.D.4. The total emissions from all treatment units and other emission sources shall not exceed those in the following Table 3.

Table 3 - Emission Limits

Constituent	Total Emission Limit (grams per hour)
Antimony	40
Arsenic	0.32
Barium	6800
Beryllium	0.56
Cadmium	0.76
Chromium	0.11
Lead	12
Mercury	40
Silver	400
Thallium	40
Free Chlorine (Cl <sub>2</sub> )	53
Hydrogen Chloride (HCl)	920

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- IV.D.5. The oxygen concentration within a treatment unit shall be maintained above 7% (on a volumetric basis) on a one minute basis at all times.
- IV.D.6. The carbon monoxide concentration within a treatment unit shall be below 100 parts per million (on a volumetric basis) on a one minute basis at all times.
- IV.D.7. Alternative carbon monoxide standard: This standard may be used during treatment of a hazardous waste if the Permittee demonstrates that its treatment cannot be conducted in compliance with the standard in Permit Condition IV.D.6. In this case the following standards and conditions shall apply:
- a. The Permittee shall comply with a maximum carbon monoxide standard specific to each hazardous waste for which its treatment cannot comply with the carbon monoxide standard in Permit Condition IV.D.6. on an hourly rolling average basis that is the average of carbon monoxide concentrations during emissions testing during treatment of that hazardous waste.
  - b. The Permittee shall comply with a minimum oxygen standard specific to each hazardous waste for which its treatment cannot comply with the carbon monoxide standard in Permit Condition IV.D.6. on an hourly rolling average basis that is the average of oxygen concentrations during emissions testing during treatment of that hazardous waste.
  - c. The Permittee shall comply with a maximum total hydrocarbon limit of 20 parts per million (volumetric basis) on a one minute basis at all times when operating under this alternative carbon monoxide limit.
  - d. The Permittee shall submit a test plan to determine emissions from treatment of each specific hazardous waste for which its treatment cannot comply with the carbon monoxide standard in Permit Condition IV.D.6. The test plan shall include an emissions test plan and quality assurance project plan to determine the emissions of principle organic hazardous constituents, products of incomplete combustion, metals, chlorine and hydrogen chloride, particulates and particulate size. The plan will be reviewed and approved by the Director in accordance with Permit Conditions IV.H.1.a - b. The Permittee shall provide written notice of testing to the Director at least 30 days prior to its initiation. The testing shall be completed within 30 days of its initiation and the test results and report submitted within 90 days of its conclusion.

#### IV.E. OPERATING CONDITIONS

This Permit Condition authorizes the construction and operation of the hazardous waste treatment units listed herein. The Permittee shall submit a class 2 permit modification to authorize additional treatment units up to a maximum of six treatment units. The maximum combined capacity of the treatment units shall not exceed 20 tons per hour of reactive wastes on a total feed weight basis including non-reactive components of the feed items. The Permittee shall not begin construction of any other treatment units until this Permit Condition has been modified to authorize their construction and include their specific operating conditions.

Operations in Building 600-84 are authorized to include receiving containers of reactive waste, and opening those containers in the Feed Preparation Area where the waste is packaged into separate charges for the Feed Room Operator. A total of no more than four (4) hours of reactive waste feed may be present in Building 600-84 at any time.

A Commercial Disposal Plan shall be prepared for each waste to be treated in accordance with Permit Attachment IV-1. This plan shall, for each waste, describe the testing required by the Waste Analysis Plan, handling requirements, maximum shift storage, packaging requirements for feeding into the treatment system, any special equipment needed for handling and treatment, the charge size, charge rate, temperature limits, ash, metal and chlorine constituent feed rate limits, waste specific automatic waste feed cutoff limits and all other operating limits or conditions to ensure compliance with the performance standards in Permit Condition IV.D. and the treatment unit operating conditions. All data and information used to prepare the plan shall be attached thereto. Each plan shall be approved by a responsible corporate officer as defined in 40 CFR §270.11(a) and include the certification found in 40 CFR §270.11(d)(1). The plan shall be available electronically in PDF format. A checklist shall be prepared for the treatment unit operators to complete that will ensure that all operational requirements are in place prior to the start of each treatment shift.

The Permittee shall submit each Commercial Disposal plan to the Director for review. The Director may reject a Commercial Disposal plan and the Permittee shall not treat that waste at the facility. The Director will explain the reasons for the rejection in writing.

##### IV.E.1. Treatment Unit One

Treatment Unit One is located at Building 600-84 and is a continuous feed design. The treatment unit shall not be operated unless all required monitoring equipment, air pollution control equipment, and safety equipment are present and functioning and operating as designed and constructed. Hazardous wastes shall not be fed into the treatment unit unless it is compliance with its operating conditions. The treatment unit shall not be operated if it cannot meet the performance standards in Permit Condition IV.D. or its operation will cause the facility to exceed its performance standards. Hazardous wastes shall not be fed into the treatment unit if it will cause it to be out of compliance with the performance standards in Permit Condition IV.D. or with its operating conditions identified below.

- a. Total waste feed into the treatment unit shall be limited so that the net explosive weight on a TNT equivalent basis shall not exceed one pound per minute into each internal reaction chamber.
- b. The Permittee shall prepare and follow an approved Commercial Disposal Plan to handle, package and treat each hazardous waste in the treatment unit.
- c. No waste feed item may be treated until its treatment checklist is completed and the treatment unit is in compliance with all required items. A new checklist shall be completed by each operating shift before waste feed may continue.
- d. Waste feed shall be automatically interlocked to prevent its being fed to the treatment unit when the differential pressure across any baghouse module falls below the manufacturer's specification of 0.5 inches of water column. Waste feed shall not resume until the differential pressure is within the manufacturer's specification for a minimum of 10 minutes. This interlock shall be implemented in accordance with 40 CFR §63.1206(c)(3).
- e. The Permittee shall prepare and follow an Operations and Maintenance Plan for the baghouse in accordance with 40 CFR §63.1206(c)(7). The plan shall be completed and approved prior to startup of the treatment unit. The plan shall be signed by a responsible corporate officer as defined in 40 CFR §270.10(a) and include the certification in 40 CFR §270.10(d)(1). All air pollution control equipment, e.g., cyclone, baghouse and any appurtenant equipment, shall be fully operational prior to and during hazardous waste treatment in the treatment unit.
- f. Waste feed shall be automatically interlocked to prevent its being fed to the treatment unit when the hourly rolling average carbon monoxide (CO) concentration exceeds 100 parts per million (on a volumetric basis) on a one minute basis. This interlock shall be implemented in accordance with 40 CFR §63.1206(c)(3).

When operating under the alternative carbon monoxide standard of Permit Condition IV.D.7., waste feed shall be automatically interlocked to prevent its being fed to the treatment unit when the hourly rolling average carbon monoxide (CO) concentration exceeds the waste specific limit on an hourly average basis. Waste feed shall also be automatically interlocked when operating under this alternative carbon monoxide limit to prevent its being fed to the treatment unit when the total hydrocarbon concentration exceeds 10 parts per million (on a volumetric basis) on a one minute basis.

- These interlocks shall be implemented in accordance with 40 CFR §63.1206(c)(3).
- g. Waste feed shall be automatically interlocked to prevent its being fed to the treatment unit when the hourly rolling average temperature to the inlet to the baghouse exceeds 400 degrees Fahrenheit. This interlock shall be implemented in accordance with 40 CFR §63.1206(c)(3).
  - h. The Permittee shall prepare and follow a Startup, Shutdown and Malfunction Plan for the treatment unit in accordance with 40 CFR §63.1206(c)(2). The plan shall be completed and approved prior to startup of the treatment unit. 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).
  - i. The Permittee shall prepare and establish an Operator Training and Certification Program for the treatment unit in accordance with 40 CFR §63.1206(c)(6). All persons responsible for the operation of the treatment unit shall complete the program prior to startup of the treatment unit. Documentation of completion of the program shall be included in the facility operating record.
  - j. All operating conditions and parameters, including all information necessary to document compliance with the performance standards in Permit Condition IV.D. and the operating requirements and/or limits of this Permit Condition shall be continuously monitored, recorded and included in the facility operating record.
  - k. The temperature in each inner reaction chamber shall be within the range specified in the Commercial Disposal Plan for the hazardous waste being treated. Hazardous waste feed shall be automatically interlocked to prevent waste from being fed into a reaction chamber when it is outside of the required temperature range.

#### IV.F. MONITORING REQUIREMENTS

- IV.F.1. The Permittee shall install maintain, calibrate, and operate continuous monitors which monitor and record the operating parameters and conditions used to verify compliance with the Commercial Disposal Plan, performance standards, operating limits or other operating requirements specified in this Permit including any parameters used in calculations.
- IV.F.2. The Permittee shall install maintain, calibrate, and operate continuous monitors which monitor and record baghouse inlet temperature, differential

pressure across each baghouse module, and stack gas velocity (at the exit of each treatment unit before any quench or dilution air is introduced).

- IV.F.3. For purposes of this Permit, the following terms shall have the meanings stated herein.

Continuous monitor shall be defined as 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.

One minute average value shall be defined as the arithmetic mean of a minimum of four valid detector response values obtained within a 60-second period, and corrected where required by using the formulas listed above.

Continuously record shall mean that at least 95% of the values of each operating limit required to be monitored by this Permit, in any 60 minute period during which hazardous waste is introduced into the treatment unit, shall be accurately recorded in the Permittee's operating record. Except during instrument calibration periods as specified below, the Permittee shall continuously record all data monitored by the instruments described in this Permit when treating hazardous wastes. All monitors shall record data in units corresponding to the limits specified in the operating conditions set out in this Permit unless otherwise specified.

Calibration Frequency shall mean the minimum frequency that the required monitoring equipment shall be verified for proper operation.

- IV.F.4. Hazardous waste may continue to be introduced into the treatment unit during daily continuous emission monitor system (CEMS) calibration check periods as described in the approved SOP. The CEMS shall be maintained according to the following schedule: (1) at least daily, a calibration check of the instrument; (2) at least daily, a system audit; (3) at least quarterly, a calibration error test; and, (4) at least annually, a performance specification test. Testing of the CEMS systems shall be conducted in accordance with the requirements in 40 CFR part 266, appendix IX.

For purposes of compliance with this Permit, quarterly shall refer to calendar quarters. In addition, successive quarterly calibration error tests must be at least forty-five (45) days apart.

For purposes of compliance with this Permit, annual performance specification testing must occur within  $\pm$  ninety (90) days of the first annual performance specification test.

- IV.F.5. Carbon monoxide and oxygen shall be continuously monitored in conformance with Performance Specifications for Continuous Emission

Monitoring of Carbon Monoxide and Oxygen for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste in 40 CFR Part 266, Appendix IX, Section 2.1. The Permittee shall institute an automatic waste feed cut-off any time the measured concentration of carbon monoxide is below the value allowed for zero calibration gases.

Total Hydrocarbons shall be continuously monitored in conformance with Performance Specifications for Continuous Emission Monitoring of Hydrocarbons for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste 40 CFR Part 266, Appendix IX, Section 2.2. The Permittee shall institute an automatic waste feed cut-off any time the measured concentration of hydrocarbons is below the value allowed for zero calibration gases.

- IV.F.6. For purposes of this Permit, like for like replacement of a CEMS component shall mean that the component has been replaced with a component of the same make/model/version, a component of identical or superior performance specifications, or another component recommended by the manufacturer. Like for like replacements will not require permit modification so long as adequate records of such replacements are maintained to demonstrate the like for like nature of the component.

For the purposes of this Permit, reconfiguration of the CEM system is a substantive change in the structure or design of the system.

- IV.F.7. For CEM system hardware/software utilized for collection, reduction, and recording of compliance data, any replacement or reconfiguration shall require a daily calibration check, system audit, and data audit to verify the new or reconfigured components are operating properly. None of these actions shall require a permit modification.
- IV.F.8. For CEM system gas collection system (including the conditioning system), any replacement or reconfiguration shall require a daily calibration check, system audit, and data audit to verify that the new or reconfigured components are operating properly. In addition, any reconfiguration or replacement that is not like for like shall require a performance specification test as in 40 CFR §266, Appendix IX, to be completed within forty-five (45) days to demonstrate total system integrity. The Permittee may request by Class 1 permit modification requiring approval of the Director (in accordance with 40 CFR §270.42(a)) an alternative performance specification testing.

Any reconfiguration or replacement that is not like for like shall require a class 1 permit modification in accordance with 40 CFR §270.42(a) within 7 days of implementing the change.

- IV.F.9. For the CEM analyzer/detector/sensor, any replacement or reconfiguration shall require a daily calibration check, system audit, and data audit to verify

that the new or reconfigured components are operating properly. In addition, any reconfiguration or replacement that is not like for like shall require a performance specification test as in 40 CFR §266, Appendix IX, to be completed within forty-five (45) days to demonstrate total system integrity. The Permittee may request by Class 1 permit modification requiring approval of the Director (in accordance with 40 CFR §270.42(a)) an alternative performance specification testing.

Any reconfiguration or replacement that is not like for like shall require a class 1 permit modification in accordance with 40 CFR §270.42(a) within 7 days of implementing the change.

#### IV.G. INSPECTION SCHEDULES AND PROCEDURES

IV.G.1. Prior to each day of operation, the Permittee shall completely inspect the loading docks, waste holding areas, waste preparation areas, waste staging areas, treatment units, residue handling areas, residue treatment areas, air pollution control devices, safety systems, and industrial hygiene systems for malfunction, signs of deterioration, and releases. All malfunctions shall be repaired prior to handling hazardous wastes and operation of the treatment system. Any release identified during the inspection shall be cleaned up immediately. Any deterioration shall be remedied as soon as possible to prevent malfunction.

IV.G.2. The Permittee shall follow the Inspection Schedule in Permit Attachment II-3 and document the results of the inspection, any repairs, all clean-ups, and other activities taken.

#### IV.H. EMISSIONS TESTING

IV.H.1. Upon the request of the Director, the Permittee shall submit a test plan, conduct sampling and analysis of the hazardous waste, residues, and exhaust emissions and verify that the operating requirements established in this Permit achieve the performance standards of Permit Condition IV.D. The Director may request a new or revised plan for the conduct of such testing. The Director shall review and approve any test plan prior to its implementation. The Permittee shall provide written notice of testing to the Director 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. 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 can not be met, the Permittee shall cease burning of hazardous wastes and close the treatment unit in accordance with the requirements of 40 CFR §264, Subpart G and Section IV.K. of this Permit.



- a. If the Director disapproves the plan or report, the Director will notify the Permittee in writing of the plan's deficiencies and specify a due date for submittal of a revision.
  - b. If the Director disapproves the revised plan or report, the Director 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.
- IV.H.2. The Permittee shall conduct tests to verify that the conditions and limits required by this Permit achieve the performance standards of Permit Condition IV.D. Within 60 days of the effective date of this permit, the Permittee shall submit a compliance test plan. The plan will be reviewed and approved by the Director in accordance with Permit Conditions IV.H.1.a - b. This testing shall be repeated at no more than 5 year intervals beginning with the effective date of this Permit. The initial testing of a treatment unit shall be completed no later than 180 days after initial startup of a treatment unit. The Permittee shall provide written notice of testing to the Director at least 30 days prior to its initiation. The testing shall be completed within 30 days of its initiation. The data collected from these tests and the test report 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 can not be met, the Permittee shall cease burning of hazardous wastes and close the treatment unit in accordance with the requirements of 40 CFR §264, Subpart G and Section IV.K. of this Permit.

#### IV.I. RISK ASSESSMENT

- IV.I.1. Within 60 days of the effective date of the Permit, the Permittee shall submit an emissions test plan and quality assurance project plan to determine the emissions of principle organic hazardous constituents, products of incomplete combustion, metals, chlorine and hydrogen chloride, particulates and particulate size. The plan will be reviewed and approved by the Director in accordance with Permit Conditions IV.H.1.a - b. The Permittee shall implement the test plan within 90 days of its approval. The Permittee shall provide written notice of testing to the Director at least 30 days prior to its initiation. The testing shall be completed within 30 days of its initiation and the test results and report submitted within 90 days of its conclusion.
- IV.I.2. Within 60 days of a written request from the Director, the Permittee shall submit a work plan that describes all activities (including an emissions test plan, quality assurance project plan and an air dispersion modeling plan) to complete a human health risk assessment and screening level ecological risk assessment to evaluate potential risks from emissions from the treatment units. The workplan shall be consistent with the technical intent and objectives of

EPA's Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, (HHRAP) EPA 530-D-98-001A, July 1998, and Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities, (Peer Review Draft), August 1999. The work plan will be reviewed in accordance with the procedures set forth in Permit Condition V.L. The Permittee shall also submit an electronic copy of the approved work plan in PDF format on a CD-ROM. Upon approval of the work plan by EPA, the work plan, including all activities and schedules for such activities, shall be incorporated into and made an enforceable part of this Permit, and failure to implement the work plan in accordance with the requirements and schedules contained therein shall be deemed a violation of this Permit.

- IV.I.3. The Permittee shall submit a work plan as part of a permit modification request for authorization for new treatment units that describes all activities (including an emissions test plan, quality assurance project plan and an air dispersion modeling plan) to complete a human health risk assessment and screening level ecological risk assessment to evaluate potential risks from emissions from all the facility. The workplan shall be consistent with the technical intent and objectives of EPA's Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities, (HHRAP) EPA 530-D-98-001A, July 1998, and Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities, (Peer Review Draft), August 1999. The work plan will be reviewed in accordance with the procedures set forth in Permit Condition V.L. The Permittee shall also submit an electronic copy of the approved work plan in PDF format on a CD-ROM. Upon approval of the work plan by EPA, the work plan, including all activities and schedules for such activities, shall be incorporated into and made an enforceable part of this Permit, and failure to implement the work plan in accordance with the requirements and schedules contained therein shall be deemed a violation of this Permit. The risk assessment report submitted by the Permittee shall be consistent with the technical intents and objectives of Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities and Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities.

#### IV.J. RECORDKEEPING

The Permittee shall place all standard operating procedures, commercial disposal plans, documentation of monitoring, testing, inspections and follow-up activities in the facility operating record. These records shall be maintained by the Permittee for a period of at least three (3) years from the date of the sample, measurement, report, record, certification, or application. This period may be extended by request of the EPA at any time and is automatically extended during the course of any unresolved enforcement action regarding this facility.

IV.K. CLOSURE

At closure of the treatment system, the Permittee shall remove all hazardous waste and hazardous waste residues from the treatment units, air pollution control equipment, any associated treatment systems and ancillary facilities, in accordance with the procedures in the Closure Plan, Permit Attachment II-8. [40 CFR §264.178]

IV.L. SPECIAL CONTAINER PROVISIONS FOR IGNITABLE, REACTIVE OR INCOMPATIBLE WASTE

- IV.L.1. The Permittee shall comply with DOD and ATF standards for quantity and distance requirements for explosive waste storage including, but not limited to, DOD 6055.9-STD and 27 CFR part 55, Subpart K. [40 CFR §264.176]
- IV.L.2. The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste.
- IV.L.3. The Permittee shall not treat incompatible wastes together in the treatment system. The Permittee shall follow the procedures in Permit Attachment III-1 for identifying incompatible wastes.
- IV.L.4. The Permittee shall not store, handle, or otherwise manage incompatible wastes together in the treatment facilities. The Permittee shall follow the procedures described in the Permit Application for identifying incompatible wastes.
- IV.L.5. The Permittee shall comply with all applicable or relevant and appropriate standards of the U.S. Department of Defense (DOD), the U.S. Department of Justice s Bureau of Alcohol, Tobacco & Firearms (ATF), U.S. Department of Labor s Occupational Safety and Health Administration (OSHA) and parallel state agencies with jurisdiction over explosive materials. The Permittee shall provide to EPA copies of all inspection reports, notices of violation or other review of the Permittee s storage, handling and treatment of explosives within 5 working days after such inspection by these above identified authorities.

\*\*\* END OF PERMIT MODULE IV \*\*\*

## MODULE V - CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS

### V.A. AUTHORITY

Section 3004(u) of RCRA, 42 USC §6924, and 40 CFR §264.101, require that all permits issued after November 8, 1984, address corrective action for releases of hazardous waste or hazardous constituents from any solid waste management unit (SWMU), regardless of when waste was placed in the unit or whether the unit is closed. Those sections further require that permits issued under Section 3005 of RCRA, 42 USC §6925 contain a schedule of compliance for corrective action where corrective action cannot be completed prior to permit issuance and that such permits contain evidence of financial assurance for completing corrective action. This Permit Condition V is such a schedule of compliance. Section 3004(v) of RCRA, 42 USC §6924(v) authorizes the Regional Administrator to require that corrective action be taken by the facility owner or operator beyond the facility boundary when necessary to protect human health and the environment, unless the owner or operator demonstrates that permission to undertake such action, despite the owner/operator's best efforts, was denied.

Section 3005(c)(3) of RCRA, 42 USC §6925(c)(3) requires that each permit issued under that section shall contain terms and conditions as the Regional Administrator determines necessary to protect human health and the environment. The Regional Administrator has delegated authority to perform all actions necessary to enforce this Permit to the Director of Region VII Air, RCRA, and Toxics Division (hereafter referred to as Director ) or the Director's designated representative, by delegation No. R7-8-6; January 1, 1995.

### V.B. IDENTIFICATION OF SOLID WASTE MANAGEMENT UNITS AND AREAS OF CONCERN

The Permittee will operate its facility on land owned by the United States Army (Army). The Army's installation is known as the Iowa Army Ammunition Plant (IAAAP). The installation is listed on EPA's National Priorities List (NPL) (see 55 FEDERAL REGISTER 35502, August 30, 1990) pursuant to Section 105 of CERCLA, 42 U.S.C. §9605. Under a Federal Facilities Agreement with EPA, the Army is investigating and remediating IAAAP. The Army has completed a removal action at IAAAP Line 5A, a facility operated by the Permittee. The Army's action was to protect human health when the IAAAP Line 5A facility is used for industrial purposes. The Permittee's operation of the facility is consistent with the assumptions made by the Army for its action. However, should EPA receive information that a release of hazardous waste or hazardous constituents has or may occur, EPA may require the Permittee to respond with any of the activities in this Permit Module in order to protect human health and the environment.

A RCRA Facility Assessment (RFA), completed for the Permittee's facility when it was operated by the United States Army, identifies solid waste management units (SWMUs) and areas of concern (AOCs). The report titled "RCRA Facility Assessment, Final Report, Iowa Army Ammunition Plant, Middletown, Iowa, September 28, 1987" contains a listing and description of SWMUs and AOCs.

EPA is deferring action contemplated by this Permit Module to the ongoing actions being taken by the Army pursuant to the Federal Facilities Agreement dated December 10, 1990 between the Army and EPA.

V.C. REQUIREMENTS FOR NEWLY-IDENTIFIED SOLID WASTE MANAGEMENT UNITS

V.C.1. The Permittee shall notify the Director in writing of any and all SWMUs identified subsequent to the issuance of this Permit no later than fifteen (15) calendar days after discovery or startup of a new SWMU.

a. The Director may require a Work Plan for conducting an investigation of the newly-identified SWMU(s). The Work Plan shall describe all the activities to be completed in order to characterize the SWMU so that the Director can determine if a RCRA Facility Investigation is necessary. The Work Plan for the investigation shall be consistent with the requirements of the Release Assessment Scope of Work in the RCRA Corrective Action Plan. The Work Plan shall also be consistent with the RCRA Facility Investigation Guidance. Within thirty (30) calendar days after receipt of notice that the Director requires a Work Plan, the Permittee shall submit a SWMU Assessment Work Plan which shall include any of the following as specified in the Director's notice:

- i. A discussion of past waste management practices at the unit;
- ii. A sampling and analysis program for groundwater, land surface and subsurface strata, surface water or air, as necessary to determine whether a release of hazardous waste and/or hazardous constituents from such unit(s) has occurred, or is occurring;
- iii. A discussion of Data Quality Objectives;
- iv. A Quality Assurance Project Plan for the collection and analysis of samples;
- v. Whether any release is harmful to human health or the environment; and/or
- vi. A proposed schedule for implementation and completion of the Work Plan.

The sampling and analysis program, if required, shall be capable of yielding representative samples and must include parameters sufficient to identify migration of hazardous

waste and/or hazardous constituents from the newly-identified SWMU(s) to the environment. The SWMU Assessment Work Plan shall specify any data to be collected to provide for a complete SWMU Assessment Report, as defined below.

- b. The SWMU Assessment Work Plan will be reviewed in accordance with the procedures set forth in Permit Condition V.L. The Permittee shall also submit an electronic copy of the approved SWMU Assessment Work Plan in PDF format on a CD-ROM. Upon EPA's approval of the SWMU Assessment Work Plan, the Permittee shall implement said Work Plan in accordance with the schedules contained therein.
- c. The Permittee shall submit three copies of a SWMU Assessment Report to the Director according to the schedule specified in the approved SWMU Assessment Work Plan. The SWMU Assessment Report shall present and discuss the information obtained from implementation of the approved SWMU Assessment Work Plan so that the Director can determine if a RCRA Facility Investigation is necessary. The report shall be consistent with the requirements of the Release Assessment Scope of Work in the RCRA Corrective Action Plan. At a minimum, the report shall provide the following information for each newly-identified SWMU:
  - i. The location of the newly-identified SWMU in relation to other SWMUs;
  - ii. The type and function of the unit;
  - iii. The general dimensions, capacities, and structural description of the unit;
  - iv. The period during which the unit was operated;
  - v. The physical and chemical properties of all wastes that have been or are being managed at the SWMU, to the extent available;
  - vi. The results of any sampling and analysis conducted;
  - vii. A review of sampling and analysis data conducted as required by the Quality Assurance Project Plan;
  - viii. A comparison of the sampling and analysis data to the Data Quality Objectives;

- ix. Past and present operating practices;
  - x. Previous uses of the area(s) occupied by the SWMU;
  - xi. Amounts of waste handled; and
  - xii. Drainage areas and/or drainage patterns near the SWMU.
- d. The SWMU Assessment Report will be reviewed in accordance with the procedures set forth in the Permit Condition V.L. The Permittee shall also submit an electronic copy of the approved SWMU Assessment Report in PDF format on a CD-ROM. Based on the findings of the Report, and any other available information, the Director will determine the need for further investigation, stabilization, a RCRA Facility Investigation, or a Corrective Measures Study.

V.D. REQUIREMENTS FOR NEWLY-IDENTIFIED RELEASES

- V.D.1. The Permittee shall notify the Director, in writing, of any release(s) of hazardous waste and/or hazardous constituents identified during the course of groundwater monitoring, field investigation(s), environmental auditing, or other activities undertaken after issuance of this Permit, no later than fifteen (15) calendar days after discovery. This reporting requirement does not alleviate obligation to report releases under CERCLA, EPCRA or other applicable federal, state, or local law.
- V.D.2. The Director may require a Work Plan for conducting an investigation of the newly-identified release(s). The Work Plan shall describe all the activities to be completed in order to characterize the newly-identified release so that the Director can determine if a RCRA Facility Investigation is necessary. The Work Plan for the investigation shall be consistent with the requirements of the Release Assessment Scope of Work in the RCRA Corrective Action Plan. Within thirty (30) calendar days after receipt of notice that the Director requires a Work Plan, the Permittee shall submit a Newly-Identified Release Investigation Work Plan which may include any of the following as specified in the Director's notice:
- a. A discussion of past waste management practices at the release;
  - b. A sampling and analysis program for groundwater, land surface and subsurface strata, surface water, or air, as necessary to determine whether it is harmful to human health or the environment; and/or
  - c. A Quality Assurance Project Plan for the collection and analysis of samples;

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- d. A proposed schedule for implementation and completion of the Work Plan.
- V.D.3. The sampling and analysis program, if required, shall be capable of yielding representative samples and must include parameters sufficient to identify the migration of the release into the environment. The Newly-Identified Release Investigation Work Plan shall specify any data which needs to be included in a complete Newly-Identified Release Report, as defined below.
- a. The Newly-Identified Release Investigation Work Plan will be reviewed in accordance with the procedures set forth in Permit Condition V.L. The Permittee shall also submit an electronic copy of the approved Newly-Identified Release Investigation Work Plan in PDF format on a CD-ROM. Upon EPA's approval, the Permittee shall implement said plan in accordance with the schedule(s) contained therein.
- b. The Permittee shall submit three copies of a Newly-Identified Release Report to the Director according to the schedule specified in the approved Newly-Identified Release Investigation Work Plan. The Newly-Identified Release Report shall present and discuss the information obtained from implementation of the approved Newly-Identified Release Investigation Work Plan so that the Director can determine if a RCRA Facility Investigation is necessary. The report shall be consistent with the requirements of the Release Assessment Scope of Work in the RCRA Corrective Action Plan. At a minimum, the Report shall provide the following information for each newly-identified release:
- i. The location of the newly-identified release in relation to SWMUs;
  - ii. The general dimensions of the extent of the release;
  - iii. The period during which the release was suspected to have occurred;
  - iv. The physical and chemical properties of all wastes that have been determined to comprise the release;
  - v. The results of any sampling and analysis conducted;
  - vi. A review of sampling and analysis data conducted as required by the Quality Assurance Project Plan;
  - vii. A comparison of the sampling and analysis data to the Data Quality Objectives;



- viii. Past and present operating practices near and at the location of the release;
  - ix. Previous uses of the area(s) occupied near and at the location of the release;
  - x. Amounts of waste handled near and at the release; and
  - xi. Drainage areas and/or drainage patterns near and at the release.
- c. The Newly-Identified Release Report will be reviewed in accordance with the procedures set forth in the Permit Condition V.L. The Permittee shall also submit an electronic copy of the approved Newly-Identified Release Report in PDF format on a CD-ROM. Based on the findings of the Report and any other available information, the Director will determine the need for further investigation, including stabilization, a RCRA Facility Investigation, or a Corrective Measures Study.

V.E. INTERIM MEASURES AND STABILIZATION

- V.E.1. The Permittee shall evaluate available data and assess the need for interim measures, in addition to those specifically required by this Permit. Interim measures shall be used whenever possible to achieve the goal of stabilization which is to control or abate immediate threats to human health and/or the environment, and to prevent or minimize the spread of contaminants while long-term corrective measures alternatives are being evaluated.
- V.E.2. The Permittee shall notify the Director within twenty-four (24) hours of becoming aware of a situation that requires interim measures, stabilization or both.
- V.E.3. If, during the course of any activity initiated under this Permit, the Director determines that a release or potential release of hazardous waste and/or hazardous constituents poses a threat to human health or the environment, the Director may require interim measures, stabilization or both to control or abate such threat, or to minimize or prevent the further spread of contamination until final corrective measures can be initiated. The Director will determine the specific action(s) that must be taken to implement interim measures and stabilization or both, including the schedule for implementing the interim measure and stabilization requirements, and will inform the Permittee of the action(s) in writing.
- V.E.4. If at any time, the Permittee determines that the interim measure and stabilization activities are not controlling or abating the threat or effectively minimizing or preventing the further spread of contamination, the Permittee

must notify the Director in writing no later than ten (10) calendar days after such a determination is made. The Director may then require that the interim measure and stabilization activities be revised to make them more effective; or that final corrective measures be implemented to remediate the contaminated media.

- V.E.5. The Permittee shall demonstrate by September 30, 2002, through submitting an Environmental Indicators Report and by performing any other necessary activities, consistent with this Section, that:
- a. All current human exposures to contamination at or from the Facility are under control. That is, for all media known or reasonably suspected to be contaminated with hazardous wastes or hazardous constituents above risk-based levels, for which there are complete pathways between contamination and human receptors, significant or unacceptable exposures do not exist.
  - b. Migration of contaminated groundwater at or from the Facility is stabilized. That is, the migration of all groundwater known or reasonably suspected to be contaminated with hazardous wastes or hazardous constituents above acceptable levels is stabilized to remain within any existing areas of contamination as defined by monitoring locations designated at the time of the demonstration. In addition, any discharge of groundwater to surface water is either insignificant or shown to be currently acceptable according to an appropriate interim assessment. Monitoring and measurement data must be collected in the future as necessary to verify that migration of any contaminated groundwater is stabilized.

V.F. RCRA FACILITY INVESTIGATION

V.F.1. Current Conditions Report

Within 60 days after receipt of notice that the Director requires a Current Conditions Report, the Permittee shall submit three copies of a Current Conditions Report consistent with the requirements of the Description of Current Conditions for a RCRA Facility Investigation in the RCRA Corrective Action Plan. The Permittee shall also submit an electronic copy of the Current Conditions Report in PDF format on a CD-ROM. The Current Conditions Report shall:

- a. Describe the nature and extent of contamination as currently known by investigations previously completed by or on behalf of the Permittee or other responsible parties.
- b. Describe the status and effectiveness of any interim measures and stabilization activities completed or ongoing by or on behalf of the Permittee or other responsible parties.

- c. Provide an assessment of the applicability of any interim measure or stabilization which may be used to control human exposure or groundwater exposure from releases of hazardous wastes and hazardous constituents at or from the Facility. The assessment must evaluate other Interim Measures alternatives that could be implemented at the facility and identify any new data needed for making decisions on stabilization. EPA shall determine when this data or information shall be collected. EPA will review Permittee's data and assessment and other information available to EPA, and select, if any, an appropriate interim measure(s) for implementation by Permittee. If deemed appropriate by EPA, such selection may be deferred until additional data is collected in the RCRA Facility Investigation.
- d. The Permittee shall submit a Current Conditions Report for Line 5B within 90 days of the effective date of this Permit. The report shall be consistent with the requirements of this Permit Condition.

V.F.2. RCRA Facility Investigation Workplan

- a. Within ninety (90) calendar days after receipt of notice that the Director requires a RCRA Facility Investigation (RFI) Work Plan, the Permittee shall submit three copies of a RFI Work Plan consistent with the requirements of the Scope of Work for a RCRA Facility Investigation in the RCRA Corrective Action Plan. In order to support corrective action decisions, the RFI Work Plan shall describe all the investigations and other work necessary to meet the following objectives:
  - i. The full characterization of the environmental setting.
  - ii. The full characterization of the sources and nature of hazardous wastes and constituents.
  - iii. The full characterization of the vertical and horizontal extent, and rate of migration of releases of hazardous waste and/or hazardous constituents from SWMUs, groups of SWMUs, and AOCs, at the facility and their actual or potential receptors;
  - iv. The complete identification and characterization of any contaminant plumes, including plumes of light and dense non-aqueous phase liquids and dissolved contaminant plumes.

- v. Identification of any additional SWMUs and AOCs not previously identified.
  - vi. Collection of sufficient data to conduct a Risk Assessment consistent with EPA's guidance for risk assessments titled Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual, Parts A-D - Interim Final (1989 & 1991) and Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments - Interim Final (1997).
  - vii. The collection of any other pertinent data which can be utilized to substantiate future corrective action decisions.
- b. The RFI Work Plan shall also be consistent with the RCRA Facility Investigation Guidance. At a minimum, the RFI Work Plan shall detail all proposed activities, investigations, procedures, and other work to be conducted at the facility, a description of current conditions, the schedule for its implementation, and for the submission of the RFI report. The qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the RFI, shall be part of the work plan.
- c. The RFI Work Plan shall include the submittal of a Quality Assurance Project Plan (QAPP). The QAPP shall be consistent with the document titled EPA Requirements for Quality Assurance Project Plans - External Review Draft 10/98, EPA QA/R-5" and 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, Data Quality 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 not harmful to human health or the environment.
- e. Due to the complexity of defining the extent of contamination, the Permittee may be required to use a phased approach which requires the submittal of subsequent RFI Work Plans.
- f. The RFI Work Plan(s) will be reviewed in accordance with the procedures set forth in Permit Condition V.L. The Permittee shall

also submit an electronic copy of the approved RFI Work Plan(s) in PDF format on a CD-ROM. Upon approval thereof, the Permittee shall implement the Work Plan(s) in accordance with the schedule(s) contained therein.

- g. Within 90 days of the effective date of this Permit, the Permittee shall submit a RFI workplan consistent with this Permit Condition and a Current Conditions report (consistent with Permit Condition V.F.1.) to complete the investigation of Building 600-84. The workplan will be reviewed in accordance with the procedures set forth in Permit Condition V.L. The Permittee shall also submit an electronic copy of the approved workplan in PDF format on a CD-ROM. Upon approval thereof, the Permittee shall implement the workplan in accordance with the schedule contained therein.

V.F.3. RCRA Facility Investigation Report

- a. The Permittee shall submit three copies of a RFI Report 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. The information presented in the RFI Report shall be consistent with the RCRA Facility Investigation Guidance.
- b. The RFI Report shall provide an interpretation of the RFI information gathered, supported with sound documentation, to enable the Director to determine whether interim measures, stabilization and/or a Corrective Measures Study are necessary. The RFI Report shall describe the procedures, methods, and results of all investigations of SWMUs, AOCs, and releases, and all stabilization activities undertaken and the results of those activities.
- c. The RFI Report shall include a review of sampling and analysis data conducted as required by the Quality Assurance Project Plan and a comparison of the sampling and analysis data to the Data Quality Objectives;
- d. The RFI Report will be reviewed in accordance with the procedures set forth in Permit Condition V.L. The Permittee shall also submit an electronic copy of the approved RFI Report in PDF format on a CD-ROM. After review of the RFI Report, if the Director determines that the objectives of the RFI have not been met, the Director may require additional investigation.
- e. The Permittee shall submit a RFI report in accordance with this Permit Condition for the investigation required by Permit Condition

V.F.2.g. The report will be reviewed in accordance with the procedures set forth in Permit Condition V.L. The Permittee shall also submit an electronic copy of the approved report in PDF format on a CD-ROM. After review of the RFI Report, if the Director determines that the objectives of the RFI have not been met, the Director may require additional investigation.

V.G. CORRECTIVE MEASURES STUDY

V.G.1. Corrective Measures Study Work Plan

If the Director determines that there has been a release of hazardous waste and/or hazardous constituents from a SWMU or AOC that may present a threat to human health or the environment, the Director may require a Corrective Measures Study (CMS) and will notify the Permittee in writing of the requirement to submit a CMS Work Plan.

- a. Within sixty (60) calendar days after receipt of notice that the Director requires the conduct a CMS, the Permittee shall submit three copies of a CMS Work Plan consistent with the requirements of the Scope of Work for a Corrective Measures Study in the RCRA Corrective Action Plan. The CMS Work Plan shall describe all the investigations, studies and other work necessary to select a corrective measure or measures to protect human health and the environment from releases of hazardous wastes and constituents. Specifically, the CMS Work Plan will include:
  - i. A description of the general approach to investigating and evaluating potential corrective measures.
  - ii. The specific objectives of the study.
  - iii. A description of the corrective measures which will be studied.
  - iv. A description of the method to be used to evaluate corrective measures. At a minimum, each corrective measure studied shall be evaluated using four threshold criteria and five balancing criteria. The threshold criteria are protection of human health and the environment, attainment of media cleanup standards set by EPA, controlling the sources of releases to reduce or eliminate further releases that may pose a threat to human health and the environment, and compliance with applicable or relevant and appropriate standards for management hazardous constituents, hazardous wastes, and contaminated media. To be selected as a corrective measure

- for the Facility, the corrective measure must meet these four threshold criteria. The balancing criteria are long-term reliability and effectiveness, reduction of toxicity, mobility or volume of wastes, short-term effectiveness, implementability, and cost. A corrective measure is selected from those meeting the threshold criteria based upon the balancing criteria.
- v. A schedule for conducting the CMS and submitting a Corrective Measures Study Report; and
  - vi. The proposed format for the presentation of information in the Corrective Measures Study Report.
- b. The Director 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 EPA's judgment, achieves protection of human health and the environment.
  - c. The Director will review the CMS Work Plan in accordance with the procedures set forth in Permit Condition V.L. The Permittee shall also submit an electronic copy of the approved CMS Work Plan in PDF format on a CD-ROM. Upon approval thereof, the Permittee shall implement the Work Plan in accordance with the schedule contained therein.

#### V.G.2. Corrective Measures Study Report

The Permittee shall submit three copies of a CMS Report 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 the RCRA Corrective Action Plan.

The CMS Report shall contain adequate information for the Director to select the corrective measure or measures necessary to protect human health and the environment from releases of hazardous wastes and constituents at or from the Facility.

The CMS Report will be reviewed in accordance with the procedures set forth in Permit Condition V.L. The Permittee shall also submit an electronic copy of the approved SWMU Assessment Work Plan in PDF format on a CD-ROM.

The CMS Report shall include:

- a. A summary of the risks to human health and the environment which require implementation of a corrective measure or measures.

- b. Proposed media cleanup standards for the protection of human health and the environment.
- c. The results of the investigations for each remedy studied and of any bench-scale or pilot tests conducted and shall propose a remedy.
- d. An estimate of the cost to implement each corrective measure.
- e. A detailed evaluation of each corrective measure using the four threshold criteria and the five balancing criteria.
- f. And, the Permittee's preferred corrective measure or measures.

V.H. CORRECTIVE MEASURES SELECTION

The Director will select a corrective measure or measures that will (1) be protective of human health and the environment; (2) control the source(s) of release(s) so as to reduce or eliminate, to the maximum extent practicable, further releases that may pose a threat to human health and the environment; and (3) meet all applicable federal, state, and local laws and regulations. After the Director prepares a Statement of Basis that identifies the preferred corrective measure or measures and provides the reasons that it is preferred, a permit modification will be initiated pursuant to 40 CFR §§270.41 or 270.42 - Class 3, as applicable, to require implementation of the preferred corrective measure or measures.

V.I. CORRECTIVE MEASURES IMPLEMENTATION

\*\*\*\* *Reserved* \*\*\*\*

V.J. FINANCIAL ASSURANCE/FUNDING FOR CORRECTIVE ACTION

- V.J.1. Within one hundred twenty (120) calendar days after Permit Condition V.I. has been modified to include a remedy, the Permittee shall demonstrate continuous compliance with the RCRA financial assurance requirements specified in Section 3004(t) of RCRA, 42 U.S.C. §6924(t), for corrective action being performed under Section 3004(u) of RCRA, 42 U.S.C. §6924(u). The effective financial assurance mechanism shall be substantially equivalent to that 40 CFR part 264, Subpart H. Other financial assurance amounts and mechanisms may be used, if approved in writing by the Director. The amount of the financial assurance shall at minimum be for the amount of the cost estimate included in the Corrective Measures Study Report for the selected corrective measure.
- V.J.2. If the cost estimate increases, documentation of financial assurance for that increase shall be provided within sixty (60) calendar days following the increase in the cost estimate. The Permittee shall also adjust the cost estimate for inflation within sixty (60) calendar days prior to the yearly anniversary date of the establishment of the financial instrument(s), or within thirty (30)



calendar days after the close of the fiscal year if a financial test or corporate guarantee is used, in accordance with 40 CFR §264.142(b).

V.K. PERIODIC REPORTING

The Permittee shall submit to the Director a signed Quarterly Progress Report covering all activities within the current reporting period which are conducted pursuant to the corrective action provisions of this Permit. Each Quarterly Progress Report shall be due thirty (30) calendar days after the last day of each calendar quarter. The first quarter for which a Quarterly Progress Report is due is the first quarter in which the Director requires the Permittee to begin corrective action activities pursuant to this Permit, including development of Work Plans. These Quarterly Progress Reports shall be submitted until such time that the activities pursuant to the corrective action provisions of this Permit are complete. The Quarterly Progress Reports shall include the following information for the quarter being reported:

- V.K.1. A description of the work completed.
- V.K.2. Summaries of all findings, including summaries of laboratory data.
- V.K.3. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems.
- V.K.4. Projected work for the next quarter.

V.L. REVIEW AND APPROVAL PROCEDURES

- V.L.1. After submission of any plan or report pertaining to corrective action activities (excluding the Quarterly Progress Report), the Director will either approve or disapprove the plan or report in writing. EPA will rely on both the RFI Guidance (see the document titled RCRA Facility Investigation Guidance dated May 1989, OSWER Directive Number 9502.00-6D, EPA Document Number 530/SW-89-03) and the RCRA Corrective Action Plan (see the document titled RCRA Corrective Action Plan dated May 1994 and given the OSWER Directive Number 9902.3-2A and EPA Document Number 520-R-94-004) in its review to ensure the completeness and consistency of corrective action activities. EPA intends to use the most recent versions of those guidance documents in its review as they would incorporate advancements in the conduct of corrective action activities. Strict adherence to these guidance documents is not an enforceable condition of this Permit. The Permittee may dispute using the procedures outlined in the condition entitled, Dispute Resolution (Permit Condition V.M.), EPA's disapproval, modification, or other decision or directive that the Permittee believes is an inappropriate reliance on existing or subsequently issued guidance documents. Upon approval of the plan by EPA, the plan, including all activities and schedules for such activities, shall be incorporated into and made an enforceable part of this Permit, and failure to implement the plan in accordance with the requirements and schedules contained therein shall be

deemed a violation of this Permit unless excused pursuant to Permit Condition V.M., (Dispute Resolution).

- V.L.2. If the Director disapproves the plan or report, the Director will notify the Permittee in writing of the plan's deficiencies and specify a due date for submittal of a revision.
- V.L.3. If the Director disapproves the revised plan or report, the Director 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.
- V.L.4. If the Permittee takes exception to the modifications made by the Director, the Permittee shall follow the procedures outlined in the Permit Condition entitled, Dispute Resolution.

V.M. DISPUTE RESOLUTION

- V.M.1. If the Permittee disagrees, in whole or in part, with any EPA disapproval, modification, or other decision or directive made by EPA pursuant to the corrective action provisions of this Permit, the Permittee shall notify the EPA in writing of any objections and basis for them within fifteen (15) calendar days of receipt of EPA's disapproval, decision, or directive. The notice shall set forth specific points of the dispute, the position the Permittee maintains should be adopted as consistent with the requirements of this Permit, the factual and legal basis for the Permittee's position, and all matters the Permittee considers necessary for the EPA's determination. The EPA and the Permittee shall then have an additional thirty (30) calendar days from the EPA's receipt of the Permittee's objection to attempt to resolve the dispute. If agreement is reached, the resolution will be reduced to writing by EPA and shall become part of this Permit. If the parties are unable to reach complete agreement within this 30-day period, the matter will be submitted for resolution to the Director. This resolution shall become an enforceable part of this Permit. The Director shall notify the Permittee in writing of the resolution of the dispute, and the reasons for this resolution.
- V.M.2. The existence of a dispute as defined herein and EPA's consideration of such matters as placed in dispute shall not excuse, toll or suspend any obligation or deadline required pursuant to this Permit, that is not the subject of dispute, during pendency of the dispute resolution process.

\*\*\* END OF PERMIT MODULE V \*\*\*