Kentucky Energy and Environment Cabinet
Department for Environmental Protection
Division of Waste Management

HAZARDOUS WASTE MANAGEMENT FACILITY PERMIT

PART I
LEGAL AUTHORITY

A.I.A. PERMITTEE

Pursuant to the Kentucky Revised Statutes Chapter 224 and the Kentucky Administrative Regulations Title 401 adopted pursuant thereto by the Kentucky Energy and Environment Cabinet (hereinafter referred to as "the Cabinet"), a Hazardous Waste Permit is issued to the U.S. Department of the Army, Blue Grass Army Depot (BGAD), and to Bechtel Parsons Blue Grass Joint Venture (BPBG) (individually and collectively hereinafter referred to as "the Permittee"), for hazardous waste management activities at 431 Battlefield Memorial Highway, Richmond, Kentucky, latitude 37°42'00"N and longitude 84°12'30"W for the Blue Grass Chemical Agent Destruction Pilot Plant (BGCAPP).

BGCAPP includes the Container Handling Building (CHB), Munitions Demilitarization Building (MDB), Supercritical Water Oxidation (SCWO) Processing Building (SPB), Hydrolysate Storage Area (HSA), SCWO Tank Area (STA), Waste Transfer Station (WTS), Container Storage Facility (CSF), Rocket Motor Storage (RMS), and related facilities.

The Owner and Operator are co-permittees.

The Facility Owner is:	U.S. Department of the Army 431 Battlefield Memorial Highway Richmond, Kentucky 40475-5001
The Facility Operator is:	Bechtel Parsons Blue Grass Joint Venture (BPBG) 830 Eastern Bypass, Suite 106 Richmond, Kentucky 40475

[KRS 224.46.520, KRS 224.50-130, 401 KAR 39:005 Section 1, 401 KAR 39:060 Section 5, (40 CFR 270.10)]

A.I.B. APPLICATIONS

This permit is based on the assumption that the information in the permit applications listed in the table below, (herein referred to as the "permit application") is accurate and that the facility shall be operated as specified in the permit application and this permit. The permit application and modification requests are hereby incorporated into this permit.

Application	Date

Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Addition of Blue Grass Chemical Agent-Destruction Pilot Plant - Main Plant Organic Air Emissions	October 12, 2017 Supplemented July 10, 2018
Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Treatment of VX Munitions	July 7, 2020
Class 3 Hazardous Waste Permit Modification Request, Addition of a Container Storage Facility	May 10, 2019
Class 3 Hazardous Waste Permit Modification Request, Addition of Hazardous Waste Storage Units	September 12, 2019
Letter addressing VX Permitting Path Forward	June 9, 2020
Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Change in Rocket Management and Miscellaneous Permit Updates	November 16, 2020
Class 2 Hazardous Waste Storage & Treatment Permit Modification Request, Vertical Rocket Cutting Machines and Rocket Non Destructive Examination	November 19, 2020
Class 2 Hazardous Waste Storage & Treatment Permit Modification Request, Treatment of VX Rockets	December 17, 2020
Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Offsite Shipment and Disposal of Agent Hydrolysate	March 10, 2021
Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Increase in Permitted Storage Units for Uncontaminated Rocket Motor Storage	April 5, 2021

Any inaccuracies found in the permit application could lead to the termination or modification of this permit and potential enforcement action. The Permittee shall inform the Kentucky Division of Waste Management (hereinafter referred to as "the Division") of any deviation from or changes in the information in the permit application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

[401 KAR 39:060 Section 5 (40 CFR 270.30, 40 CFR 270.32, 40 CFR 270.42)]

A.I.C. EFFECTIVE DATE

This permit is effective and shall remain in effect as stated on the signature page of this permit, unless revoked and reissued, or terminated.

[401 KAR 39:060 Section 5 (40 CFR 270.41, 40 CFR 270.43, and 40 CFR 270.50)]

A.I.D. PARTS OF THE PERMIT

The Permittee shall comply with all terms and conditions of the permit. This permit consists of the conditions set forth in:

Part I Legal Authority
Part II Standard Conditions
Part III Specific Conditions
Part IV Corrective Action
Part V Referenced Attachments
Part VI Waste Minimization

[401 KAR 39:060 Section 5 (40 CFR 270.32), KRS 224.46-530]

A.I.E. SECTIONS OF THE PERMIT

Not Applicable

A.I.F. REGULATIONS AND STATUTES

Applicable regulations and statutes are those which are in effect on the date of issuance, modification, or reissuance of this permit.

[401 KAR 39:060 Section 5, KRS 224.46-530]

PART II

STANDARD CONDITIONS

A.II.A. EFFECT OF THE PERMIT

Compliance with the terms of this permit constitutes compliance for purposes of enforcement with KRS Chapter 224, except for those requirements not included in the permit which become effective by statute, are promulgated under 401 KAR 39:060 Section 4 (Land Disposal Restrictions) restricting the placement of hazardous wastes in or on the land.

This Permit is issued pursuant to KRS 224.46. Issuance of this Permit does not convey 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, or any infringement of state or local law or regulations. 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 the Resource Conservation and Recovery Act (RCRA) of 1976; Sections 104, 106(a), or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 U.S.C. 9601 et seq.), the equivalent state statutes, or any other law governing protection of public health or the environment for any imminent and substantial endangerment to human health, welfare, or the environment.

The Permittee shall treat, store, and/or dispose of hazardous waste on-site; ship/receive hazardous waste; perform post-closure care; and/or perform corrective action in accordance with the Conditions of this Permit. Any storage, treatment, and/or disposal of hazardous waste not authorized in this Permit is prohibited, except as allowed by the Kentucky Hazardous Waste Management Regulations, 401 KAR Chapter 39 and 401 KAR Chapter 40 (40 CFR 239-282).

[See list in condition]

A.II.B. PERMIT ACTIONS

A.II.B.(1) Permit Modification, Revocation and Reissuance, Termination

This permit may be modified, revoked and reissued, or terminated for cause as specified in 401 KAR 39:060 Section 5 [40 CFR 270.30, 40 CFR 270.40-43, 40 CFR 124.5(a), 40 CFR 270.10(b)-(d)], and 401 KAR 40:040 Section 1. The filing of a request for a permit modification, revocation and reissuance, or termination, 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.

[See list in condition]

A.II.B.(2) Severability: Modification, Suspension, and Revocation of a Permit

The Cabinet may modify, suspend, or revoke this permit for:

a. Violation of any requirement of KRS Chapter 224 or the respective administrative regulations promulgated pursuant thereto

b. Aiding, abetting, or permitting the violation of any provisions of 401 KAR Chapters 39 and 40
c. Any action or omission associated with maintenance and operation of the facility that could or does create a threat to public health or the environment
d. Violation(s) of a condition(s) of this permit
e. Misrepresentation or omission of a significant fact by the Permittee either in the application(s) for the permit or in information subsequently reported to the Cabinet
f. Failure to comply with an order issued by the Cabinet

[401 KAR 40:040 Section 1, KRS 224.10-100]

A.II.B.(3) Severability - Invalid Provision

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

[401 KAR 39:060 Section 2]

A.II.B.(4) Permit Renewal

This Permit may be renewed as specified in Permit Condition A.II.B.(5). Review of any application for a Permit renewal shall also consider improvements in the state of control and measurement technology, as well as changes in applicable regulations.

[401 KAR 39:060 Section 5, 40 CFR 270.30]

A.II.B.(5) Permit Expiration and Continuation

This Permit and all Conditions herein shall remain in effect beyond the permit's expiration date, if the Permittee has submitted a timely, complete application in accordance with 401 KAR 39:060 Section 5, and through no fault of the Permittee, the Division has not issued a new permit. Permits continued under this section remain fully effective and enforceable. When the Permittee is not in compliance with the conditions of the expiring or expired permit, the Cabinet may choose to do any or all of the following:

a. Initiate enforcement action based upon the permit which has been continued
b. Issue a notice of intent to deny the new permit. If the permit is denied, the Permittee is required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit.
c. Issue a new permit with appropriate conditions
d. Take other actions authorized by Kentucky regulations, 401 KAR Chapters 39 and 40

[401 KAR 39:060 Section 2, 401 KAR 39:060 Section 5, 40 CFR 270.50, 40 CFR 270.51 as established in 401 KAR 39:060 Section 5]

A.II.B.(6) Permit Modification for Corrective Action Plan

See Entire Facility Section

A.II.B.(7) New Statutes, Standards, or Administrative Regulations

The Cabinet may modify this permit when the standards or administrative regulations on which this permit is based have been changed by statute, amended standards, administrative regulations, or by judicial decision after the permit was issued.

[401 KAR 39:060 Section 5, 40 CFR 270.41(a)(3)]

A.II.C. DEFINITIONS

For the purpose of this permit, terms used herein shall have the same meaning as those in Chapter 224 of the Kentucky Revised Statutes, and Title 401 of Kentucky Administrative Regulations and listed here. Where terms are not otherwise defined, the meaning associated with such terms shall be as defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

[KAR Title 401, KRS 224]

A.II.C.(1) **"Area of Concern" (AOC)** includes any area having evidence of a release or a probable release of a hazardous waste or hazardous waste constituent which is not from a Solid Waste Management Unit and is determined by the Permittee and/or the Manager to pose a current or potential threat to human health or the environment. Such AOCs may require investigations and remedial action as required in order to ensure adequate protection of human health and/or the environment.

A.II.C.(2) **"Blister or Nerve Agent"** means a compound listed below, or degradation byproducts of these compounds:

- N001 GB (isopropyl methyl phosphonofluoridate)
- N002 VX (O-ethyl-S-(2-diisopropylaminoethyl) methyl phosphonothiolate)
- N003 H (bis(2-chloroethyl) sulfide), and related compounds

[401 KAR 39:060 Section 3]

A.II.C.(3) **"Canister"** means a container made of steel (or other compatible material) into which separated M56 warheads are sealed; the canisters are stored in permitted container storage units until subsequent treatment in a permitted Static Detonation Chamber unit.

A.II.C.(4) **"Chemical Munitions"** are assembled projectiles or rockets containing chemical warfare agent including GB, VX, or H.

[KRS 224.50-130(2)]

A.II.C.(5) **"Chemical Hazardous Waste Storage Units"** are the individual container storage areas (munitions igloos) approved in this permit for the storage of chemical munitions and/or Chemical Related Hazardous Waste. These units are located in the Chemical Limited Area. Within the Chemical Storage section of the permit, the terms Hazardous Waste Storage Units (HWSUs) and Chemical Hazardous Waste Storage Igloos are considered the same.

A.II.C.(6) **"Chemical Limited Area"** means that portion of the facility enclosed in a double fence which contains the Chemical Hazardous Waste Storage Units, and support structures, as well as the demilitarization facilities once they are included in the double fence.

A.II.C.(7) **"Chemical Related Hazardous Waste"** means all hazardous waste received by and/or generated by Blue Grass Chemical Activity stockpile management operations and/or the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP).

A.II.C.(8) **"Contamination"** means the degradation of naturally occurring water, air, or soil quality either directly or indirectly as a result of human activities.

[401 KAR 39:005 Section 1]

A.II.C.(9) **"Corrective action"** means all corrective actions/measures necessary to protect human health and the environment from any releases of hazardous waste or hazardous waste constituents from a Solid Waste Management Unit at the facility, regardless of the time at which waste was placed in the unit. Corrective action may address releases to air, soils, surface water sediment,

groundwater, or subsurface gas.

[401 KAR 39:090]

A.II.C.(10) **"Director"** is a reference to the Director of the Division of Waste Management. The terms "Cabinet", "Division", and "Manager" can be used interchangeably.

[401 KAR 39:005 Section 1]

A.II.C.(11) **"DRE"** means the destruction and removal efficiency of agent, calculated by: $[(W_{in} – W_{out}) / W_{in}] \times 100\%$. Where W_{in} is the mass of agent into the process and W_{out} is the emission rate of agent out of the process.

Treatment shall be sufficient to provide assurance of destruction or neutralization and removal efficiency of ninety-nine and nine thousand, nine hundred, and ninety-nine ten thousandths percent (99.9999%) for nerve agent, with the efficiency to be demonstrated as achievable under all operating conditions. During the occurrence of malfunctions, upsets, or unplanned shutdowns, nerve agent shall be contained, reprocessed, or otherwise controlled so as to ensure that the required efficiency is attained prior to any release to the environment.

[KRS 224.50-130(3), 401 KAR 39:090 Section 6]

A.II.C.(12) **"Extent of contamination"** is the horizontal and vertical area in which the concentrations of hazardous constituents in the environmental media being investigated are above detection limits or background concentrations indicative of the region, whichever is appropriate as determined by the Cabinet.

A.II.C.(13) **"Facility"**

(1) All contiguous land and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste, or for managing hazardous secondary materials prior to reclamation. A facility may consist of several treatment, storage, or disposal operational units (for example one or more landfills, surface impoundments, or combinations of them).

(2) For the purpose of implementing corrective action under 40 CFR 264.101 or 40 CFR 267.101, all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA. This definition also applies to facilities implementing corrective action under RCRA Section 3008(h).

(3) Notwithstanding paragraph (2) of this definition, a remediation waste management site is not a facility that is subject to 40 CFR 264.101, but is subject to corrective action requirements if the site is located within such a facility.

"Facility" includes sites implementing corrective action pursuant to KRS 224.46-520 and KRS 224.46-530.

[401 KAR 39:005 Section 1(28), 40 CFR 260.10]

A.II.C.(14) **"Hazardous Waste"** means any discarded material or material intended to be discarded or substance or combination of such substances intended to be discarded, in any form which because of its quantity, concentration or physical, chemical or infectious characteristics may cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

[401 KAR 39:005 Section 1, KRS 224.1-010(30)(b]

A.II.C.(15) **"Hazardous Waste Constituent"** means a constituent that caused the cabinet or EPA to list the waste, or a constituent listed in 40 CFR Part 261 Subpart D, as incorporated by 401 KAR 39:060, Section 3.

[401 KAR 39:005 Section 1]

A.II.C.(16) **"Land disposal"** includes but is not limited to any placement of hazardous waste in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, or underground mine or cave.

[KRS 224.1-010]

A.II.C.(17) **"Landfill"** includes any disposal facility or part of a facility where hazardous waste is placed in or on the land and which is not a pile, a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground mine, a cave, or a corrective action management unit.

[401 KAR 39:005 Section 1]

A.II.C.(18) **"Leak Detection and Repair Program (LDAR Program)"** refers to the process and procedures contained in the Organic Air Permit Application, Attachment N.

A.II.C.(19) **"Manager"** is a reference to the Manager of the Hazardous Waste Branch, Division of Waste Management. The terms "Cabinet", "Director", and "Division" can be used interchangeably.

A.II.C.(20) **"MOA"** means any Memorandum of Agreement, Memorandum of Understanding, Coordination Agreement, or any other written document covering the terms, scope, conditions, or other arrangements for services to the facility with an off-site company, group, or government agency.

A.II.C.(21) **"Off-normal"** means an abnormal or unplanned event or condition that adversely affects, potentially affects, or is indicative of degradation in the safety, security, environmental or health protection performance or operations of a facility. Off-normal events include failure of a critical interlock activation, out of compliance critical parameter, non-transient loss of cascade ventilation, agent release to the environment, and similar events.

A.II.C.(22) **"Off-site"** Off-site means any site which is not on site.

[401 KAR 39:005 Section 1, 40 CFR 270.2]

A.II.C.(23) **"On-site"** means on the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a crossroads intersection, and access is by crossing, as opposed to going along the right-of-way. A noncontiguous property owned by the same person but connected by a right-of-way which he controls and to which the public does not have access is also considered on-site property.

[401 KAR 39:005 Section 1]

A.II.C.(24) **"Operator"** Operator is defined by 40 CFR 260.10 and includes any operation of an on-site or off-site waste facility, including any private contractor conducting operational activities at a federal facility.

[401 KAR 39:005 Section 1(50)]

A.II.C.(25) **"Owner"** is defined by 40 CFR 260.10 and includes any person who owns an on-site or off-site facility, or any part of a facility.

[401 KAR 39:005 Section 1]

A.II.C.(26) **"Permit Compliance Demonstration Testing" (PCDT)** means any testing performed in accordance with the criteria set forth in the approved Pilot Test Demonstration Plan (PTDP).

A.II.C.(27) **"Release"** includes any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any hazardous waste or hazardous waste constituents.

[KRS 224.1-400(1)(b) and (4)]

A.II.C.(28) **"Solid waste"** means any garbage, refuse, sludge, and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining (excluding coal mining wastes, coal mining by-products, refuse, and overburden), agricultural operations, and from community activities, but does not include those materials including, but not limited to, sand, soil, rock, gravel, or bridge debris extracted as part of a public road construction project funded wholly or in part with state funds, recovered material, tire-derived fuel, special wastes as designated by KRS 224.50-760, solid or dissolved material in domestic sewage, manure, crops, crop residue, or a combination thereof which are placed on the soil for return to the soil as fertilizers or soil conditioners, or solid or dissolved material in irrigation return flows or industrial discharges which are point sources subject to permits under Section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).

[KRS 224.1-010(31)(a)]

A.II.C.(29) **"Solid Waste Management Unit"** 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. These units include any area at a facility at which solid wastes have been routinely and systematically released.

[401 KAR 39:005 Section 1]

A.II.C.(30) **"Treatment"** means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological characteristic or composition of any waste so as to neutralize such waste or so as to render such waste nonhazardous, safer for transport, amenable for recovery, amenable for storage, or reduced in volume. Such term includes any activity or processing designed to change the physical form or chemical composition of hazardous waste so as to render it nonhazardous.

The term "treatment" also includes the manual or mechanical handling of the chemical agent compounds and of any munitions containing the compounds during the processing of munitions to remove the compounds, to separate munitions components, and to otherwise prepare the components and compounds for destruction, neutralization, dismantling, or decommissioning.

[401 KAR 39:005 Section 1, KRS 224.1-010(29), KRS 224.50-130(5)]

A.II.C.(31) **"Uncontaminated Rocket Motor"** means a rocket motor that meets the following criteria:

a. The rocket motor was never exposed to liquid agent or agent aerosol.
b. The rocket motor was never exposed to agent vapor above the agent specific IDLH vapor concentration.
c. The rocket motor has not previously been decontaminated for agent hazard.
d. The rocket motor has not indicated presence of agent hazard at any point during its handling sequence. This includes:
    i. Passing Blue Grass Chemical Activity (BGCA) visual inspection and air monitoring to identify and segregate rockets that present a chemical agent hazard during prior storage activities.

ii. Being screened to ≤1 VSL with 0.5 VSL Alarm Level in the unpack area during EONC unload
iii. Being screened and passing rocket non-destructive examination (RNDE) in the unpack area
iv. Passing visual inspections and area air monitoring requirements during cutting and packing operations
v. Being screened to ≤1 VSL with 0.5 VSL Alarm Level in the container monitoring airlock (agent is not confirmed)
vi. Being screened to ≤1 WPL with 0.5 WPL Action Level in the box transfer area (agent is not confirmed)

A.II.D. DUTIES AND REQUIREMENTS

A.II.D.(1) Duty to Comply

The Permittee shall comply with all conditions of this permit except to the extent and for the duration that such noncompliance is authorized by an emergency permit. Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of KRS Chapter 224 and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

[401 KAR 39:060 Section 5, 40 CFR 270.30]

A.II.D.(2) Duty to Reapply

If the Permittee intends to continue an activity allowed or required by this Permit after the expiration date of this Permit, the Permittee shall submit a formal request to renew the permit at least one hundred eighty (180) days prior to permit expiration. The Permittee shall comply with the public notice requirements of 401 KAR 39:060 Section 5. The Cabinet may require additional information to ensure protection of human health or the environment.

[401 KAR 39:060 Section 5, 40 CFR 270.30, 40 CFR 270.10(h), 40 CFR 270.10(l)]

A.II.D.(3) Obligation for Corrective Action

The Permittee is required to continue this Permit for any period necessary to comply with the corrective action requirements of this Permit.

[401 KAR 39:090 Section 1, 40 CFR 264.100(f)]

A.II.D.(4) Need to Halt or Reduce Activity Not a Defense

The Cabinet may order an immediate termination of all operations at the facility at any time it is determined that termination is necessary to protect human health or the environment.

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.

[401 KAR 39:060 Section 5, 40 CFR 270.30(c)]

A.II.D.(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.

[401 KAR 39:060 Section 5, 40 CFR 270.30(d)]

A.II.D.(6) Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all hazardous waste 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, but is not limited to, effective performance, adequate funding, adequate operator staffing and training, adequate laboratory and process controls, including appropriate quality assurance procedures, and adequate agent monitoring. This condition requires the operation of backup or auxiliary facilities, equipment, or similar systems when necessary to achieve compliance with the conditions of the permit.

[401 KAR 39:060 Section 5, 40 CFR 270.30(e), 40 CFR 270.31]

A.II.D.(7) Duty to Provide Information

The Permittee shall furnish to the Manager, within a reasonable time, any information which the Division 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 Manager, upon request, copies of records required to be kept by this Permit.

[401 KAR 39:060 Section 5, 401 KAR 39:090 Section 1, 40 CFR 264.74, 40 CFR 270.30(h)]

A.II.D.(8) Inspection and Entry

The Permittee shall allow an authorized representative of the Division, upon the presentation of credentials and other documents, as required by law to:

a. Enter at reasonable times upon the Permittee's premises where a regulated activity is located or conducted, or where records shall be kept under the conditions of this permit
b. Have access to and copy, at reasonable times, any records that shall 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 as required under this permit
d. Sample or monitor, at reasonable times, any non-surety material at any location, for the purpose of assuring permit compliance as authorized by the Kentucky Revised Statutes
e. Split samples of any non-surety materials, and copies of analysis shall be provided to the Permittee or Division upon request

[401 KAR 39:060 Section 5, 40 CFR 270.30(i)]

A.II.D.(9) Facility Construction Certification/New Units

The Permittee shall not begin treatment or storage of hazardous wastes in any new Hazardous Waste Management Unit, until the Permittee has complied with the following:

a. The Permittee has submitted to the Manager by certified mail or hand delivery, a letter signed by the Permittee and a professional engineer (PE) licensed in the Commonwealth of Kentucky stating that the Hazardous Waste Management Unit has been constructed in accordance with this permit. A licensed PE, employed by the government, does not have to be licensed in the Commonwealth of Kentucky (KRS 322.030(2)).
b. The Permittee has received confirmation that the appropriate Cabinet personnel has inspected the new Hazardous Waste Management Unit and has determined that the new unit is in compliance with the conditions of this permit; or
c. The Permittee has received confirmation that the Cabinet has either waived the inspection, or has within fifteen (15) days, notified the Permittee of the Cabinet's intent to not inspect.

[401 KAR 39:060 Section 5, 40 CFR 270.30(l)]

A.II.D.(10) Monitoring and Records

A.II.D.(10)(a) Sampling Methods

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample shall be the appropriate method from 401 KAR 39:060 Section 3, or an equivalent method if specified in the application, or otherwise approved by the Manager. Laboratory methods shall be those specified in the most recent edition of Test Methods for Evaluating Solid Waste: Physical/ Chemical Methods SW-846, Standard Methods of Wastewater Analysis, methods listed in the Waste Analysis Plan (WAP) or an equivalent method approved by the Manager and in compliance with applicable regulations. Changes to agent analytical methods that have been approved by Program Executive Office, Assembled Chemical Weapons Alternatives, (PEO ACWA) may be submitted as a Class 1 modification not requiring prior agency approval.

[401 KAR 39:060 Section 2, 401 KAR 39:060 Section 5, 40 CFR 270.30, 40 CFR 261 Appendix I, 40 CFR 260.21, 40 CFR 270.42 Appendix I]

A.II.D.(10)(b) Required Records

The Permittee shall retain the following at the facility, or at another location as approved by the Division:

a. records of all monitoring information required under the terms of this Permit, including all calibration and maintenance records
b. records of all original strip chart recordings for continuous monitoring instrumentation or the modern equivalent
c. copies of all reports and records required by this Permit and all data used to prepare them
d. records of all data used to complete the application for this Permit
e. certification required by 401 KAR 39:090 Section 1
f. annual Waste Minimization Certifications
g. land disposal certification
h. records from all groundwater testing, for the active life of this facility, and for disposal facilities for the post closure care period as well

[401 KAR 39:060 Section 5, 40 CFR 270.30, 40 CFR 264.73]

A.II.D.(10)(c) Record Retention

The Permittee shall retain these items for a period of at least three (3) years from the date of the sample, measurement, report, record, certification, or application, or until corrective action is completed, whichever date is later. This period may be extended by request of the Manager at any time and is automatically extended during the course of any unresolved enforcement action regarding this facility.

[401 KAR 39:060 Section 5, 40 CFR 270.30, 40 CFR 268.7]

A.II.D.(10)(d) Content of Records

Records of monitoring information shall include:

a. date(s), exact place(s), time(s), and individual(s) performing sampling or measurements
b. date(s) analyses were performed and the individual(s) who performed the analyses
c. analytical technique(s) or method(s) used
d. results of such analyses, including the detection limits or quantitation limits
e. monitoring results shall be reported at intervals specified elsewhere in the permit

[401 KAR 39:060 Section 5, 40 CFR 270.30]

A.II.D.(11) Advance Sampling Notification

The Permittee shall, at a minimum, provide one (1) week advance notification to the Manager and the Division's Field Office, of any environmental media sampling event required by this permit or its effects, in order to determine hazardous baseline, background, or contamination levels. During an environmental emergency, the Permittee is not required to provide advance notification.

[KRS 224.46-530]

A.II.D.(12) Reporting Planned Changes

The Permittee shall give notice to the Manager as soon as possible of any planned physical alterations or additions which may impact any Hazardous Waste Management Units (HWMUs), Solid Waste Management Units (SWMUs), Areas of Concern (AOCs), or the areas contaminated by them.

[401 KAR 39:060 Section 5, 40 CFR 270.30(l)(1)]

A.II.D.(13) Reporting Noncompliance

A.II.D.(13)(a) Anticipated Noncompliance

The Permittee shall give advance notice to the Manager of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

[401 KAR 39:060 Section 5, 40 CFR 270.30(l)(2)]

A.II.D.(13)(b) Immediate Notification

The Permittee shall report to the Manager any noncompliance with the permit which may endanger human health or the environment. Any information shall be provided orally within two (2) hours from the time the Permittee becomes aware of the circumstances (Kentucky twenty-four (24) hours reporting number (800) 928-2380). This oral report shall include information concerning release of any hazardous waste or hazardous constituents that may cause an endangerment to public drinking water supplies, including both surface water and groundwater used for public drinking water supply and any information of a release or discharge of hazardous waste or hazardous waste constituents, or of a fire or explosion from a hazardous waste site or facility, which may threaten the environment or human health outside the facility

Noncompliance which requires immediate notification includes, but is not limited to:

a. A determination by the Emergency Coordinator that there is an imminent or actual release, fire, or explosion which could threaten human health or the environment
b. Any Environmental Release, including but not limited to, those defined by Condition A.III.A.(4).
c. A confirmed exposure of an unprotected worker to chemical warfare agent exceeding the Short-Term Exposure Limit (STEL) defined in A.III.F.(2)
d. A determination that performance standards for emissions or agent Destruction and Removal Efficiency (DRE) are not being met
e. An Off-Normal Event as listed in Appendix H, and/or an event which leads to an unplanned or extended processing pause
f. Any RCRA Critical Parameter in Appendix F of this permit which is out of compliance and leads to an unplanned shutdown
g. Any other unplanned shutdown which has the potential to affect compliance with this permit

[401 KAR 39:060 Section 6, 40 CFR 270.30(l)(2), KRS 224.1-400(5), KRS 224.50-130(3)]

A.II.D.(13)(c) Follow-up Reporting

The Permittee shall also provide a written submission to the Manager within five (5) days of the time the Permittee becomes aware of the circumstances of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the periods of noncompliance (including exact dates and times); whether the noncompliance has been corrected; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps planned or taken to reduce, eliminate, and prevent reoccurrence of the noncompliance.

The written submission shall contain a description of the non-compliance and its cause, which shall include:

a. Name, address, and telephone number of the owner or operator and the reporter
b. Name, address, and telephone number of the facility
c. Date, time, and type of incident
d. Name and quantity of material(s) involved
e. The extent of injuries, if any
f. An assessment of actual or potential hazard to the environment and human health outside the facility, where this is applicable
g. Estimated quantity and disposition of recovered material that resulted from the incident
h. Periods of non-compliance, including exact dates and times
i. Whether the non-compliance has been corrected
j. If the non-compliance has not been corrected, the anticipated time it is expected to continue
k. Steps planned or taken to reduce, eliminate, and prevent reoccurrence of the non-compliance

[401 KAR 39:060 Section 5, 40 CFR 270.32]

A.II.D.(14) Transfer of Permit

This Permit may be transferred to a new owner or operator only if it is modified or revoked or a modification made in order to identify the new Permittee and incorporate such other requirements as may be necessary under KRS Chapter 224. Until the new owner or operator has demonstrated compliance with 401 KAR 39:060 Section 5, the old owner/operator shall continue to maintain financial assurance until released by the Manager in writing. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner/operator in writing of the requirements of 401 KAR 39 and 401 KAR 40 (40 CFR 239-282) and this permit.

[401 KAR 39:060 Section 5, 40 CFR 270.40, 401 KAR 39:090 Section 1, 40 CFR 264.12]

A.II.D.(15) Manifest Discrepancy Report

If a significant discrepancy in a manifest is discovered, the Permittee shall attempt to reconcile the discrepancy. If not resolved within fifteen (15) days, the Permittee shall submit a letter report, including a copy of the manifest, to the Manager.

[401 KAR 39:060 Section 5, 40 CFR 270.30 (l)(7), 401 KAR 39:090 Section 1, 40 CFR 264.72(c)]

A.II.D.(16) Unmanifested Waste Report

This report shall be submitted to the Manager within fifteen (15) days of receipt of unmanifested waste.

[401 KAR 39:060 Section 5, 40 CFR 270.30 (l)(8), 401 KAR 39:090 Section 1, 40 CFR 264.76]

A.II.D.(17) Other Noncompliance

The Permittee shall report all instances of noncompliance not reported under the other conditions of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in

Permit Condition A.II.D.(13)(c).

[401 KAR 39:060 Section 5, 40 CFR 270.30]

A.II.D.(18) Other Information

Whenever the Permittee becomes aware that any relevant facts were not submitted, or were incorrect in a permit application or in any report to the Manager, the Permittee shall promptly submit such facts or information. In addition, upon request, the Permittee shall furnish to the Manager any information related to compliance with the permit.

[401 KAR 39:060 Section 5, 40 CFR 270.30 (l)(11)]

A.II.D.(19) New Additions or Alterations

The Cabinet may modify the permit when there is material and substantial alterations or additions to the permitted facility, or activity; which occurred after permit issuance and justify the application of permit conditions that are different or absent in this permit.

[401 KAR 39:060 Section 5, 40 CFR 270.41(a)(1)]

A.II.D.(20) New Information

The Cabinet may modify the permit when the Cabinet receives new information. Permits may be modified during their terms for this cause, if the information was not available at the time of permit issuance and justify the application of different permit conditions.

[401 KAR 39:060 Section 5, 40 CFR 270.41(a)(2)]

A.II.D.(21) Information Repositories

The permittee shall establish, update, and maintain information repositories. The information repositories shall contain all documents, reports, data, and information deemed necessary by the Manager to fulfill the purposes for which the repositories are established. The Manager shall have the discretion to limit the contents of the repositories.

[401 KAR 39:060 Section 5, 40 CFR 270.42 (b)(3)]

A.II.E. SIGNATORY REQUIREMENT

All applications, reports, or information submitted to the Cabinet shall be signed and certified by the Commander or by a duly authorized representative of the permittee(s). Certifications shall include the language: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

[401 KAR 39:060 Section 5, 40 CFR 270.11 (d)(1)]

A.II.F. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE DIVISION

All reports, notifications, or other submissions which are required by this Permit to be sent or given to the Division should be sent by certified mail, overnight mail, or hand delivered to:

Kentucky Department for Environmental Protection
Hazardous Waste Branch
300 Sower Boulevard, Second Floor

Frankfort, Kentucky 40601

A.II.G. CONFIDENTIAL INFORMATION

The Permittee may claim as confidential any information required to be submitted by this permit in accordance with 401 KAR 39:060 Section 5 and the procedures in 400 KAR 1:060.

[400 KAR 1:060 Section 1(4), 400 KAR 1:060 Section 3), 401 KAR 39:060 Section 5, 40 CFR 270.12, KRS 224.10-210, KRS 224.10-212]

A.II.H. DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The Permittee shall maintain at the facility the following documents and amendments, revisions, and modifications to these documents, as required by the specified regulation:

a. The approved Permit Application (401 KAR 39:060 Section 5)
b. The Waste Analysis Plan (401 KAR 39:090 Section 1)
c. Inspection schedules (401 KAR 39:090 Section 1)
d. Personnel training documents and records (401 KAR 39:090 Section 1)
e. The Contingency Plan (401 KAR 39:090 Section 1)
f. The Operating Record (401 KAR 39:090 Section 1)
g. The Closure Plan (401 KAR 39:090 Section 1)
h. Annual Reports (401 KAR 39:090 Section 1)
i. This permit, all permit modifications and any correspondence regarding this permit
j. Any other document required by permit conditions

A.II.I. SCHEDULE OF COMPLIANCE

This Permit includes a specified Compliance Schedule (Appendix A) leading to compliance with regulations. Any compliance schedule items shall require compliance as soon as possible, but no later than the timeline specified in the Schedule of Compliance.

[401 KAR 39:060 Section 5, 40 CFR 270.33]

PART III

SPECIFIC CONDITIONS

A.III.A. GENERAL STANDARDS

A.III.A.(1) Permitted Waste Streams, Descriptions, and Codes

Chemical warfare agent-filled munitions and secondary wastes, and waste from the BGAD stockpile shall be the only wastes that are stored or treated under this Permit. No off-site wastes shall be stored or treated.

The permitted hazardous waste streams are listed below. Each of these hazardous wastes shall be managed as specified within this permit.

Waste Stream	Waste Codes	Waste Description
A.1	D004, D005, D006, D007, D008, D009, D010, D011, N201 and/or N202	S01; MPT Residues and Ash and Solids from the Cyclone
A.2	D001, D003, D004, D005, D006, D007, D008, D009, D010, D011, N001, N002	S01, T04 and X02 Containerized Warheads

Waste Stream	Waste Codes	Waste Description
A.3	Reserved	
A.4	D026, D037 (Cresol and PCP), N001, N002, and/or N003	S01 and X03; Agent Contaminated Munitions Dunnage
A.5	D026 and/or D037 (Cresol and PCP)	S01 and X03; Munitions Dunnage
A.6	D001, D003, D008, N101, and/or N102	S01; Rocket Motors and Shipping and Firing Tubes
A.7	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D024, D026, D027, D028, D029, D030, D035, D037, D038, D039, D040, F001-F005, P098, P106,U002, U003, U044, U080, U154, U188, U196, U213, and/or N001, N002, N003, N201, N202, N203, N301, N302, N401, N402, N501, N502, N601, N602 N701, N702, N703, N801, N802, N901, N902	S01; Lab Wastes
A.8	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D026, D027, D028, D029, D030, D035, D037, D038, D039, D040,F001-F005, P098, P106,U002, U003, U044, U080, U154, U188, U196, U213,and/or N001, N002, N003, N101, N102 N201, N202, N301, N302, N401, N402, N501, N502, N601, N602, N701, N702, N703, N801, N802, N901, N902	S01 and X03; Maintenance and Miscellaneous Wastes; Oils, Paints, Spent Solvents, Hydraulic Fluids.
A.9	D022, N001, N002	S01; Agent Derived, Listed Secondary Wastes
A.10	D001, D003, D004, D005, D006, D007, D008, D009, D010, D011, N001, N002	S01, X02, X03, X99 and T01; GB and VX Rockets and Projectiles
A.11	D002, D004, D005, D006, D007, D008, D009, D010, D011, N301, N302	S02: Agent Hydrolysate
A.12	Reserved	
A.13	D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, N001, N002, N301, N302, N401, N402, N801, N802, N901, N902	S02, T01 and X99; Spent Decontamination Solution
A.14	Reserved	
A.15	Reserved	
A.16	D002, N801, N802	S02 and X99; OTM Condensate
A.17	Reserved	
A.18	D004, D005, D006, D007, D008, D009, D010, D011, and/or N203	S01; Static Detonation Chamber residue
A.19	D001, D002, D004, D005, D006, D007, D008, D009, D010, D011, D022, D026, D027, D028, D029, D030, D037, D039, D040, F001, F002, F003, F004, F005, and/or N001, N002, N003	S01; Agent contaminated waste, PPE, Trash, Rags, Operation and Maintenance Wastes from Main Plant, EDT, and CSF
A.20	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, D022, D026, D027, D028, D029, D030, D037,	S01; Laboratory wastes and solvents

Waste Stream	Waste Codes	Waste Description
	D039, D040, F001, F002, F003, F004, F005, N003, N203, N703	
A.21	D001, D002, D003, D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D030, D039, D040, F001, F002, F003, F004, F005, N003	S01; Miscellaneous wastes to include, but not limited to, oils, hydraulic fluids, paints, solvents, and other wastes that exhibit characteristics of ignitability, corrosivity, reactivity, or toxicity due to the chemical composition of the materials
A.22	D002, D004, D005, D006, D007, D008, D009, D010, D011, N001, N002, N003, N203	S01; Liquid from Off-gas Treatment System (OTS) scrubbers
A.23	D001, D004, D005, D006, D007, D008, D009, D010, D011, D022, N001, N002, N003	S01; Solids from OTS buffer tank
A.24	D001, D002, D004-D011, D022, D027-D030, D039, D040, F001-F005, and/or N003, N203	S01; Dry Salts and particulates from the OTS spray dryer
A.25	D001, D004, D005, D006, D007, D008, D009, D010, D011, and/or N001, N002, N003, N203	S01; Particulates and adsorbed vapors in the IONEX carbon filter beds; HEPA filters, pre-filters
A.26	D002, D004-D011, N203, D001, D022, D027-D030, D039, D040, F001-F005, N003, N203	S01; Dust, particulates, and metal oxides from the OTS Bag House Filters

[KRS 224.50-130, KRS 224.46-530, 401 KAR 39:060 Section 3]

A.III.A.(2) Waste Codes

The following are listed hazardous wastes:

Code	Hazardous Waste
N001	GB (isopropyl methyl phosphonofluoridate) and related compounds (H)
N001	Maintenance/miscellaneous wastes associated with GB munitions
N001	Non-process wastes (PPE, filters, trash, concrete, rags, parts/tools, and related waste) associated with GB munitions
N001	Spent carbon, pre filters, and HEPA filters associated with GB munitions
N001	Agent contaminated dunnage associated with GB munitions
N002	VX (0-ethyl-S-(2-diisopropyl-aminoethyl)–methyl phosphono-thiolate) and related compounds (H)
N003	H (bis (2-chloroethyl) Sulfide and related compounds (H)
N003	Maintenance/miscellaneous wastes associated with H munitions
N003	Non-process wastes (PPE, filters, trash, concrete, rags, parts/tools, and related waste) associated with H munitions
N003	Spent carbon, pre-filters, and HEPA filters associated with H munitions
N003	Agent contaminated dunnage associated with H munitions
N101	Uncontaminated M67 rocket motor assembly, propellant component of the rocket motors, shipping firing tubes, and end-caps associated with GB munitions
N102	Uncontaminated M67 Rocket Motor Assembly, Propellant Component of the Rocket Motor, Shipping Firing Tubes, and End-Caps associated with VX munitions

Code	Hazardous Waste
N201	Metal parts treater residue associated with GB munitions or related waste
N202	Metal Parts Treater Residue associated with VX munitions or related wastes
N203	Static Detonation Chamber Residue and Ash associated with H munitions
N301	Agent hydrolysate associated with GB munitions
N302	Agent Hydrolysate associated with VX munitions
N401	Energetics hydrolysate associated with GB munitions
N402	Energetic Hydrolysate associated with VX munitions
N501	Aluminum precipitate associated with GB munitions
N502	Aluminum Precipitate associated with treated VX wastes
N601	Reverse osmosis reject or supercritical water oxidation effluent associated with treated GB waste
N602	Reverse Osmosis Reject or Supercritical Water Oxidation Effluent associated with treated VX wastes
N701	Lab wastes associated with treated GB wastes and GB containing lab wastes treated to destroy agent with caustic
N702	Lab Wastes associated with treated VX wastes and VX containing lab wastes treated to destroy agent with caustic
N703	Lab wastes associated with treated H wastes and H-containing lab waste treated to destroy agent with caustic
N801	Off-gas Treatment (OTM) condensate associated with treated GB wastes
N802	Off-gas Treatment (OTM) condensate associated with treated VX wastes
N901	Spent Decontamination Solution associated with treated GB wastes
N902	Spent Decontamination Solution associated with treated VX wastes

[KRS 224.50-130, KRS 224.46-530, 401 KAR 39:060 Section 3]

A.III.A.(3) Approval Prior to Start of Agent Destruction Operations

For each agent or munition campaign, i.e. VX rockets, and GB rockets, the Permittee shall not receive hazardous waste munitions until the Division has given written approval.

[KRS 224.46-530(1)(g), KRS 224.50-130(3)(c)]

A.III.A.(4) Environmental Releases

The Permittee shall operate the facility to prevent an environmental release of hazardous waste or hazardous waste constituents.

An environmental release shall include but is not limited to the following:

a. Confirmed agent detection equal to or greater than 1.0 VSL at either of the Munitions Demilitarization Building (MDB) HVAC stacks
b. Confirmed agent detection of agent equal to or greater than general population limit (GPL) at a perimeter monitoring location
c. Confirmed detection of agent in an area that is not under engineering controls or in an airlock that is opened to the environment. However, detection of agent above the WPL, (but less than 0.5 VSL), in rocket motor boxes outside engineering controls shall not be considered a release as long as contents of the rocket motor boxes have been monitored by MINICAMS to less than 0.5 VSL alarm level in the Motor Packing Room Airlock prior to movement out of the airlock.

d. The non-transient loss of engineering controls in an MDB agent contaminated area that results in category A, category B, category A/B, or category C air pressures equal to or greater than the ambient air pressure in category D areas.
e. A release of agent outside of engineering controls

[401 KAR 39:090 Section 6, KRS 224.1-400(1)(b), KRS 224.1-400(4), KRS 224.50-130]

A.III.A.(5) Destruction and Removal Efficiency

A.III.A.(5)(a) Destruction and Removal Requirement

The Permittee shall assure destruction and removal efficiency (DRE) of ninety-nine and nine thousand, nine hundred, and ninety-nine ten thousandths percent (99.9999%) for chemical warfare agents. The compliance limits are upper concentrations for agent that shall not be exceeded in order to continuously meet 99.9999% DRE.

[401 KAR 39:090 Section 6, KRS 224.50-130 (3)(a)]

A.III.A.(5)(b) Hydrolysate

Prior to release from the Munitions Demilitarization Building (MDB), each agent neutralization batch of agent hydrolysate shall be analyzed for agent. GB agent hydrolysate shall not be released from the MDB unless it is cleared to less than 52 µg/L GB. VX agent hydrolysate shall not be released from the MDB unless it is cleared to less than 80 µg/L VX. VX hydrolysate shall also be analyzed for experimental agent (EA) 2192 and flammability and shall not be released from the MDB unless it is cleared to less than 1 mg/l EA2192 and to greater than or equal to 140 °F flashpoint.

[401 KAR 39:090 Section 6, KRS 224.50-130 (3)(a)]

A.III.A.(5)(c) MDB HVAC Stacks

When agent or hazardous waste is present in the Munitions Demilitarization Building (MDB), the MDB HVAC stack(s) shall be monitored for agent and shall contain an agent concentration at or below the compliance limit so as to ensure 99.9999% destruction and removal efficiency. For GB and for VX, the MDB stack compliance limit shall be 1.0 VSL.

[401 KAR 39:090 Section 6, KRS 224.50-130 (3)(a)]

A.III.A.(5)(d) Repeat Destruction and Removal Demonstration

The Permittee shall repeat the demonstration of 99.9999% destruction and removal efficiency if the neutralization formula changes, or if any destruction process changes, or upon written request by the Hazardous Waste Branch Manager.

[KRS 224.46-530(1)(g), KRS 224.50-130(3)(a), 401 KAR 39:090 Section 6]

A.III.A.(6) Off-gas Treatment System

A.III.A.(6)(a) Pilot Test Demonstration

During the pilot test demonstration, Permittee shall demonstrate that under normal operating conditions and normal agent loading that the agent concentration in the OTM off-gases is less than 1.0 VSL. Until the Permittee has demonstrated that the OTM off-gases contain less than 1.0 VSL of agent, OTM Condensate shall be tested for agent and cleared to less than the compliance limit prior to being released from the MDB. During GB campaigns, OTM condensate shall not be released from the MDB unless it is cleared to less than 52 µg/L GB. During VX campaigns, OTM condensate shall not be released from the MDB unless it is cleared to less than 80 µg/L VX.

[KRS 224.46-530(1)(g), KRS 224.50-130]

A.III.A.(6)(b) OTM Condensate

After the pilot test demonstration, and in the event activation of the OTM System interlock in Appendix G occurs, OTM Condensate shall be tested for VX and cleared to less than 80 µg/L prior to being released from the MDB.

[KRS 224.46-530(1)(g), KRS 224.50-130]

A.III.A.(6)(c) Thermal Oxidizer (TOX) Shutdown

During TOX unit shutdown, a deviation from the parameters in Appendix F – Critical RCRA Parameters, listed for the TOX/OTM system, or other off normal event affecting the TOX/OTM system, OTM condensate shall be directed to the SDS tanks. Agent waste feed shall be prohibited to the Agent Neutralization System (ANS) and the Metal Parts Treater (MPT).

[KRS 224.46-530(1)(g), KRS 224.50-130]

A.III.A.(7) MDB HVAC System

A.III.A.(7)(a) Cascade Pressure Control

The Munitions Demilitarization Building (MDB) HVAC system shall maintain "cascade pressure control" and shall:

a. Maintain a negative pressure environment in Hazard Category A, Hazard Category B, and Hazard Category C areas of the MDB
b. Maintain the flow of air from areas of low contamination probability to areas of higher contamination probability.
c. Remove agent in the air flow from the MDB and its systems prior to discharge to the atmosphere after the air streams have passed through other air pollution control systems, including the off-gas treatment for the MPT (OTM) to ensure 99.9999% destruction and removal efficiency, as specified in Condition A.III.A.(5)(a).

[KRS 224.46-530(1)(g), KRS 224.50-130]

A.III.A.(7)(b) Operational Requirement

The MDB HVAC System shall be operating at all times when agent is present in the MDB. Waste feed to all MDB treatment units shall be stopped if the MDB HVAC does not meet the conditions of this section.

[KRS 224.46-530(1)(g), KRS 224.50-130(3)]

A.III.A.(7)(c) Agent Breakthrough

Any confirmed detection of agent between beds of carbon will indicate agent breakthrough. If breakthrough is detected at the last mid-bed monitoring location, between beds 4 and 5, the carbon filter unit shall be taken offline immediately and carbon beds shall be replaced prior to the unit being placed back online.

[KRS 224.46-530(1)(g), KRS 224.50-130(3)]

A.III.A.(8) Permit Compliance Demonstration

A.III.A.(8)(a) Pilot Test Demonstration Plan

The Permittee shall comply with the approved Pilot Test Demonstration Plan (PTDP) (Appendix A - Compliance Schedule) and comply with the following requirements:

a. The maximum number of items that shall be treated prior to beginning the Permit Compliance Demonstration shall be in accordance with the approved Pilot Test Demonstration Plan.
b. All Environmental Performance Standards contained in A.III.X.(1) shall be met using the operating conditions specified in Appendix F and using the interlocks specified in Appendix G.
c. The Permittee shall test each operating condition in Appendix F and each interlock in Appendix G, treatment quantity, and waste feed rate specified in the Pilot Test Demonstration Plan (PTDP) at the condition specified or at a more limiting condition.
d. The Permittee shall measure stack emissions for all Constituents of Potential Concern (COPCs) identified in the Multi-Pathway Human Health Risk Assessment (MPHHRA) (included in Attachment M) and all target analytes listed in the PTDP. All measurements and emission rates shall be included in the PTDP reports.
e. During testing, the Permittee shall operate and monitor emissions from the facility as specified in the approved PTDP.

[KRS 224.50-130(3), 401 KAR 39:060 Sections 1 and 5, 401 KAR 39:060 Section 5]

A.III.A.(8)(b) Demonstration Test Data Submittals

Test Reports shall contain a summary of all data collected during the Demonstration Test.

a. All submissions shall be certified in accordance with 401 KAR 39:060 Section 5.
b. If preliminary results and/or calculations show that performance standards for emissions and agent DRE testing are not being met during the Demonstration Test, the Permittee shall immediately stop waste feed.
c. Should the demonstration test result in COPC emission concentrations greater than the Estimated Emissions Rates used in the MPHHRA, the Permittee shall either:
   (i) Revise the feed rate, treatment quantities, interlocks, or operating conditions to limit the emissions and conduct a revised Demonstration Test; or
   (ii) Revise the MPHHRA and demonstrate that the higher emission values resulting from the demonstration test do not pose an unacceptable risk level to potential receptors.
d. Permittee shall submit Test Reports for all Revised Demonstration Test pursuant to the Compliance Schedule (Appendix A).
e. Should testing demonstrate a more restrictive operating condition, interlock, treatment quantity, or waste feed rate than was proposed in the test plan, the Permittee shall submit a permit modification within 30 days of submitting the final Demonstration Test Report to revise the values or operating conditions.

[KRS 224.50-130(3)(a), 401 KAR 39:060 Sections 1 and 5, 401 KAR 39:090 Section 6]

A.III.A.(9) Sumps and Secondary Containment

Sumps and secondary containment shall prevent any migration of wastes or accumulated liquid outside of secondary containment at any time during the use of the hazardous waste management unit.

a. Spilled or leaked waste and accumulated precipitation shall be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.
b. The coatings system providing secondary containment in the MDB and SPB shall be:
   (i) Free of cracks and gaps
   (ii) Adhered to the structure beneath the coating
   (iii) Free of liquid beneath the coating
   (iv) Inspected in accordance with the Inspection Plan

c. Sumps and containment areas where coating repair is taking place shall be isolated or removed from service of providing secondary containment. The Permittee shall document repairs to coatings.
d. The Permittee shall document areas that have been exposed to agent and clean-up activities.

[401 KAR 39:090 Section 1 (40 CFR 264.175, 40 CFR 264.193)]

A.III.A.(10) Spent Decontamination Solution

Spent decontamination solution shall be tested for agent and cleared prior to being released from the MDB. Spent decontamination solution shall not be released unless cleared to less than 52 µg/L for the GB campaigns and less than 80 µg/L for the VX campaigns.

[KRS 224.46-530(1)(g), KRS 224.50-130(3)]

A.III.A.(11) Reserved

A.III.A.(12) Leaker Munitions

Known leaker munitions are rockets or projectiles that have been discovered to leak agent vapor or liquid while stored in the CLA. They shall have been over-packed prior to being transferred to BGCAPP.

Unknown leaker munitions are rockets or projectiles that have been discovered to leak agent vapor or liquid during transport or after being transferred to BGCAPP. Unknown leakers shall be over-packed and placed under engineering controls until the over-pack exterior is below agent air monitoring alarm levels to prevent a release to the environment.

[KRS 224.46-530(1)(g), KRS 224.50-130(3)]

A.III.A.(13) Worker Protection

All workers within 1,000 meters of the MDB shall be provided with an adequate level of protection against exposure to nerve agents.

[KRS 224.50-130(3), 401 KAR 39:090 Section 6]

A.III.A.(14) Reporting Requirements

The Permittee shall submit quarterly reports to the Hazardous Waste Branch, no later than 45 days after the end of each calendar quarter, that document the treatment activities for that calendar quarter. The report shall include:

a. Type and number of munitions processed
b. Quantity of agent processed
c. Quantity of agent hydrolysate generated
d. Documentation for each batch of agent hydrolysate that was rejected
e. Date, time and concentration of any confirmed agent detection between MDB carbon beds 4 and 5 or at the stack
f. Type and quantity of wastes shipped to TSD facilities
g. Details of off-normal conditions experienced as listed in Appendix H and/or an event which leads to an unplanned or extended processing pause, and corrective measures taken
h. Quantity of agent hydrolysate shipped off-site for treatment and disposal
i. Number of separated uncontaminated rocket motors in storage
j. Number of separated uncontaminated rocket motors shipped off-site for disposal
k. Number of containerized rocket warheads in storage

[KRS 224.50-130(3), KRS 224.46-530(1)(g), 401 KAR 39:060 Section 5]

A.III.A.(15) Limitations of Permit

This Permit is for storage and treatment of chemical warfare agents.

[KRS 224.50-130(3), 401 KAR 39:060 Section 5]

A.III.B. GENERAL FACILITY STANDARDS

A.III.B.(1) Identification Number

KY8-213-820-105

A.III.B.(2) Required Notices

The Permittee shall not receive hazardous waste from off-site sources.

A.III.B.(3) Waste Analysis

A.III.B.(3)(a) Detailed Chemical and Physical Analysis

Before the Permittee stores or disposes of any hazardous waste, the Permittee shall obtain a detailed chemical and physical analysis of a representative sample of the waste in accordance with Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846, or equivalent methods approved by the Manager. At a minimum, this analysis shall contain all the information which will need to be known to treat, store, or dispose of the waste. The analysis may be based in whole or in part on:

a. Testing the waste according to the methods set forth in 401 KAR 39:060 Section 3 (Identification and Listing of Hazardous Waste), 40 CFR 261 Subpart C, or an equivalent method approved by the Cabinet; or
b. Applying generator knowledge of the waste based on existing published or documented data on the hazardous waste or on hazardous waste generated from a similar process.

[401 KAR 39:060 Section 3 (40 CFR 261 Subpart C), 401 KAR 39:090 Section 1 (40 CFR 264.13)]

A.III.B.(3)(b) Analysis Repeated As Necessary

The analysis shall be repeated as necessary to ensure that it is accurate and up to date. A review of the waste streams shall be conducted annually to determine if any changes have occurred that may require an analysis to be repeated. At a minimum, the analysis shall be repeated:

a. When the Permittee is notified, or has reason to believe, that the process or operation generating the hazardous waste has changed or if the Permittee has reason to believe that the composition of the waste has changed; and/or
b. If the owner or operator of an off-site facility that received hazardous waste from the Permittee determines that the waste does not match the waste specified on the accompanying shipping manifest.

[401 KAR 39:090 Section 1 (40 CFR 264.13 (a)(3))]

A.III.B.(3)(c) Comply With Waste Analysis Plan

The Permittee shall comply with the Waste Analysis Plan, Attachment C, of the permit application. At a minimum, the Permittee shall maintain properly functioning instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and

perform correct laboratory calculations. If the Permittee uses a contract laboratory to perform analyses, then the Permittee shall inform the laboratory, in writing, that it shall operate under the waste analysis conditions set forth in this Permit.

[401 KAR 39:090 Section 1 (40 CFR 264.13)]

A.III.B.(4) Security

The Permittee shall comply with the security procedures outlined in the Procedures to Prevent Hazards, Attachment F, of the applicable Section of this permit.

[401 KAR 39:090 Section 1 (40 CFR 264.14)]

A.III.B.(4)(a) Prevent Entry

The Permittee shall prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons onto the active portion of the facility.

[401 KAR 39:090 Section 1 (40 CFR 264.14)]

A.III.B.(4)(b) Perimeter Fence

The Permittee shall have:

a. A twenty-four (24) hour surveillance system (for example, television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the active portion of the facility
b. An artificial barrier (fence in good repair), that completely surrounds the active portion of the facility
c. A means to control entry, at all times, through the gates or other entrances to the active portion of the facility (an attendant, television monitors, locked entrance, or controlled roadway access to the facility)

[401 KAR 39:090 Section 1 (40 CFR 264.14)]

A.III.B.(4)(c) Warning Signs

The Permittee shall have:

a. A sign with the legend, "Danger - Unauthorized Personnel Keep Out," posted at each entrance to the active portion of a facility, and at other locations, in sufficient number to be seen from any approach to this active portion. The legend shall be written in English and in any other language predominant in the area surrounding the facility and shall be legible from a distance of at least twenty-five (25) feet.
b. Existing signs with a legend other than "Danger - Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous.

[401 KAR 39:090 Section 1 (40 CFR 264.14)]

A.III.B.(5) General Inspection Requirements

The Permittee shall inspect the facility for malfunctions and deterioration, operator errors, and discharge which may cause or lead to a release of hazardous waste constituents to the environment or a threat to human health. These inspections shall occur often enough to identify problems in time to correct them before they harm human health or the environment. The Permittee shall remedy any deterioration(s) or malfunction(s) discovered by an inspection, and keep all records.

[401 KAR 39:090 Section 1 (40 CFR 264.15 (except 40 CFR 264.15(b)(5))]

A.III.B.(5)(a) Inspection Schedule

The Permittee shall follow the schedule in Procedures to Prevent Hazards, Attachment F, of the permit application, for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are important to preventing, detecting, or responding to environmental or human health hazards.

The Permittee shall keep this schedule at the facility, and it shall identify the types of problems (for example, malfunctions or deterioration) which are to be looked for during the inspection (for example, inoperative sump pump, leaking container, or eroding dike).

The frequency of inspection shall be based on the rate of deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or any operator error goes undetected between inspections. At a minimum, the inspection frequency for all hazardous waste storage units shall be weekly.

[401 KAR 39:090 Section 1 (40 CFR 264.15 (b)(except 40 CFR 264.15(b)(5)))]

A.III.B.(5)(b) Remedy

The Permittee shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals, on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action shall be taken immediately.

[401 KAR 39:090 Section 1 (40 CFR 264.15 (c))]

A.III.B.(5)(c) General Inspection Log

The Permittee shall record inspections in an inspection log or summary. These records shall be kept for at least three (3) years from the date of inspection. At a minimum, these records shall include 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.

[401 KAR 39:090 Section 1 (40 CFR 264.15 (d))]

A.III.B.(6) Personnel Training

The Permittee shall comply with the Personnel Training Plan, Attachment H, of the permit application. Facility personnel shall successfully complete a program of classroom instruction and on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with this permit. The Permittee shall ensure that this program includes all the elements described below in this condition. This program shall be directed by a person trained in hazardous waste management procedures, and shall include instruction which teaches facility personnel hazardous waste management procedures (including Contingency Plan implementation) relevant to the position(s) in which they are employed. At a minimum, the training program shall be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including where applicable:

a. Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment
b. Communications or alarm systems
c. Response to fires or explosions
d. Response to groundwater contamination incidents

e. Shutdown of operations

[401 KAR 39:090 Section 1 (40 CFR 264.16)]

A.III.B.(6)(a) Initial Training

Facility personnel shall successfully complete the training programs in accordance with the Personnel Training Plan, Attachment H, of the permit application, within six (6) months after the date of their employment or assignment to this facility, or to a new position at this facility, whichever is later. Employees shall not work in unsupervised positions until they have completed training.

[401 KAR 39:090 Section 1 (40 CFR 264.16)]

A.III.B.(6)(b) Annual Training

Facility personnel shall be given an appropriate annual review of the initial training in accordance with the Personnel Training Plan, Attachment H, of the permit application.

[401 KAR 39:090 Section 1 (40 CFR 264.16)]

A.III.B.(6)(c) Job Description and Training

The Permittee shall maintain the following training documents and records at the facility:

a. The job title for each position at the facility related to hazardous waste management, and the names of the employees filling each job
b. A written job description for each job title, including the required skills, education, 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 job title
d. Records that document that the training or job experience has been given to, and completed by, facility personnel

[401 KAR 39:090 Section 1 (40 CFR 264.16)]

A.III.B.(6)(d) Training Records

Training records on current personnel shall be kept until closure of the facility. Training records on former employees shall be kept for at least three (3) years from the date the employee last worked at the facility.

[401 KAR 39:090 Section 1 (40 CFR 264.16)]

A.III.B.(7) General Requirements for Ignitable, Reactive, or Incompatible Waste

A.III.B.(7)(a) The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable **or** reactive waste. This waste shall be separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (for example, from heat-producing chemical reactions), and radiant heat.

A.III.B.(7)(b) The Permittee shall take precautions to prevent uncontrolled reactions which generate extreme heat or pressure, fire or explosions, or violent reactions; produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment; produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion; damage the structural integrity of the device or facility; or through other like means threaten human health or the environment.

A.III.B.(7)(c) The Permittee shall document compliance with this condition. This documentation may be based on references to published scientific or engineering literature, data from trial tests (for example, bench scale or pilot scale tests), waste analyses, or the results of the treatment of similar wastes by similar treatment processes and under similar conditions.

[401 KAR 39:090 Section 1 (40 CFR 264.17)]

A.III.B.(8) Location Standards

Not applicable

A.III.B.(9) Land Disposal Restrictions (LDR)

A waste, restricted by LDR, as identified in 401 KAR 39:060 Section 4, may not be placed in a land disposal unit without further treatment unless the requirements of 401 KAR 39:060 Section 4 are met.

[401 KAR 39:060 Section 4 (40 CFR 268 Subpart C)]

A.III.B.(9)(a) LDR - Prohibitions on Storage of Restricted Waste

The storage of hazardous wastes restricted from land disposal under 401 KAR 39:060 Section 4 is prohibited, unless the following conditions are met:

a. The Permittee stores such waste on site solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal.
b. Each container of Hazardous Waste is clearly labeled with the words "Hazardous Waste," and marked to identify its contents and the date accumulation began in that container.

[401 KAR 39:060 Section 4 (40 CFR 268.50), KRS 224.46-520]

A.III.B.(9)(b) LDR - Storage Time

Munitions storage: The Permittee may store waste restricted from land disposal for up to one (1) year in a permitted hazardous waste storage unit. The Permittee may store waste restricted from land disposal beyond one (1) year, if such storage was solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal.

[401 KAR 39:060 Section 4 (40 CFR 268.50), KRS 224.46-520]

A.III.B.(9)(c) LDR - General Restrictions

401 KAR 39:060 Section 4 identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances in which an otherwise prohibited waste may continue to be placed on or in a land treatment, storage, or disposal unit. The Permittee shall maintain compliance with the requirements of 401 KAR 39:060 Section 4. Where the Permittee has applied for an extension, waiver, or variance under 401 KAR 39:060 Section 4, the Permittee shall comply with all restrictions on land disposal under this part once the effective date for the waste has been reached pending final approval of such application.

[401 KAR 39:060 Section 4 (40 CFR 268 Subpart C), KRS 224.46-520]

A.III.B.(9)(d) Restrict Shipment

The Permittee shall determine if any hazardous waste generated needs to be treated before it can be land disposed. The Permittee shall provide certification with each hazardous waste shipment that the waste meets land disposal requirements or a written notice that the waste does not meet

the treatment standard.

Chemical related hazardous waste shipped off-site for treatment or disposal shall comply with the Waste Analysis Plan, Attachment C of the permit application.

Off-site shipments of secondary waste with headspace monitoring resulting in greater than 1 Vapor Screening Level (VSL), shall be disposed of at an appropriately permitted TSDF with direct feed to the receiving facility's treatment unit.

The Permittee shall adhere to the requirements of the Bounding Transportation Risk Assessment as well as the DA Memorandum (Requirements for Implementation of the US Army Chemical Materials Agency Bounding Transportation Risk Analysis for Shipment of Greater Than 1 Vapor Screening Level Chemical Agent Contaminated Secondary Waste) dated 15 September 2008; however, for greater than 0.5 IDLH shipments, the Permittee shall notify the Division and request and obtain approval from the Division prior to shipment.

Agent hydrolysate shall meet all permit requirements and the United States Army Public Health Center (USAPHC) waste control limits prior to off-site shipment for disposal.

[401 KAR 39:060 Section 4 (40 CFR 268 Subpart C), KRS 224.46-530, KRS 224.50-130]

A.III.C. PREPAREDNESS AND PREVENTION

A.III.C.(1) Design and Operation of Facility

The Permittee shall construct, maintain, and operate the facility in a manner 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.

The Permittee shall construct all hazardous waste management units (HWMUs) in accordance with the approved Permit Application and the drawings incorporated into the application.

[401 KAR 39:090 Section 1 (40 CFR 264.31)]

A.III.C.(2) Required Equipment

The Permittee shall keep the following equipment at the facility as specified in Attachment G, Contingency Plan, including:

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 (2) way radio, capable of summoning emergency assistance from BGAD security force, BGAD fire department, emergency operations center (EOC), or state/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), spill control equipment
d. Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or water spray systems
e. Monitoring equipment, personal protective equipment, decontamination solution
f. Munitions over-packs to contain leaking munitions

[401 KAR 39:090 Section 1 (40 CFR 264.32), KRS 224.46-530]

A.III.C.(3) Testing and Maintenance of Equipment

The Permittee shall:

a. Test all emergency equipment including; communication, alarm, fire, spill control, and decontamination equipment at the facility for quality
b. Maintain all equipment at the facility in good working order, to ensure proper operation in time of emergency, consistent with the inspection schedule given in Attachment F, Procedures to Prevent Hazards

[401 KAR 39:090 Section 1 (40 CFR 264.33)]

A.III.C.(4) Access to Communications or Alarm Systems

Whenever hazardous waste is present in the BGCAPP Facility, all personnel shall have immediate access to a telephone or a hand-held two (2) way radio, capable of summoning emergency assistance, either directly or through visual or voice contact with another employee.

[401 KAR 39:090 Section 1 (40 CFR 264.34)]

A.III.C.(5) Required Aisle Space

The Permittee shall maintain adequate aisle space in the container storage areas to allow unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area, with a minimum of 30 inches of aisle space.*[401 KAR 39:090 Section 1 (40 CFR 264.35)]*

A.III.C.(6) Arrangements with Local Authorities

The Permittee shall attempt to make the following arrangements, as appropriate for the type of waste handled at this facility and the potential need for the services of these organizations:

a. Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties, and associated hazards of hazardous waste handled at the facility and places where facility personnel would normally be working, entrances to any roads inside the facility, and possible evacuation routes
b. Where more than one (1) police or fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority
c. Agreements with state emergency response teams, emergency response contractors, and equipment suppliers
d. Arrangements to familiarize local hospitals with the properties of the hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility
e. Where state or local authorities decline to enter into such arrangements, the Permittee shall document the refusal in the Operating Record

The Permittee shall keep current copies of all Agreements with Local Authorities for hazardous waste emergency response assistance at an on-site location. If, at any time, the Permittee enters into an agreement with an off-post responder not listed in the Contingency Plan or does not renew an agreement with an off-post responder listed in the Contingency Plan, then the Permittee shall notify the Manager.

[401 KAR 39:090 Section 1 (40 CFR 264.37)]

A.III.D. CONTINGENCY PLAN AND EMERGENCY PROCEDURES

A.III.D.(1) Implementation of Plan

The Permittee shall comply with the Contingency Plan and Emergency Procedures, Attachment G, of the permit application and shall immediately carry out the procedures in the Contingency Plan whenever there is an imminent or actual emergency situation including a fire, explosion, or unplanned sudden or non-sudden release of any hazardous waste or hazardous waste constituents which could threaten human health or the environment, including: activate internal facility alarms or communication systems, where applicable, to notify all facility personnel and appropriate state or local agencies with designated response roles if their help is needed.

[401 KAR 39:090 Section 1 (40 CFR 264.51, 40 CFR 264.56)]

A.III.D.(2) Content of Plan

The Contingency Plan shall contain the following information and be kept up to date:

a. Actions facility personnel shall take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility
b. Arrangements agreed to by local emergency services
c. List of Emergency Coordinators
d. List, description, and location of all emergency equipment
e. Evacuation plan for facility personnel that describes signals, routes, and alternate routes

[401 KAR 39:090 Section 1 (40 CFR 264.52)]

A.III.D.(3) Copies of Plan

A copy of the Contingency Plan and all revisions to the plan shall be:

a. Maintained at the BGCAPP Control Room
b. Provided to BGAD Emergency Operations Center (EOC), all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services
c. Provided to all outside agencies, contractors, and emergency response providers that have a Memorandum of Agreement (MOA) with the facility to provide assistance in an emergency
d. Provided to the Hazardous Waste Branch Manager and the Field Operations Branch Manager

[401 KAR 39:090 Section 1 (40 CFR 264.53)]

A.III.D.(4) Amendment of Plan

The Contingency Plan shall be reviewed, and immediately amended, if necessary, whenever:

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

Administrative updates and/or changes as identified above to the Contingency Plan may not warrant a permit modification. These shall be submitted to the Manager for determination in accordance with 401 KAR 39:060 Section 5.

[401 KAR 39:090 Section 1 (40 CFR 264.54), 401 KAR 39:060 Section 5 (40 CFR 270.42)]

A.III.D.(5) Emergency Coordinator (EC)

At all times, there shall be an EC either at the facility or on call with the responsibility for coordinating all emergency response measures. The EC shall be thoroughly familiar with all aspects of the facility's 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. The EC shall have the authority to commit the resources needed to carry out the Contingency Plan.

[401 KAR 39:090 Section 1 (40 CFR 264.55)]

A.III.D.(6) Emergency Procedures

A.III.D.(6)(a) Activate Alarms

Whenever there is an imminent or actual emergency situation, the EC (or designee) shall immediately activate internal facility alarms or communication systems, where applicable, to notify all facility personnel, and notify appropriate state and local agencies with designated response roles, as specified in the Contingency Plan.

[401 KAR 39:090 Section 1 (40 CFR 264.56)]

A.III.D.(6)(b) Evaluate Scope of Release

Whenever there is a release, fire, or explosion, the EC shall immediately identify the character, exact source, amount, and areal extent of any released materials. This evaluation may be completed by observation or review of facility records or manifests, and, if necessary, by chemical analysis.

[401 KAR 39:090 Section 1 (40 CFR 264.56)]

A.III.D.(6)(c) Assess Possible Hazards to Human Health or the Environment

The EC shall assess possible hazards to human health or the environment that may result from a release, fire, or explosion. This assessment shall consider both direct and indirect effects of the release, fire, or explosion (for example, the effects of any toxic irritating or asphyxiating gases that are generated or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions).

[401 KAR 39:090 Section 1 (40 CFR 264.56)]

A.III.D.(6)(d) Hazard to Human Health or the Environment Outside of the Facility

If the EC determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, the findings shall be reported as follows:

a. If the assessment indicates that evacuation of local areas may be advisable, appropriate local authorities shall be notified immediately. The EC shall be available to help appropriate officials decide whether local areas should be evacuated

b. The EC shall immediately notify either the government official designated as the on-scene coordinator for that geographical area, or the National Response Center (using their 24-hour toll free number 800-424-8802). The report shall include:

   (i) Name and telephone number of reporter
   (ii) Name and address of facility
   (iii) Time and type of incident

(iv) Name and quantity of material(s) involved, to the extent known
(v) The extent of injuries, if any
(vi) The possible hazards to human health or the environment

[401 KAR 39:090 Section 1 (40 CFR 264.56)]

A.III.D.(6)(e) Preventive Measures

During an emergency, the EC shall take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures shall include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.

[401 KAR 39:090 Section 1 (40 CFR 264.56)]

A.III.D.(6)(f) Monitoring During Halted Operations

If the facility stops operations in response to a fire, explosion, or confirmed release, the EC shall ensure monitoring occurs for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

[401 KAR 39:090 Section 1 (40 CFR 264.56)]

A.III.D.(6)(g) Secure Recovered Waste

Immediately after an emergency, the EC shall provide for treating, storing, or disposing of recovered waste, contaminated soil, surface water or ground water, or other materials that result from a release, fire, or explosion at the facility.

[401 KAR 39:090 Section 1 (40 CFR 264.56)]

A.III.D.(6)(h) Recovery After Emergency

The EC shall ensure that, in the affected area(s) of the facility:

a. No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed
b. All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed

[401 KAR 39:090 Section 1 (40 CFR 264.56)]

A.III.D.(6)(i) Environmental Emergency Written Report

The Permittee shall note in the Operating Record the time, date, and details of any release of hazardous waste. Within fifteen (15) calendar days of the later of the time of release, the conclusion of emergency operations, or completion of efforts to control or mitigate the release or threatened release, the Permittee shall submit a written report on the incident to the Manager and the Division Field Office. The report shall include:

a. Name, address, and telephone number of the Permittee
b. Name, address, and telephone number of the facility
c. Name, address, and telephone number of persons having actual knowledge of the facts surrounding the release or threatened release
d. Date, time, and type of incident (e.g., fire, explosion)
e. Name, quantity, concentration of materials, pollutant, or contaminant involved
f. Precise location, circumstances, and cause
g. Extent of injuries, if any

h. Assessment of actual or potential hazards to human health or the environment, and daily efforts taken by the Permittee to control or mitigate, including monitoring data
i. Estimated quantity and disposition of recovered material that resulted from the incident
j. Changes in equipment, procedures, personnel, etc. to prevent similar incidents
k. Any other pertinent or requested information

[401 KAR 39:090 Section 1 (40 CFR 264.56), KRS 224.1-400]

A.III.D.(6)(j) Daily Notification During Environmental Emergency

The Permittee shall notify the Division's Field Office and Hazardous Waste Branch daily during an environmental emergency operation by telephone, e-mail, or fax. The following information, at a minimum, shall be provided:

a. Summary of the previous day's operations
b. Summary of planned operations for the day, including monitoring and movement/handling
c. Results of any monitoring since the last daily notification
d. Any other pertinent or requested information

[401 KAR 39:060 Section 5 (40 CFR 270.32), KRS 224.46-530]

A.III.D.(6)(k) Memorandums of Agreements (MOAs)

The Permittee shall keep current copies of all Memorandums of Agreement (MOAs) with off-post responders at an on-site location. If, at any time, the Permittee enters into an agreement with an off-post responder not listed in the Contingency Plan and Emergency Procedures, Attachment G, of the permit application, or does not renew an agreement with an off-post responder listed in the Contingency Plan, then the Permittee shall notify the Manager.

[401 KAR 39:090 Section 1 (40 CFR 264.52)]

A.III.E. MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING

A.III.E.(1) Manifest System

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

A.III.E.(1)(a) Receive No Off-Site Chemical Related Hazardous Waste

The Permittee shall not accept at this facility any chemical warfare agent or chemical related hazardous waste generated off site.

[KRS 224.46-530]

A.III.E.(1)(b) General Requirements

If the Permittee transports, or offers for transportation, hazardous waste for off-site treatment, storage, or disposal, the Permittee shall prepare a manifest, and if necessary the continuation sheet, incorporated by reference in 401 KAR 39:080 Section 1 (Appendix on Hazardous Waste Manifest and Instructions). The Permittee shall designate on the manifest, the facility which is permitted to handle the waste described on the manifest. The Permittee may also designate on the manifest, one (1) alternate facility which is permitted to handle the waste in the event an emergency prevents delivery of the waste to the primary facility. If the transporter is unable to deliver the hazardous waste to the primary facility or the alternate facility, the Permittee shall either designate another facility or instruct the transporter to return the waste.

[40 CFR 262.20 as established in 401 KAR 39:080 Section 1]

A.III.E.(1)(c) Acquisition of Manifests

If the state to which the shipment is manifested (consignment state) supplies the manifest and requires its use, then the Permittee shall use that manifest and include all information required. If the consignment state does not require and supply the manifest, then the Permittee shall use the Commonwealth of Kentucky's manifest and include all information required.

[40 CFR 262.21 as established in 401 KAR 39:080 Section 1]

A.III.E.(1)(d) Manifest Number of Copies

The manifest consists of at least the number of copies which will provide the Permittee, each transporter, and the owner or operator of the designated facility with one copy each for their records and another copy to be returned, by the operator of the designated facility, to the Permittee.

[40 CFR 262.22 as established in 401 KAR 39:080 Section 1]

A.III.E.(1)(e) Use of the Manifest When Shipping

The Permittee shall:

a. Sign the manifest certification by hand
b. Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest
c. Retain one (1) copy for a minimum of three years
d. The Permittee shall give the transporter the remaining copies of the manifest
e. For rail shipments of hazardous waste within the United States which originate at the facility, the Permittee shall send at least three (3) copies of the manifest dated and signed in accordance with this section to the next non-rail transporter, if any; or the designated facility if transported solely by rail; or the last rail transporter to handle the waste in the United States, if exported by rail.
f. For shipments of hazardous waste to a designated facility in a state which has not yet obtained authorization to regulate that particular waste as hazardous, the Permittee shall assure that the designated facility agrees to sign and return the manifest to the Permittee, and that any out-of-state transporter signs and forwards the manifest to the designated facility with the shipment.

[40 CFR 262.23 as established in 401 KAR 39:080 Section 1]

A.III.E.(1)(f) Use of Manifest System When Receiving

Not applicable

A.III.E.(1)(g) Receiving Hazardous Waste by Rail

Not applicable

A.III.E.(2) Manifest Discrepancies

Manifest discrepancies are differences between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity or type of hazardous waste a facility actually receives. Significant discrepancies in quantity are:

a. For bulk waste, variations greater than ten (10) percent in weight
b. For batch waste, any variation in piece count, such as a discrepancy of one (1) drum in a truckload

Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper.

Upon discovering a significant discrepancy, the Permittee shall attempt to reconcile the discrepancy with the waste generator or transporter (for example, by telephone or email). If the discrepancy is not resolved within fifteen (15) days after receiving the waste, the Permittee shall immediately submit to the Hazardous Waste Branch Manager a letter describing the discrepancy, a description of all attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

[40 CFR 264.72 as established in 401 KAR 39:090 Section 1]

A.III.E.(3) Operating Record

The Permittee shall keep a written Operating Record. At a minimum, the following information shall be recorded, as it becomes available, and maintained in the Operating Record until closure of the facility:

a. A description and the quantity of each hazardous waste received, and the method and date of its treatment, storage, or disposal at the facility as described in 401 KAR 39:090 Section 1 (Appendix I to 40 CFR 264 on Recordkeeping Instructions)
b. The location of each hazardous waste within the facility and the quantity at each location
c. Records and results of waste analyses and waste determinations
d. Summary reports and details of all incidents that require implementing Contingency Plans
e. Records and results of facility and equipment inspections for three (3) years
f. Monitoring, testing, analytical data, and corrective action
g. Notice to off-site generator of hazardous waste informing them in writing that the Permittee has the appropriate permit(s) for, and shall accept, the waste the generator is shipping
h. For an off-site treatment facility, a copy of the notice, and the certification and demonstration, if applicable, required of a generator under 401 KAR 39:060 Section 4 (Land Disposal Restrictions)
i. For an on-site treatment facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required of the generator under 401 KAR 39:060 Section 4 (Land Disposal Restrictions, 40 CFR 268.7 and 268.9)
j. Records of munitions processed
k. Records of all operating/processing hours and days
l. Copies of all documents showing the quantity and disposition of metal scrap and residues shipped with the bill of lading or manifest number (if applicable)
m. Records associated with off-site shipments of hazardous wastes generated at the facility, the types and locations of destination facilities, and how the wastes were managed at the destination facilities (for example: recycling, treatment, storage, or disposal)
n. Records of quantities and date of each shipment of hazardous waste placed in a land disposal unit pursuant to 401 KAR 39:090 Section 1, 40 CFR 264.73
o. The Permittee shall also ensure that the facility that receives, treats, and/or disposes of hazardous waste generated at the permitted facility has the appropriate permits to treat and/or dispose of the waste. The Permittee shall retain documentation of treatment from the treatment or disposal facility
p. The date and time of all permit compliance interlock activations to include the cause, corrective action, and corrective measures taken to prevent recurrence of the incident.
q. The Permittee shall record all incidents of the interlock function failures including the corrective measures taken to correct the condition that caused the failure and all equipment monitoring and inspection records for monitoring equipment compiled under the conditions of this permit
r. Daily Limiting Conditions of Operations checklist and any necessary mitigation measures

s. Any agent leak prior to treatment shall be documented and steps taken in response to the leak shall be documented each day until agent is no longer detected
t. A record of all shipments of greater than 0.5 IDLH wastes.

[401 KAR 39:080 (40 CFR 262.40, 40 CFR 262.41, 40 CFR 262.42, 40 CFR 262.43)]

A.III.E.(4) Records

A.III.E.(4)(a) Records Retention

The Permittee shall:

a. Keep a copy of each signed shipping manifest, in addition to the signed copy returned from the designated facility which received the waste. Both copies shall be retained on record for at least three (3) years from the date the waste was accepted by the initial transporter.
b. Keep a copy of each annual report and exception report for a period of at least three (3) years from the due date of the report (March 1)
c. Keep records of any test results, waste analyses, or other waste determinations for at least three (3) years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal
d. Keep a log showing all facility and equipment inspections

The periods of retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Cabinet.

[40 CFR 262.23 as established in 401 KAR 39:080 Section 1, 40 CFR 264.74 as established in 401 KAR 39:090 Section 1]

A.III.E.(4)(b) Availability, Retention, and Disposition of Records

All records, including plans, shall be furnished upon request, and made available at all reasonable times for inspection by any officer, employee, or representative of the Cabinet who is duly designated by the Secretary of the Cabinet. The retention period for all records required under this chapter is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the Cabinet.

[40 CFR 264.74 as established in 401 KAR 39:090 Section 1]

A.III.E.(5) Annual Report

The Permittee shall prepare and submit a Hazardous Waste Annual Report, DEP Form 7072. The Hazardous Waste Annual Report shall be submitted to the Cabinet no later than March 1 of each year. The Hazardous Waste Annual Report shall cover facility activities for the preceding calendar year. The Permittee shall provide a duplicate copy of the Hazardous Waste Annual Report to the Madison County Judge Executive and Emergency Management Agency so that he/she may make the report available to the county law enforcement and emergency services for emergency planning purposes.

The following document is hereby incorporated by reference: "Hazardous Waste Annual Report", DEP Form 7072.

[401 KAR 39:060 Section 5 (18), 401 KAR 39:080 Section 6]

A.III.E.(6) Unmanifested Waste Report

If the Permittee accepts for treatment, storage, or disposal any hazardous waste from an off-site source

without an accompanying manifest, or without an accompanying shipping paper, and if the waste is not excluded from the manifest requirement by 401 KAR 39:060 Section 3 and 40 CFR 261.5 (Special Requirements for Hazardous Waste Generated by Conditionally Exempt Small Quantity Generators), then the Permittee shall prepare and submit a single copy of a report to the Manager within fifteen (15) days after receiving the waste. The unmanifested waste report shall be submitted on an approved form. The report shall be designated "Unmanifested Waste Report" and include the following information:

a. EPA identification number, name, and address of the facility
b. Date the facility received the waste
c. EPA identification number, name, and address of the generator and the transporter, if available
d. Description and quantity of each unmanifested hazardous waste received
e. Method of treatment, storage, or disposal for each hazardous waste
f. Certification signed by the Permittee
g. Brief explanation of why the waste was unmanifested, if known

[401 KAR 39:090 Section 1, 40 CFR 264.76]

A.III.F. MONITORING REQUIREMENTS

A.III.F.(1) Groundwater Monitoring Requirements

Not applicable

A.III.F.(2) Air Monitoring Requirements

When agent waste is present at the Munitions Demilitarization Building, the permittee shall continuously monitor airborne concentrations to prevent an exposure exceeding Airborne Exposure Limits, to determine the appropriate level of PPE for workers, and to ensure the general population is not at risk due to airborne agent concentrations. When agent waste is present at the Container Storage Facility the permittee shall perform first entry agent monitoring of airborne concentrations of the interior of the facility for any chemical agent type potentially present in containers in the facility to prevent an exposure exceeding Airborne Exposure Limits, to determine the appropriate level of PPE for workers, and to ensure the general population is not at risk due to airborne agent concentrations.

The Permittee shall operate agent monitoring systems in accordance with the Permit Application, the Laboratory Analysis and Monitoring Plan (LAMP), the Perimeter Monitoring Plan (PMP), the Metal Parts Treater Monitoring Plan, and the MINICAMS/DAAMS Monitoring Table. The MINICAMS/DAAMS Monitoring Table is incorporated into this permit as Appendix E.

Monitoring at each of the Munitions Demilitarization Building (MDB) HVAC Stacks shall be configured with two NRT instruments. Only one MDB HVAC Stack NRT instrument shall be off-line at any given time per stack for daily challenge and/or maintenance, up to a maximum of 3 hours, when hazardous waste is present in the MDB. Munitions and/or agent processing shall not be initiated if both MDB HVAC Stack NRT monitors at the same stack are offline at the same time.

During agent or campaign changeover, and upon government (ACWA) approval of meeting the <1 VSL standard and providing written notice to the Division, the Permittee may suspend air monitoring in those areas of the MDB. In no case shall stack monitoring be suspended.

Airborne exposure limits for chemical warfare agents are below:

Level	$GPL_{(a)}$	$WPL_{(b)}$	$STEL_{(c)}$	$VSL_{(d)}$

Averaging Time	24 hrs.	8 hrs.	15 min	NA
H (mg/m3)	$2x10^{-5}$	$4x10^{-4}$	$3x10^{-3}$	$3x10^{-3}$
GB (mg/m3)	$1x10^{-6}$	$3x10^{-5}$	$1x10^{-4}$	$1x10^{-4}$
VX (mg/m3)	$6x10^{-7}$	$1x10^{-6}$	$1x10^{-5}$	$1x10^{-5}$
Monitoring Method	Historic(e)	Historic(e)	NRT(f)	NRT(f)

(a) GPL is the General Population Limit and is an airborne agent exposure limit for the general population
(b) WPL is Worker Population Limit and is an airborne agent exposure limit for the worker population
(c) STEL is Short Term Exposure Limit and is a concentration based on a 15-minute exposure for an unprotected worker, but is evaluated with an instrument using the shortest analytic cycle time practical to obtain accurate results. Since most NRT cycle times are less than 15min (typically 5-6 min), confirmed readings and durations are used to calculate whether the STEL has been reached or exceeded.
(d) VSL is Vapor Screening Level and is an agent vapor concentration-only value independent of time. As such, it is used to define a level of contamination for items, wastes, engineering controls systems (for example, filter beds and vestibules) and facilities under specific environmental conditions. VSL is the readout level of certain NRT monitors and the value is applied to process or operational monitoring as opposed to worker exposure.
(e) Historic monitoring is used when the sample analyzed represents an extended period of time and the results are not known until laboratory analysis is completed after the sampling event has been completed.
(f) NRT is Near Real-Time monitoring and is conducted with instruments that have the capability to collect, analyze, and report or display results within 15 minutes. They also provide audible and remote alarms when levels are detected at, or above, a specific alarm set point.

[401 KAR 39:060 Section 5 (40 CFR 270.31)]

A.III.G. CLOSURE

Closure shall be in accordance with the Attachment I, Closure Plan.

[401 KAR 39:090 Section 1 (40 CFR 264.197)]

A.III.H. FINANCIAL REQUIREMENTS

Not Applicable

A.III.I. USE AND MANAGEMENT OF CONTAINERS

A.III.I.(1) Condition of Containers

If a container holding non-munition hazardous waste is not in good condition, including but not limited to severe rusting, apparent structural defects, or if it begins to leak, the Permittee shall transfer the hazardous waste from this container to a container that is in good condition, or use over-packs as appropriate to handle the size of the container.

Before transporting hazardous waste, the waste shall be packaged in accordance with the applicable Department of Transportation regulations on packaging under 49 CFR parts 173, 178, and 179.

[401 KAR 39:080 Section 1 (40 CFR 262.30), 401 KAR 39:090 Section 1 (40 CFR 264.171)]

A.III.I.(2) Compatibility of Waste with Containers

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

[401 KAR 39:090 Section 1 (40 CFR 264.172)]

A.III.I.(3) Management of Containers

A container holding hazardous waste shall always be closed during storage except when it is necessary to add or remove waste.

A container holding hazardous waste shall not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

Containers shall be labeled in accordance with 401 KAR 39:080 Section 1. Hazardous waste containers shall be positioned so that labels are visible and easy to inspect.

Non-hazardous materials/waste may be stored in the container storage areas provided the Permittee:

a. Conducts necessary testing and analysis in accordance with the Waste Analysis Plan, Attachment C, of the permit application, in order to ensure that materials stored in the container storage areas are compatible
b. Ensures that any products or non-hazardous wastes stored in the container storage areas are counted toward the total permitted container storage volume
c. Maintains inventories to ensure that permitted storage capacities are not exceeded
d. Complies with all applicable requirements of this permit while storing containers of products or non-hazardous materials/waste in the container storage areas

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart I)]

A.III.I.(4) Inspections

The container storage areas shall be maintained and operated to allow compliance with the inspection and container management requirements described in Attachment F, Procedures to Prevent Hazards.

a. Permittee shall conduct weekly inspections for leaking containers and deterioration of containers caused by corrosion or other factors in accordance with Attachment F, Inspection Schedule, Procedures to Prevent Hazards, of the permit application.
b. Permittee shall conduct weekly inspections of secondary containment system in the container storage areas for deterioration in accordance with Attachment F, Procedures to Prevent Hazards, of the permit application.
c. Permittee inspection procedures shall be based upon Attachment F, Procedures to Prevent Hazards, of the permit application.

[401 KAR 39:090 Section 1 (40 CFR 264.174)]

A.III.I.(5) Containment

The container storage areas shall be designed and operated as follows:

a. Monitoring and inspection procedures for the container storage areas shall assure the controls and containment systems are working as designed and agent is not escaping
b. A base which underlies the containers shall be free of cracks/gaps and be sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is removed
c. The base shall be sloped or the containment system shall be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation

d. The containment system shall have sufficient capacity to contain ten (10) percent of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination
e. Run-on into the containment system shall be prevented unless the collection system has sufficient excess capacity to contain any run-on which might enter the system
f. Liquid in secondary containment shall be removed to the maximum extent possible within 24 hours of discovery
g. Permittee shall ensure that any products or non-hazardous wastes stored in the container storage areas are counted toward the total permitted container storage volume

[401 KAR 39:090 Section 1 (40 CFR 264.174, 40 CFR 264.175), KRS 224.50-130]

A.III.I.(6) Special Requirements for Ignitable or Reactive Waste

Containers holding ignitable or reactive waste shall be located at least fifteen (15) meters from the facility's property line.

[401 KAR 39:090 Section 1 (40 CFR 264.176)]

A.III.I.(7) Special Requirements for Incompatible Wastes

Incompatible chemical related hazardous wastes and materials shall not be placed in the same container. Chemical related hazardous wastes shall not be placed in an unwashed container that previously held an incompatible waste or material. A storage container holding a chemical related hazardous waste that is incompatible with any waste or materials stored nearby in other containers, shall be separated from the incompatible materials, or protected from them by means of a dike, berm, wall, or engineering controls.

[401 KAR 39:090 Section 1 (40 CFR 264.177)]

A.III.I.(8) Closure

Closure shall be in accordance with Attachment I, Closure Plan.

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart G)]

A.III.I.(9) Permitted Container Storage

The following container storage units are permitted and shall be operated and maintained as described in the permit application and this permit:

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart I)]

Condition No.	Container Storage Area	Designation	Amount and Type of Waste Permitted	Secondary Containment	Other Requirements
A.III.I.(9).(a)	Container Handling Building	CHB	Munitions (projectiles and rockets) inside Enhanced Onsite Containers (EONCs). Each EONC is permitted to hold a maximum of 30 rockets (a total of 321 pounds of GB or 300 pounds of VX). Rockets also have rocket motors and shipping and firing tubes which contain PCBs. Rocket warheads contain bursters in addition to agent.	Secondary containment for munitions while they are in the CHB is provided by EONCs. EONCs are approximately 8.5 feet wide by 12 feet long by 8.5 feet high.	EONCs shall not be opened in the CHB. No more than 53 EONCs shall be stored. No more than 58 gallons of agent may be stored in each EONC. An EONC containing munitions that remains in the CHB for more than one week shall be monitored for agent at least once per week.
A.III.I.(9).(b)	Waste Transfer Station	WTS	WTS building shall store up to 24,000 gallons, tanker storage area shall store up to 120,000 gallons and bulk solids storage area shall store up to 32,500 gallons. The wastes are various secondary wastes that will be generated at the BGCAPP prior to shipment to treatment and disposal facilities.	In the container storage building, containers with liquids shall be stored on spill pallets. In the tanker storage area, tankers shall be stored in three secondary containment areas which shall provide not less than 39,778 gallons capacity each.	Roll-off containers shall not contain free liquids.
A.III.I.(9).(c)	Box Transfer Areas 1 and 2	Room 07-165 Room 07-166	Separated rocket motors and SFTs. Each room shall store up to eight boxes containing thirty rocket motors per box.	Not applicable – no free liquids.	Storage shall be limited to the storage of separated rocket motors and empty shipping and firing tube segments.
A.III.I.(9).(d)	Agent Neutralization System (ANS) Storage Area	Room 07-123	Various secondary wastes and spent decontamination solution, not to exceed 2,750 gallons.	Liquid in sumps shall be transferred to the Spent Decontamination System (SDS) tanks.	Storage shall be limited to the storage of miscellaneous secondary wastes and spent decontamination solution. No more than 2,750 gallons shall be permitted in this area.
A.III.I.(9).(e)	Tray/Container Transfer Room	Room 07-124	Up to four skids of 25 containerized warheads, and up to eight 55 gallon drums of miscellaneous secondary waste.	Coated concrete floor with curb and sump.	Storage shall not exceed 1,300 gallons
A.III.I.(9).(f)	Metal Parts Treater Cooling Conveyor Storage Area	Room 07-150	MPT treated metal for recycle; MPT treated secondary waste; spent particulate filter cartridges, and SFT segments	Spill pallets for wastes with free liquids.	Storage shall not exceed 12,000 gallons
A.III.I.(9).(g)	Toxic Maintenance Area Storage Area	Room 07-125	Permitted storage shall be limited to the storage of up to two rocket warhead skids with 25 containerized warheads per skid and miscellaneous waste in drums, contaminated equipment and leaking munitions.	Coated concrete floor with curb and sump.	Storage shall not exceed 5,500 gallons.

Condition No.	Container Storage Area	Designation	Amount and Type of Waste Permitted	Secondary Containment	Other Requirements
A.III.I.(9).(h)	Explosive Containment Vestibule Storage Areas 1 and 2	Room 07-103 Room 07-106	Chemical warfare agent in rockets shall be stored prior to treatment.	Coated concrete floor, sumps and perimeter curbs and walls	Storage shall not exceed 275 gallons in each room.
A.III.I.(9).(i)	Unpack Areas 1 and 2	Room 07-101 Room 07-128	Up to 24 skids containing up to 25 containerized warheads each and various secondary wastes.	Storage of containers shall be inside of an EONC or on a secondary containment pallet.	Storage shall not exceed 2,400 gallons for each unpack area.
A.III.I.(9).(j)	Motor Packing Room	Room 07-163	2 boxes of 30 rocket motors and 2 boxes of shipping and firing tubes.	Not applicable – no free liquids.	Storage shall be limited to the storage of separated rocket motors and empty shipping and firing tube segments. Storage shall not exceed 350 gallon capacity for storage of 2 boxes of 30 rocket motors per box and 2 boxes of empty shipping and firing tubes.
A.III.I.(9).(k)	Motor Shipping Room	Room 07-164	Two boxes of 30 rocket motors and 2 boxes of shipping and firing tubes.	Not applicable – no free liquids.	Storage shall be limited to the storage of separated rocket motors and empty shipping and firing tube segments. Storage shall not exceed 350 gallon capacity for storage of 2 boxes of 30 rocket motors per box and 2 boxes of empty shipping and firing tubes.
A.III.I.(9).(l)	Explosive Containment Room Storage Areas 1 and 2	Room 07-104 Room 07-105	Various secondary wastes, reject warheads and reject warheads in canisters.	Coated concrete floors, sumps, curbs, and walls.	Storage shall not exceed 70 gallons per room.
A.III.I.(9).(m)	Munitions Washout System Room	Room 07-135	Up to five chemical agent VX containing projectiles (5 gallons), and up to 2,750 gallons of miscellaneous secondary waste.	Coated concrete floor with drainage to sumps.	Limited to projectiles that cannot be processed normally. Storage shall not exceed 2,755 gallons.
A.III.I.(9).(n)	SCWO Processing Building Storage Area	SPB	Miscellaneous secondary waste, such as Aluminum Filtration System (AFS) filter cake.	Coated concrete floor with curbs, spill pallets.	Limited to the storage of AFS filter cake and various secondary wastes in roll-off containers and drums. Storage of no more than 8,550 gallons shall be permitted in this area.
A.III.I.(9).(o)	Container Storage Facility (CSF)	CSF	49,280 gallons maximum capacity of waste generated from EDT and Main Plant Operations.	No free liquids stored except on spill pallets or storage lockers providing containment as required by A.III.I.(5)	No recoverable liquid agent shall be allowed in the CSF. All containers shall be stored on pallets to provide protection from contact with moisture or accumulated liquids. Containers shall not be stacked more than two high. The Exhaust Ventilation System (EVS) shall be continuously operated when there is a confirmed detection of agent inside the CSF until the source of agent is identified and contained.
A.III.I.(9).(p)	Rocket Motor	Igloo F1001	16,000 gallons maximum capacity of	No free liquids stored	Rocket motors shall be uncontaminated, as described in condition

	Storage	Igloo F1002	uncontaminated rocket motors and shipping and firing tubes from either VX or GB rockets		A.II.C.(31) "Uncontaminated Rocket Motor". Operational control of igloos listed in this condition may be transferred from BGAD to Bechtel Parsons Blue Grass (BPBG) by permit modification. The permit modification request shall include: a. The designation of the igloo(s) to be transferred b. An amended Part A c. Photo documentation demonstrating that the igloo is empty and in good condition d. Advance notification to allow an inspection, at the Division's discretion, prior to modification approval. Igloos which have been permitted to store uncontaminated rocket motors are listed in the Designation column. Igloos which are eligible to be transferred include: Igloo F1102, Igloo F1203, Igloo F1205, Igloo F1206, Igloo F1207, Igloo F1301, Igloo F1303, Igloo F1304, Igloo F1305, Igloo F1307, Igloo F1401, Igloo F1402, Igloo F1407, Igloo E301, Igloo E302, Igloo E303, Igloo E401, Igloo E402, Igloo E403, Igloo E404, Igloo E405, Igloo E406, Igloo E407, Igloo E501, Igloo E502, Igloo E503, Igloo E810, Igloo E907, Igloo E908 Rocket motor igloos shall contain a maximum of 100 boxes, each containing up to 30 rocket motors with shipping and firing tubes. The boxes shall not be stacked more than two high. There shall be sufficient aisle space to allow access for inspections and container management, with a minimum of 30 inches of aisle space. No free liquids shall be stored in the igloos.
A.III.I.(9).(q)	EBH Room	Room 07-111	Up to two skids of 25 containerized warheads and miscellaneous secondary wastes	Coated concrete floor with curb and sump.	Storage shall not exceed 1,000 gallons

Condition No.	Container Storage Area	Designation	Amount and Type of Waste Permitted	Secondary Containment	Other Requirements
A.III.I.(9).(r)	TMA Equipment Room	Room 07-133	Permitted storage shall be limited to the storage of miscellaneous secondary waste in contaiiners and contaminated equipment.	Concrete floor with curbs, sump	Storage shall not exceed 1,100 gallons.
A.III.I.(9).(s)	UPA Equipment Room	Room 07-134	Permitted storage shall be limited to the storage of miscellaneous secondary waste in containers.	Concrete floor with curbs, sump. Containers with liquids shall be stored on spill pallets.	Storage shall not exceed 1,100 gallons.
A.III.I.(9).(t)	Off-Gas Treatment System – Energetics (OTE)	Room 07-140	Permitted storage shall be limited to the storage of miscellaneous secondary waste in containers.	Concrete floor with curbs, sump. Containers with liquids shall be stored on spill pallets.	Storage shall not exceed 2,750 gallons.
A.III.I.(9).(u)	Off-Gas Treatment System for the Metal Parts Treater (OTM)	Room 07-141	Permitted storage shall be limited to the storage of miscellaneous secondary waste in containers.	Concrete floor with curbs, sump. Containers with liquids shall be stored on spill pallets.	Storage shall not exceed 2,750 gallons.

A.III.J. TANK SYSTEMS

A.III.J.(1) Records

The Permittee shall obtain and keep on file at the facility the Tank Assessment Reports and other written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system that attest that the tank system was properly designed, installed, and that repairs, if necessary, were performed.

[401 KAR 39:090 Section 1 (40 CFR 264.192)]

A.III.J.(2) General Operating Requirements

Accumulated precipitation must be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment.

For all waste storage tanks, operating volume (defined as the volume contained within the tank from the bottom elevation of the tank to the HHLL elevation) is the equivalent of maximum capacity for RCRA purposes and shall not be exceeded. RCRA Tank levels defined in Appendix F shall not be exceeded.

Hazardous wastes or treatment reagents shall not be placed in a tank system if they may cause the tank, its ancillary equipment, or the secondary containment system to rupture, leak, or otherwise fail.

The Permittee shall use appropriate controls and practices to prevent spills and overflows from tank or secondary containment systems. These include at a minimum:

a. Spill prevention controls (for example, check valves or dry disconnect couplings)
b. Overfill prevention controls (for example, level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank)
c. Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation

[401 KAR 39:090 Section 1 (40 CFR 264.194)]

A.III.J.(3) Inspections

A.III.J.(3)(a) Controls

The Permittee shall develop and follow a schedule and procedures for inspecting overfill controls.

The Permittee shall inspect at least once each operating day data gathered from monitoring and leak detection equipment to ensure that the tank system is being operated according to its design.

[401 KAR 39:090 Section 1 (40 CFR 264.195)]

A.III.J.(3)(b) Tanks

In addition, the Permittee shall inspect at least once each operating day:

a. Above ground portions of the tank system, if any, to detect corrosion or releases of waste.
b. The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system, to detect erosion or signs of releases of hazardous waste.

[401 KAR 39:090 Section 1 (40 CFR 264.195)]

A.III.J.(3)(c) Coatings

The coatings system providing secondary containment in the MDB and SPB shall be:

a. Free of cracks and gaps

b. Adhered to the structure beneath the coating
c. Inspected in accordance with the Inspection Plan

[401 KAR 39:090 Section 1 (40 CFR 264.195)]

A.III.J.(3)(d) Leak Detection

Leak detection systems to alert facility personnel to leaks shall be inspected at least weekly. Use of the alternate inspection schedule shall be documented in the facility's Operating Record. This documentation shall include a description of the established workplace practices at the facility.

[401 KAR 39:090 Section 1 (40 CFR 264.195)]

A.III.J.(3)(e) Ancillary Equipment

Ancillary equipment that is not provided with secondary containment shall be inspected at least once each operating day.

The Permittee shall document each inspection in the Operating Record.

[401 KAR 39:090 Section 1 (40 CFR 264.195)]

A.III.J.(4) Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, shall be removed from service immediately, and the Permittee shall satisfy the following requirements:

a. Immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release
b. If the release was from the tank system, within 24 hours after detection of the leak, or if the Permittee demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.
c. Spilled or leaked waste must be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment.
d. Immediately conduct a visual inspection of the release and based upon that inspection shall:
   (i) Prevent further migration of the leak or spill to soils or surface water
   (ii) Remove, and properly dispose of, any visible contamination of the soil or surface water
e. Follow the reporting and notification procedures in this permit for a release
f. Repair the failed component or close the tank system
g. If the Permittee has repaired a tank system, and the repair was extensive (for example, installation of an internal liner, repair of a ruptured primary containment or secondary containment vessel), the tank system shall not be returned to service until the Permittee has obtained a certification by a professional engineer licensed in the Commonwealth of Kentucky, that the repaired system is capable of handling hazardous wastes without release for the intended life of the system
h. This certification shall be submitted to and approved by the Cabinet before returning the tank system to use
i. This certification shall be placed in the operating record and maintained until closure of the facility

[401 KAR 39:060 Section 5, 401 KAR 39:090 Section 1 (40 CFR 264.196)]

A.III.J.(5) Closure

Closure shall be in accordance with Attachment I, Closure Plan.

[401 KAR 39:090 Section 1 (40 CFR 264.197)]

A.III.J.(6) Special Requirements for Ignitable or Reactive Wastes

Ignitable or reactive waste shall not be placed in a tank unless:

The waste is treated, rendered, or mixed before or immediately after placement in the tank so that:

a. The resulting waste, mixture or dissolved material no longer meets the definition of ignitable or reactive waste;
b. 401 KAR 39:090 Section 1, as governed by 40 CFR 264.17(b) (General Requirements for Ignitable, Reactive, or Incompatible Wastes) is complied with; or
c. The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or
d. The tank system is used solely for emergencies.

[401 KAR 39:090 Section 1 (40 CFR 264.198)]

A.III.J.(7) Special Requirements for Incompatible Wastes

Incompatible wastes, or incompatible wastes and materials shall not be placed in the same tank, and hazardous waste shall not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material; unless the Permittee takes precautions to prevent reactions which:

a. Generate extreme heat or pressure, fire or explosions, or violent reactions
b. Produce uncontrolled toxic 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 explosion
d. Damage the structural integrity of the device or facility
e. Through other like means threaten human health or the environment

[401 KAR 39:090 Section 1 (40 CFR 264.17(b), 40 CFR 264.198)]

A.III.J.(8) Permitted Tank Systems

The following tank systems are permitted and shall be operated and maintained as described in the permit application and this permit:

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart J), 401 KAR 39:060 Section 5 (40 CFR 270.16)]

Condition No.	Permitted Tank System	Designation	Type of Waste	Secondary Containment Required	Conditions
A.III.J.(8)(a)	Agent Hydrolysate Storage Tanks	MT-HSS-0105, MT-HSS-0205, MT-HSS-0104	Agent hydrolysate	Coated concrete containment basin	Three tanks for storage of cleared agent hydrolysate, cleared OTM condensate, and cleared spent decontamination solution are permitted. Volume stored in MT-HSS-0104 shall not exceed 103,195 gallons. Volume stored in MT-HSS-0205 and MT-HSS-0105 shall not exceed 336,943 gallons each.
A.III.J.(8)(b)	Energetics Hydrolysate Storage Tanks	MT-HSS-0604, MT-HSS-0704	OTM condensate	Coated concrete containment basin	Two tanks for storage of OTM condensate, cleared OTM condensate, and cleared SDS are permitted. Volume shall not exceed 316,192 gallons each
A.III.J.(8)(c)	Agent Holding Tank	MT-ACS-0105	VX agent	Coated concrete floor with curbs and sumps	One agent holding tank is permitted for storing drained agent prior to treatment in the agent hydrolyzer. Volume shall not exceed 1,856 gallons.
A.III.J.(8)(d)	Agent Surge Tank	MT-ACS-0106	VX agent	Coated concrete floor with curbs and sumps	One agent surge tank is permitted for storage of drained agent or agent spilled from the spent decontamination system prior to treatment in the agent hydrolyzer. Volume shall not exceed 1,856 gallons.
A.III.J.(8)(e)	Agent Neutralization Reactors	MV-ANS-0101, MV-ANS-0201	VX agent and agent hydrolysate	Coated concrete with curbs and sumps	Two agent neutralization reactors are permitted for neutralizing agent before it is sent to the agent hydrolysate sampling tanks or HSS. Volume shall not exceed 2,251 gallons each.
A.III.J.(8)(f)	Agent Hydrolysate Sampling Tanks	MT-ANS-0103, MT-ANS-0203, MT-ANS-0303	Agent hydrolysate	Coated concrete with curbs and sump	Three agent hydrolysate sampling tanks are permitted for storage of agent hydrolysate until sampling is performed. Cleared hydrolysate may be transferred to the agent hydrolysate storage tanks. Volume shall not exceed 5,865 gallons each.
A.III.J.(8)(g)	Reserved				
A.III.J.(8)(h)	Spent Decontamination System (SDS) Tanks	MV-SDS-0101, MV-SDS-0201, MV-SDS-0301	Spent decontamination solution	Coated concrete floor with curb and sump	Three tanks are permitted for storing spent decontamination solution. Volume shall not exceed 9,769 gallons each.
A.III.J.(8)(i)	Reserved				
A.III.J.(8)(j)	Reserved				
A.III.J.(8)(k)	Off-Spec Effluent Tank	MT-SCWO-0041	SCWO effluent	Coated concrete floor with curbs and sumps	One tank is permitted for storage of SCWO effluent that doesn't meet specifications for release to the RO units. Volume shall not exceed 4,213 gallons.
A.III.J.(8)(l)	Emergency Relief Tank	MT-SCWO-0040	SCWO contents, consisting of blended agent and energetics hydrolysate surrogate	Coated concrete floor with curbs and sumps	One tank is permitted for storage of SCWO reactor contents in the event of an emergency shutdown. Volume shall not exceed 2,260 gallons.

Condition No.	Permitted Tank System	Designation	Type of Waste	Secondary Containment Required	Conditions
A.III.J.(8)(m)	Hydrolysate Blend Tank	MT-SCWO-0030, MT-SCWO-0031	Agent hydrolysate, energetics hydrolysate surrogate	Coated concrete floor with curbs and sumps	Two tanks are permitted for blending of agent hydrolysate, energetics hydrolysate surrogate, and feed additives to feed the SCWO reactor. Volume shall not exceed 6,662 gallons each.
A.III.J.(8)(n)	Batch Hydrolysate Holding Tank	MT-SCWO-0032	Agent hydrolysate, energetics hydrolysate surrogate	Coated concrete floor with curbs and sumps	One tank is permitted for temporary storage of hydrolysate batches whose composition is unacceptable for processing in the SCWO reactors. Volume shall not exceed 6,662 gallons.
A.III.J.(8)(o)	Reserved				
A.III.J.(8)(p)	Reserved				
A.III.J.(8)(q)	RO Reject Tank	MT-RO-0106, MT-RO-0206	Reverse osmosis reject (SCWO effluent that contains too much salt to use for plant service water) or OTM condensate	Coated concrete floor with curbs and sumps	Two tanks are permitted for storing Reverse Osmosis Reject or OTM condensate prior to shipment off site. Volume shall not exceed 80,302 gallons each.
A.III.J.(8)(r)	SCWO Effluent Tanks	MT-SCWO-0101, MT-SCWO-0201, MT-SCWO-0301	SCWO effluent or OTM condensate	Coated concrete containment basin	Three tanks are permitted for storage of SCWO effluent or OTM condensate prior to processing through the Reverse Osmosis System. Volume shall not exceed 47,089 gallons each.
A.III.J.(8)(s)	RO Permeate Tanks	MT-SWS-0101, MT-SWS-0201	RO permeate	Coated concrete containment basin	Two tanks are permitted for storage of RO permeate prior to use for makeup water. Volume shall not exceed 54,634 gallons each.

A.III.K. SURFACE IMPOUNDMENTS Not applicable

A.III.L. WASTE PILES Not applicable

A.III.M. LAND TREATMENT Not applicable

A.III.N. LANDFILLS POST CLOSURE REQUIREMENTS Not applicable

A.III.O. INCINERATORS/BIF Not applicable

A.III.P. RESERVED

A.III.Q. RESERVED

A.III.R. RESERVED

A.III.S. SPECIAL PROVISIONS FOR CLEANUP Not applicable

A.III.T. RESERVED

A.III.U. RESERVED

A.III.V. RESERVED

A.III.W. DRIP PADS Not applicable

A.III.X. MISCELLANEOUS UNITS

A.III.X.(1) Environmental Performance Standards

A.III.X.(1)(a) Destruction and Removal Efficiency

Facilities shall be operated and maintained to achieve a 99.9999 percent destruction or removal of each substance treated or destroyed, as required by condition A.III.A.(5)

[KRS 224.50-130(3), 401 KAR 39:090 Section 1 (40 CFR 264.601)]

A.III.X.(1)(b) Protection of Human Health and the Environment

Miscellaneous units shall be operated, maintained, and closed in a manner that shall ensure protection of human health and the environment.

[401 KAR 39:090 Section 1 (40 CFR 264.601)]

A.III.X.(1)(c) No Harmful Releases to Soil, Surface Water, or Groundwater

The Permittee shall prevent any releases from miscellaneous units that may have adverse effects on human health or the environment due to migration of waste constituents in surface water, or wetlands, or on the soil surface, pursuant to 40 CFR 264.601, as incorporated by 401 KAR 39:090, Section 1.

[401 KAR 39:090 Section 1 (40 CFR 264.601)]

A.III.X.(1)(d) No Harmful Releases to Atmosphere

The Permittee shall prevent any release from miscellaneous units that may have adverse effects on human health or the environment due to migration of waste constituents in the air.

[401 KAR 39:090 Section 1 (40 CFR 264.601)]

A.III.X.(2) Monitoring, Analysis and Inspection

A.III.X.(2)(a) Monitoring and Analysis

Monitoring, testing, analytical data, inspections, response, and reporting procedures and frequencies must ensure compliance with 401 KAR 39:090 Section 1, as well as meet any additional requirements needed to protect human health and the environment. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, shall be tested and maintained as necessary to assure its proper operation in time of emergency.

[401 KAR 39:090 Section 1 (40 CFR 264.602)]

A.III.X.(2)(b) Inspection

The Permittee shall inspect his facility for malfunctions and deterioration, operator errors, and discharges which may be causing—or may lead to—(1) release of hazardous waste constituents to the environment or (2) a threat to human health. The Permittee shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

a. The Permittee shall develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.
b. This schedule shall be kept at the facility.
c. The schedule shall identify the types of problems (for example: malfunctions or deterioration) which are to be looked for during the inspection (for example: inoperative sump pump, leaking fitting, eroding dike).
d. The frequency of inspection may vary for the items on the schedule. However, the frequency should be based on the rate of deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, shall be inspected daily when in use.

[401 KAR 39:090 Section 1 (40 CFR 264.602)]

A.III.X.(3) Closure

Closure shall be in accordance with the Attachment I, Closure Plan.

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart G)]

A.III.X.(4) Permitted Miscellaneous Units

The following miscellaneous units are permitted and shall be operated and maintained as described in the permit application and this permit, including Appendix F and the following table:

Condition No.	Permitted Miscellaneous Unit	Designation	Amount and types of waste	Secondary containment	Conditions
A.III.X.(4)(a)	Crimp Station	MJ-RWCS-0107, MJ-RWCS-0108	Approximately 51,700 rockets containing approximately 10.7 pounds of GB; approximately 17,700 rockets containing approximately 10.1 pounds of VX	Coated concrete floor with curb and sump.	Two units are permitted for containerizing and sealing warheads. The permitted capacity is 25 warheads per hour each line or 1,200 pounds per hour (warhead, residual agent, and canister total weight) for each line.
A.III.X.(4)(b)	Nose Closure Removal System (NCRS)	MY-NCR-0101	Approximately 12,816 projectiles containing approximately 6.0 pounds of VX each.	Coated concrete floor with curb and sump.	One unit is permitted to remove nose closure/lifting plugs from VX projectiles. The permitted capacity is 350 pounds per hour.
A.III.X.(4)(c)	Vertical Rocket Cutting Machines (VRCMs)	MJ-VRCM-0106 MJ-VRCM-0107 MJ-VRCM-0126 MJ-VRCM-0127	Approximately 51,700 rockets containing approximately 10.7 pounds of GB; approximately 17,700 rockets containing approximately 10.1 pounds of VX	Coated concrete floor with curb and sump.	Four vertical rocket cutting machines (two each per rocket line) are permitted for separating rocket motors from rocket warheads. The permitted capacity is up to 25 warheads per hour each line or 2,200 pounds per hour (includes rocket, agent, and SFT) for each line.
A.III.X.(4)(d)	Rocket Shear Machine (RSM)	MY-RHS-0101, MY-RHS-0102	Approximately 51,700 rocket warheads containing 10.7 pounds of GB. Approximately 17,740 rocket warheads containing 10.0 pounds of VX.	Coated concrete floor with curb and sump.	Two rocket shear machines are permitted for punching and draining the rocket warhead. The permitted capacity is 25 warheads per hour each line or 650 pounds per hour (includes warhead and agent) for each line.
A.III.X.(4)(e)	Metal Parts Treaters (MPT)	ME-MPT-0101, ME-MPT-0201	Drained munitions, secondary wastes.	Coated concrete floor with curb and sump.	Two metal parts treaters are permitted for thermal decontamination of metal parts and various secondary wastes. The permitted capacity is 8,000 pounds per hour per unit. Qualitative assessment of agent feed to the MPT shall be limited to the maximum estimated mass per projectile and per tray successfully demonstrated as agent free during the Permit Compliance Test. Higher estimated agent feed shall require re-demonstration of agent free items exiting the MPT and Division approval. All wastes treated in the Metal Parts Treater shall be treated to a minimum of 1,000 degrees Fahrenheit for a minimum of 15 minutes prior to discharge. All material and emissions exiting the MPT cooling chamber shall be monitored in accordance with the Metal Parts Treater Monitoring Plan. If there is a confirmed detection of agent the cooling chamber shall not be opened to the cooling conveyor corridor until further treatment and monitoring indicates agent is no longer present in the cooling chamber. **Only the VSL monitoring plan is approved for implementation; if dilution air needs to be used, a permit modification will be needed.** Any items treated in the MPT which will be released for unrestricted use, other than for scrap metal recycling, shall be headspace monitored to demonstrate that vapor concentrations do not exceed the screening level corresponding to the respective material classification level.
A.III.X.(4)(f)	Munitions Washout System (MWS)	MZ-MWS-0101A, MZ-MWS-0101B, MZ-MWS-0101C	Approximately 12,816 projectiles containing approximately 6.0 pounds of VX each.	Coated concrete floor with curb and sump.	Three munitions washout systems are permitted for accessing the projectile cavity and draining agent from the projectiles. The permitted capacity is 910 pounds per hour per unit. Any projectile containing energetic material shall be rejected and not processed through the Munitions Washout System.

Condition No.	Permitted Miscellaneous Unit	Designation	Amount and types of waste	Secondary containment	Conditions
A.III.X.(4)(g)	Reserved				
A.III.X.(4)(h)	Reverse Osmosis (RO) Units	ML-RO-0101, ML-RO-0201, ML-RO-0301	Three units are provided to treat 77,760 gallons per day each.	Coated concrete floor with curb and sump.	Three reverse osmosis units are permitted for removing dissolved solids from SCWO effluent and OTM condensate. The permitted capacity is 155,520 gallons per day.
A.III.X.(4)(i)	SCWO Reactors	MV-SCWO-1030, MV-SCWO-2030, MV-SCWO-3030	Each unit can treat 1,440 pounds per hour of filtered and blended hydrolysate.	Coated concrete floor with curb and sump.	Three SCWO reactors are permitted for treating hydrolysates by supercritical water oxidation. The permitted capacity is 1,440 pounds per hour per unit.
A.III.X.(4)(j)	Handling of chemical agent compounds and chemical munitions	N/A	Chemical agent GB contained in approximately 51,700 rockets and VX contained in approximately 17,700 rockets.	N/A	Chemical agent compounds shall be transported in EONCs, during daylight hours only. EONCs shall be operated and maintained to meet requirements for secondary containment. Air monitoring of the munitions within an EONC shall be conducted prior to opening the EONC to determine if any of the munitions leaked during transportation. If air monitoring detects agent within the EONC, the EONC shall not be opened unless it is within engineering controls.
A.III.X.(4)(k)	Drum Compactor	N/A	Maximum 3,575 Gallons Per Day	Coated concrete floor with curb and sump.	This unit is located in the Toxic Maintenance Area (TMA) and used for compaction of non-rigid material to reduce void spaces in containers.
A.III.X.(4)(l)	RNDE System	MJ-RNDE-0101	Nominal 25 rockets per hour per each examination unit.	Coated concrete floor with curb and sump.	This unit is located in Unpack Area 1 and optionally used for examination of rockets for liquid chemical agent in the interspaces between the SFT and the rocket (approximately 4,400 pounds for both examination units).

[KRS 224.50-130(5), 401 KAR 39:090 Section 1 (40 CFR 264 Subpart X)]

A.III.Y. RESERVED

A.III.Z. RESERVED

A.III.AA. AIR EMISSION STANDARDS FOR PROCESS VENTS

A.III.AA.(1) Applicability

Blue Grass Army Depot, through contract with the Bechtel Parsons Blue Grass Joint Venture, Operates several closed vent systems at the Main Plant Facility which are subject to requirements of 40 CFR Subpart AA as dictated by 40 CFR Subparts BB and CC.

[401 KAR 39:090 Section 1 (40 CFR 264 Subparts AA, BB, CC)]

A.III.AA.(2) Notification of New Units

Prior to installing or operating any new process vents, closed-vent systems, or control devices subject to 40 CFR Part 264 Subpart AA, or modifying any existing equipment, procedure, or process such that the process vents, closed-vent systems, or control devices will become subject to 40 CFR Part 264 Subpart AA, the Permittee shall notify the Director and apply for a permit modification.

[401 KAR 39:060 Section 5, 401 KAR 39:120]

A.III.AA.(3) Main Plant Facility – Standards for Pressure Relief Devices in Gas/Vapor Service

Pressure safety valves (PSVs) and pressure safety elements (PSEs) in gas/vapor service within the Munitions Demilitarization Building (MDB) that have the potential to contact hazardous waste gas/vapor streams greater than or equal to 10 percent by weight (wt.%) organics in both the Chemical Agent GB and Chemical Agent VX campaigns are located within an area serviced by the MDB HVAC System, which serves as a closed-vent system capable of capturing and transporting leakage from the pressure relief devices to a control device as described in 40 CFR 264.1060; therefore, these are exempted from monitoring requirements per 40 CFR 264.1054(c). The closed-vent system (MDB HVAC System) and control device (MDB HVAC System activated carbon) shall comply with the requirements of 40 CFR 264.1033 as specified in the Main Plant LDAR Program.

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart BB)]

A.III.AA.(4) Main Plant Facility – Standards for Closed Vent Systems and Control Devices

A.III.AA.(4)(a)

Main Plant closed-vent systems and control devices subject to the requirements of 40 CFR 264.1033, as specified in the Main Plant Leak Detection and Reporting (LDAR) Program:

- MDB HVAC System and associated activated carbon units
- OTM System and the associated Thermal Oxidizer Units

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart CC)]

A.III.AA.(4)(b)

The MDB HVAC System activated carbon effluent shall be monitored for breakthrough of Chemical Agent GB during the GB campaign and for Chemical Agent VX during the VX campaign by MINICAMS units. Confirmed Chemical Agent levels that are greater than or equal to 1 VSL for GB or VX shall be the alternative monitoring criteria used to determine organic breakthrough requiring change out of the MDB HVAC System activated carbon.

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart CC)]

A.III.AA.(4)(c)

The APR vent activated carbon shall be monitored daily using a total hydrocarbon (THC) analyzer installed with the adsorption units. Instrument readings greater than 20 ppmv shall result in carbon changeout.

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart CC)]

A.III.AA.(4)(d)

The SCWO Building HVAC System activated carbon shall be monitored weekly using EPA Method 21 (Determination of Volatile Organic Compound Leaks) to determine breakthrough of volatile organics. Monitoring shall be performed daily whenever results are greater than the instrument detection limit until instrument readings are greater than or equal to 300 parts per million (ppmv), at which point the activated carbon shall be changed.

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart CC)]

A.III.AA.(4)(e)

The TOX control devices shall have a continuous temperature monitor that shall have an accuracy of ±1 percent of the temperature being monitored in °C or ±0.5 °C, whichever is greater, installed at a location in the combustion chamber downstream of the combustion zone, and shall have readings inspected at least once each operating day to check for control device operation. Operating temperatures will be equivalent to (no less than) 100 °C below the temperatures demonstrated to provide at least 95% organic removal using performance tests as specified in 40 CFR 264.1087(c)(5)(iii).

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart BB and Subpart CC)]

A.III.AA.(5) Test Methods and Procedures

The Permittee shall comply with the test methods and procedures of 40 CFR 264.1034 for all process vents, closed-vent systems, and control devices subject to 40 C.F.R. Part 264 – Subpart AA.

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart AA)]

A.III.AA.(6) Record Keeping Requirements

A.III.AA.(6)(a)

Records demonstrating compliance with 40 CFR 264 Subpart AA shall be maintained at the Facility for no less than three (3) years. Records shall contain, at a minimum, those requirements listed in 40 CFR 264.1035 and in this permit.

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart AA)]

A.III.AA.(6)(b)

Records shall contain, at a minimum:

(i) The current list of process vents, closed vent systems and control devices, as well as their physical locations at the Facility (by map or P&ID);
(ii) All associated engineering calculations, waste determinations, design analysis, operating information, specifications, drawings, schematics, P&IDs and standards for each process vent, closed-vent system, or control device;
(iii) All maintenance, inspection, monitoring, leak detection, repair, and delay of repair records associated with each process vent, closed-vent system, or control device; and
(iv) Training documentation for persons conducting inspections or monitoring.

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart AA)]

A.III.AA.(6)(c)

Records for components which are designated as unsafe to monitor shall be kept available at the Facility available for inspection and must demonstrate compliance with 40 CFR 264.1033(o) and 264.1035(c)

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart AA)]

A.III.AA.(7) Reporting Requirements

A semiannual report, to be submitted by January 31 and July 31 of each calendar year, shall be submitted to the Director documenting all information required by 40 CFR 264.1036. A copy of this report shall be maintained at the Facility in the operating record.

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart AA)]

A.III.BB. AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

A.III.BB.(1) Applicability

Blue Grass Army Depot, operates equipment at the Main Plant Facility which is subject to requirements of 40 CFR Subpart BB, which applies to equipment that contacts hazardous wastes with organic concentrations of at least 10% by weight.

The requirements of 40 CFR Subpart BB are applicable to all Main Plant Facility equipment identified in Appendix B of this Permit. Each piece of equipment is uniquely tagged for compliance with the requirements of this Permit and compliance with the Permitee's approved LDAR Program.

[401 KAR 39:090 Section 1 (40 CFR 264 Subpart BB)]

A.III.BB.(2) Notifications of Modifications, Additions, and New Units

Prior to installing or operating any new equipment which contacts hazardous waste containing or contacting hazardous waste with organic content of at least 10 percent by weight or modifying any existing equipment, or operation thereof, such that it will otherwise become subject to 40 CFR Part 264 Subpart BB, the Permittee shall notify the Director and apply for a permit modification.

[401 KAR 39:060 Section 5, 401 KAR 39:120]

A.III.BB.(3) Marking and Tagging Equipment

A.III.BB.(3)(a) Equipment Identification List

Equipment approved under this permit section are listed in Appendix B.

[401 KAR 39:090 Section 1 (40 CFR 264.1050(d) and 264.1064(b))]

A.III.BB.(3)(b) Equipment Tagging

The Permittee shall ensure that all subject equipment is uniquely marked and tagged for the specific purposes of tracking, monitoring, inspecting, and repairing each piece of equipment. Flanges and similar connectors only require tagging and marking to identify leaks and potential leaks. The tags must meet the following requirements:

- Tags display the identifier used on the Equipment Identification list and P&IDs
- Tags must be of a permanent nature,
- Tags must be constructed of or coated in a material that is not degraded by the hazardous waste streams, weather, or UV light.

- Tags must be regularly maintained to ensure it is clearly visible at all times of operation.

[401 KAR 39:090 Section 1 (40 CFR 264.1050(d) and 264.1064(c))]

A.III.BB.(4) Excluded and Exempt Equipment

Table A.1 below contains a list of equipment exempt from regulation under Subpart BB. In the event the equipment in Table A.1 no longer qualifies for the exemption the Permitee shall immediately notify the Director and amend the Equipment Identification List, and comply with all applicable provisions of 40 CFR 264 Subpart BB.

[401 KAR 39:090 Section 1 (40 CFR 264.1050(d) and 264.1064(c))]

Table A.1: Equipment Excluded from or Exempt from Monitoring
40 CFR Part 264 – Subpart BB

Systems Exempt from Subpart BB Monitoring	**Brief Description**	**Exemption or Exclusion Claimed**
Pressure Relief Devices in Gas/Vapor Service	MDB Control Vents from ACS tanks and MPT systems	Exempt from Monitoring per 40 CFR. 264.1054(c)
Valves in Gas/Vapor Service	MWS, RHS, and OTM common systems in MDB	Exempt from Monitoring per 40 CFR. 264.1057(g)
Flanges and Other Connectors on Insulated Lines	Process lines associated with MDB, HSA, and SCWO building systems	Exempt from Monitoring per 40 CFR. 264.1058(e)
Systems Excluded from Subpart BB	**Brief Description**	**Exclusion Claimed**
All Subpart BB Regulated Systems	Plant Air System	Does Not Contact Hazardous Wastes – Excluded per 40 CFR 264.1050(b)
	Plant Nitrogen System	
	Plant, Process, and Other Water Systems (Includes Boiler, Steam, Chiller, and Cooling Water)	
	Chemical Storage and Delivery Systems -Isopropyl Alcohol -Sodium Hydroxide -Sulfuric Acid -Hydrochloric Acid -Ammonium Sulfate -Sodium Chloride	
All Subpart BB Regulated Systems	ANS Vents (ANR Tank Vents and AHS Tank Vents)	Contains or Contacts <10 wt.% Organic Concentrations – Excluded per 40 CFR 264.1050(b)
	SDS Tank Vents	
All Subpart BB Regulated Systems	Energetics Hydrolysate HSA Tank Systems containing OTM Condensate and SDS	Contains or Contacts <10 wt.% Organic Concentrations – Excluded per 40 CFR 264.1050(b)

A.III.BB.(5) Equipment Standards

A.III.BB.(5)(a) Pressure Relief Devices in Gas/Vapor Service

(i) Pressure relief devices must be installed, operated, maintained and monitored in compliance with 40 CFR 264.1054. The P&IDs, provided in Attachment D of this permit, list pressure relief device settings, tank design pressure, and set point on all vents.

(ii) Subpart BB applies to the Main Plant pressure relief devices in the MDB, ACS, and MPT systems identified in Appendix B of this Permit. Pursuant to 40 CFR 264.1054(c), the ACS and MPT pressure relief devices in gas/vapor service are exempt from the requirements of 40 CFR 264.1054(a) and (b) as long as the MDB HVAC System and MDB HVAC System activated carbon, which serve as the closed-vent system and control device for these pressure relief devices, are operating as required by Condition A.III.AA.(3) of this Permit.

[401 KAR 39:090 Section 1 (40 CFR 264.1054)]

A.III.BB.(5)(b) Sampling Connection Systems

Subpart BB applies to the Main Plant sampling connection systems in the MDB, ACS, SDS, and ANS systems, and the HSA tank systems identified in Appendix B of this Permit. Each sampling system shall meet the requirements of 40 CFR 264.1055.

[401 KAR 39:090 Section 1 (40 CFR 264.1055)]

A.III.BB.(5)(c) Open Ended Valves or Lines

Open-ended valves or lines in the Main Plant MDB, MWS, RHS, ACS, SDS, ANS, MPT, OTM common system, and HSA tank systems subject to regulation under 40 CFR 264 Subpart BB are identified in Appendix B of this Permit. Each open-ended valve or line shall meet the requirements of 40 CFR 264.1056.

[401 KAR 39:090 Section 1 (40 CFR 264.1056)]

A.III.BB.(5)(d) Valves in Gas/Vapor Service or in Light Liquid Service

(i) Valves in gas/vapor service in the Main Plant MWS, RHS, and OTM common system subject to regulation under 40 CFR 264 Subpart BB are identified in Appendix B of this Permit. These valves will be unsafe-to-monitor while the Main Plant is in operation and are therefore exempt from monitoring in accordance with 40 CFR 264.1057(g); however, the Permittee must adhere to a written plan that requires monitoring under 40 CFR 264.1057(a) as frequently as practicable during safe-to-monitor times.

(ii) Repairs to equipment listed in Appendix B shall comply with the requirements of 40 CFR 264.1057, as applicable.

[401 KAR 39:090 Section 1 (40 CFR 264.1057)]

A.III.BB.(5)(e) Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors

(i) Pumps, valves, and pressure relief devices in heavy liquid service and flanges and other connectors in the Main Plant MDB MWS, RHS, ACS, SDS, and ANS systems and agent hydrolysate HSA tank system subject to regulation under the requirements of 40 CF 264 Subpart BB are identified in Appendix B of this Permit.

(ii) In areas containing Chemical Agent within the MDB, monitoring of the equipment identified in Appendix B shall be performed as described in the Main Plant LDAR Program and the alternative monitoring plan described in Appendix D of this Permit in order to prevent

unnecessary exposure of personnel to Chemical Agent; the plan shall include the use of CCTV for inspection to visually identify leaks and Near Real Time air monitoring MINICAMS® devices to identify elevated Chemical Agent GB or VX levels potentially due to equipment leaks.

Pumps, valves, and pressure relief devices in heavy liquid service and flanges and other connectors identified in Appendix B not in Chemical Agent processing areas shall be visually or otherwise monitored for leaks as required by 40 CFR 264.1058.

(iii) Flanges and other connectors identified in Appendix B of this Permit that are on insulated lines or tanks are exempt from the monitoring and recordkeeping requirements per 40 CFR 264.1058(e)

(iv) If a leak or potential leak is found during an inspection, the leak or potential leak shall be noted on the inspection record, be tagged in accordance with 40 CFR 264.1064(c), and a "Leak Detection and Repair Record" shall be completed. The repair shall be completed in compliance with, and within the timeframes required by, 40 CFR 264.1058.

[401 KAR 39:090 Section 1 (40 CFR 264.1058)]

A.III.BB.(6) Delay of Repair

Delays of repair shall be in accordance with the requirements of 40 CFR 264.1059. A written description of the circumstances associated with the delay of repair addressing the requirements of 40 CFR 264.1059 shall be maintained in the Facility's operating record.

[401 KAR 39:090 Section 1 (40 CFR 264.1059)]

A.III.BB.(7) Closed Vent Systems and Control Devices

Closed-vent systems and control devices subject to Subpart BB requirements shall comply with 40 CFR 264.1033 and Condition A.III.AA.(3) of this Permit.

[401 KAR 39:090 Section 1 (40 CFR 264.1060)]

A.III.BB.(8) Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Percentage of Valves Allowed to Leak

No alternative standards specifying the percentage of valves in gas/vapor service or in light liquid allowed to leak in Main Plant shall be used.

[401 KAR 39:090 Section 1 (40 CFR 264.1061)]

A.III.BB.(9) Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Skip Period Leak Detection and Repair

Extended skip periods for leak detection and repair for the Main Plant valves in gas/vapor service or in light liquid service shall be used in accordance with 40 CFR 264.1062.

[401 KAR 39:090 Section 1 (40 CFR 264.1062)]

A.III.BB.(10) Test Methods and Procedures

(a) The Permittee shall comply with the test methods and procedures identified in Attachment L of this Permit, and 40 CFR 264.1063.
(b) The Permittee shall comply with the test methods and procedures of 40 CFR 264.1063 and the Main Plant LDAR Program, for all equipment subject to 40 CFR 264 – Subpart BB.

(c) All testing, monitoring and confirmatory sampling must be conducted by persons trained in the proper implementation of the test methods and procedures required by 40 CFR 264.1063, including, but not limited to, Reference Method 21.

[401 KAR 39:090 Section 1 (40 CFR 264.1063)]

A.III.BB.(11) Record Keeping

(a) Records demonstrating compliance with 40 CFR 264 Subpart BB shall be maintained, accessible at the Facility, for a period of not less than three (3) years. All records necessary for demonstrating compliance shall include, at a minimum, the required recordkeeping information in 40 CFR 264.1064 and this Permit.

(b) These records shall include, but are not limited to: (1) the current list of regulated equipment and its physical location at the Facility, as illustrated on a Facility map and P&ID; (2) a running log of time, by calendar year, each piece of equipment used to manage hazardous waste with organic concentrations of at least ten (10) percent by weight; (3) all associated operating information, specifications, and standards for each unique piece of equipment; (4) all maintenance, inspection, leak detection, repair, and delay of repair records associated with each unique piece of equipment; and (5) training documentation for persons conducting inspections or monitoring

(c) Records justifying valves in light liquid service designated as difficult or unsafe to monitor shall comply with 40 CFR 264.1057(g) and (h), be kept at the Facility or other appropriate location approved by the Director, be available for inspection at reasonable times, and demonstrate compliance with the requirements of 40 CFR 264.1064(h)

(d) If the Permittee elects to comply with an equivalent recordkeeping system pursuant to 40 CFR 264.1064(m), the Permittee shall provide thirty (30) calendar days' advance notice to the Director outlining the specific equipment and the applicable provisions of 40 CFR Parts 60, 61, or 63 with which the equipment must comply.

[401 KAR 39:090 Section 1 (40 CFR 264.1064)]

A.III.BB.(12) Reporting Requirements

In accordance with 40 CFR 264.1065, the Permittee shall prepare and submit a report semiannually, due on January 31st and July 31st of each calendar year, to the Director documenting all information required by 40 CFR 264.1065 for each month during that semiannual reporting period. A copy of the report shall be kept in the Facility's Operating Record

[401 KAR 39:090 Section 1 (40 CFR 264.1065)]

A.III.CC. AIR EMISSION STANDARDS FOR TANKS, SURFACE IMPOUNDMENTS, CONTAINERS

A.III.CC.(1) Applicability

Blue Grass Army Depot operates hazardous waste management units at the Main Plant Facility which are subject to requirements of 40 CFR Subpart CC, which applies to equipment that contacts hazardous wastes with organic concentrations of 500 parts per million by weight (ppmw) or more.

[401 KAR 39:090 Section 1 (40 CFR 264.1080 and 264.1082)]

A.III.CC.(2) Notification of Modifications, Additions, or New Units

Prior to installing or operating any new tanks, containers, surface impoundments, or associated control device systems subject to 40 CFR 264 Subpart CC existing equipment, and operation thereof, such that it will otherwise become subject to 40 CFR Part 264 Subpart CC, the Permittee shall notify the Director

and apply for a permit modification.

[401 KAR 39:060 Section 5 (401 KAR 39:120)]

A.III.CC.(3) Excluded Units

(a) Appendix C-1 contain lists of excluded units for Main Plant.

(b) The following containers stored in the Main Plant have a design of less than 0.1 m^3 and are excluded from regulation under Subpart CC

(i) Containers in Appendix C-1 of this Permit with capacity less than 26.4 gallons (0.1 m^3).

(ii) Projectiles (M426) containing approximately 1.6 gallons (0.0061 m^3) of Chemical Agent GB

(iii) Projectiles (M121A1) containing approximately 0.7 gallons (0.0026 m^3) of Chemical Agent VX.

(iv) Rockets and rocket warheads containing approximately 1.2 gallons (0.0045 m^3) of Chemical Agent VX or Chemical Agent GB, 3.2 pounds (lbs.) of energetics, and 19.3 lbs. of propellant (with a total volume capacity of approximately 0.021 m^3).

(v) Overpack containers designed to hold single leaking projectiles or leaking rockets.

(vi) Enhanced On-Site Containers (EONCs) used only for secondary containment of projectiles, rockets, overpacked projectiles, and overpacked rockets during transport or storage.

(c) Should conditions change such that the Permittee is no longer able to claim the exclusions or exemptions identified in Appendix C-1, the Permittee shall immediately notify the Director and shall comply with the requirements of 40 CFR 264 – Subpart CC.

A.III.CC.(4) Waste Determinations

The Permittee must follow the waste determination procedures of 40 CFR 264.1083 and the most current approved Waste Analysis Plan for each facility.

A.III.CC.(5) Equipment Standards

A.III.CC.(5)(a) General

The Permittee shall control air pollutant emissions associated with the containers, tanks, and miscellaneous units in accordance with the standards specified in 40 CFR 264.1086 (containers), 264.1084 (tanks), and 264.1087 (closed-vent systems and control devices). See Appendix C-2 for a listing of the Main Plant waste management units subject to Subpart CC.

A.III.CC.(5)(b) Tanks / Miscellaneous Units

(i) The tanks listed in Appendix C-2 must comply with the standards set forth in 40 CFR 264.1084. These tanks shall provide a continuous barrier around the waste to be treated and shall be vented to a Level 2 control device of activated carbon or thermal oxidizer. Any tank openings not vented to a Level 2 control device shall be equipped with a closure device designed to operate with no detectable emissions.

(ii) The Subpart X miscellaneous units listed in Appendix C-2 must comply with the standards set forth in 40 CFR 264.1084 and shall be vented to a Level 2 control device of activated carbon or thermal oxidizer.

[401 KAR 39:090 Section 1 (40 CFR 264.1084)]

A.III.CC.(5)(c) Containers

Containers in permitted container storage areas (see Appendix C-2) having a design capacity greater than 26.4 gallons (0.1 m^3) managing hazardous waste with an organic concentration of more than 500 ppmw must comply with the standards set forth in 40 CFR 264.1086.

[401 KAR 39:090 Section 1 (40 CFR 264.1086)]

A.III.CC.(5)(d) Closed Vent Systems and Control Devices

Closed-vent systems shall route gases and vapors from tanks and Subpart X miscellaneous units to either the thermal oxidizer (TOX) units or activated carbon control devices. The closed-vent systems shall be designed to operate with no detectable emissions. The closed-vent systems shall not contain bypass devices that divert gas or vapor to the atmosphere before entering the control devices. The TOX control devices shall meet the requirements of 40 CFR 264.1087 and the requirements specified in Condition A.III.AA.(4). Performance testing of the TOX and associated OTM system shall be conducted according to emission testing requirements specified in the Facility's Title V Permit No. V-16-019 and this permit.

[401 KAR 39:090 Section 1 (40 CFR 264.1087)]

A.III.CC.(6) Inspection and Monitoring Requirements

The closed-vent systems and TOX/OTM and activated carbon control devices shall be inspected and monitored to ensure no detectable emissions in accordance with 40 CFR 264.1088. Some of the waste management units and the control devices are considered unsafe-to-monitor due to Chemical Agent exposure and operating hazards of entry into the area during operation, and alternate monitoring and inspection methods shall be used in accordance with 40 CFR 264.1084(l) for these units. Alternative monitoring and inspections shall be performed in accordance with the alternate monitoring methods set forth in Appendix D.

[401 KAR 39:090 Section 1 (40 CFR 264.1084)]

A.III.CC.(7) Record Keeping Requirements

(a) Records demonstrating compliance with 40 CFR 264 Subpart CC, including any third party's records, shall be maintained, accessible at the Facility for a period of not less than three (3) years. All records necessary for demonstrating compliance shall include, at a minimum, the required recordkeeping information in 40 CFR 264.1089 and this Permit.

(b) These records shall include but are not limited to the :(1) current list of regulated hazardous waste management units and their unique identification number, covers, closure and control devices and their physical location at the Facility as illustrated on a P&ID and/or Facility Map; (2) all associated operating information, specifications, and standards for each hazardous waste management unit; (3) annual waste determinations; (4) all maintenance, inspection, leak detection and repair records associated with each hazardous waste management unit; and (5) training documentation for persons conducting inspections or monitoring.

(c) Records justifying covers designated as unsafe to inspect or monitor shall comply with 40 CFR 264.1084(l) or 264.1085(g), be kept at the Facility or other appropriate location approved by the Director, be available for inspection at reasonable times, and demonstrate compliance with the requirements of 40 CFR 264.1089(g).

[401 KAR 39:090 Section 1 (40 CFR 264.1089)]

A.III.CC.(8) Reporting Requirements

(a) In accordance with 40 CFR 264.1090(a) and (b), the Permittee shall prepare and submit a report within fifteen (15) calendar days to the Director documenting each occurrence of noncompliance.

(b) In accordance with 40 CFR 264.1090(c), the Permittee shall submit a report semiannually to the Director documenting, for control devices operating in accordance with 40 CFR 264.1087, each instance where the control device could not be returned to compliance within twenty-four (24) hours and the actions taken to correct the noncompliance.

(c) The semiannual report shall be submitted by January 31st and July 31st of each calendar year.

[401 KAR 39:090 Section 1 (40 CFR 264.1090)]

A.III.DD. CONTAINMENT BUILDINGS Not applicable

A.III.EE. HAZARDOUS WASTE MUNITIONS AND EXPLOSIVES STORAGE Not applicable

PART IV
CORRECTIVE ACTION FOR SWMUs AND AOCs

See Entire Facility Section

PART V
REFERENCED ATTACHMENTS

A.V.A. Attachment A, Part A

The most recently approved, or submitted in the case of Class 1 modifications not requiring approval, Part A of the Main Plant Permit is incorporated as Attachment A of this permit.

A.V.B. Attachment B, Facility Description

Part B of Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Treatment of VX Munitions dated July 7, 2020, is incorporated as Attachment B of this permit.

A.V.C. Attachment C, Waste Analysis Plan

Part C of Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Treatment of VX Munitions dated July 7, 2020, is incorporated as Attachment C of this permit.

A.V.D. Attachment D, Process Information

Part D of Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Treatment of VX Munitions dated July 7, 2020, is incorporated as Attachment D of this permit.

A.V.E. RESERVED

A.V.F. Attachment F, Procedures to Prevent Hazards

Part F of Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Treatment of VX Munitions dated July 7, 2020, is incorporated as Attachment F of this permit.

A.V.G. Attachment G, Contingency Plan

1. Part G of Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Treatment of VX Munitions dated July 7, 2020, is incorporated as Attachment G-1 of this permit.

2. The Chemical Accident or Incident Response and Assistance (CAIRA) Plan is incorporated as Attachment G-2 of this permit.

A.V.H. Attachment H, Personnel Training

Part H of Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Treatment of VX Munitions dated July 7, 2020, is incorporated as Attachment H of this permit.

A.V.I. Attachment I, Closure Plan

Part I of Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Treatment of VX Munitions dated July 7, 2020, is incorporated as Attachment I of this permit.

A.V.J. Attachment J, Other Federal Laws

Part J of Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Treatment of VX Munitions dated July 7, 2020, is incorporated as Attachment J of this permit.

A.V.K. Attachment K, Waste Minimization

The Waste Minimization Plan dated February 4, 2020, is incorporated as Attachment K of this permit.

A.V.L. Attachment L, Signatures

Signatures in the permit modifications listed in Condition A.I.B. are incorporated as Attachment L of this permit.

A.V.M. Attachment M, Multi-Pathway Human Health Risk Assessment (MPHHRA) Report for Blue Grass Chemical Agent – Destruction Pilot Plant

The Human Health Risk Assessment Report for the Bluegrass Chemical Agent-Destruction Pilot Plant dated September 2019, the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) GB Hydrolysate Transportation Risk Assessment, dated February 2021, and the Blue Grass Chemical Agent-Destruction Pilot Plant (BGCAPP) VX Hydrolysate Transportation Risk Assessment, dated February 2021 are incorporated as Attachment M of this permit.

A.V.N. Attachment N, Organic Air Requirements

Part L, "Organic Air Emissions" and Appendix L of the October 12, 2017 Application Class 3 Hazardous Waste Storage & Treatment Permit Modification Request, Addition of Blue Grass Chemical Agent-Destruction Pilot Plant - Main Plant Organic Air Emissions - 24915-00-GPE-GGPT-00195 are incorporated as Attachment N of this permit.

A.V.O. Attachment O, Laboratory Analysis and Monitoring Plan; Perimeter Monitoring Plan

The Laboratory Analysis and Monitoring Plan, Rev. 7, dated May 11, 2021, and the Perimeter Monitoring Plan dated July 5, 2016 are incorporated as Attachment O of this permit.

A.V.P. RESERVED

A.V.Q. Attachment Q, Pilot Test Demonstration Plan

The Pilot Test Demonstration Plan, Volume IV, Rev. 1, Chg. 0 dated May 24, 2021 is incorporated as Attachment Q of this permit.

A.V.R. Attachment R, Metal Parts Treater Monitoring Plan

The Metal Parts Treater Monitoring Plan, Rev. 1, Chg. 1, dated April 24, 2019 is incorporated as Attachment R of this permit.

PART VI

WASTE MINIMIZATION

A.VI.A. PROGRAM

The Permittee shall implement a program to reduce the volume and toxicity of hazardous waste in accordance with the Waste Minimization Plan, Attachment K, and applicable regulations.

[40 CFR 262.27]

APPENDIX A. COMPLIANCE SCHEDULE

1. Reserved
2. Submit to the Division, **PE Stamped Drawings**

   Completed.
3. Reserved
4. Reserved
5. Reserved
6. Reserved
7. Submit to the Division, a revised **Closure Plan**.
   a. The Closure Plan shall identify steps necessary to perform partial and final closure of the facility at any point during its active life. The Closure Plan shall comply with 401 KAR 39:090 Section 1 and 40 CFR 264 Subpart G.
   b. Submit no later than 180 days prior to closure
   c. Approval required prior to beginning closure activities
8. Reserved
9. Reserved
10. Submit to the Division, the **Secondary Waste Disposal Certification**.

    Completed.

APPENDIX B. EQUIPMENT SUBJECT TO RCRA ORGANIC AIR EMISSIONS STANDARDS UNDER SUBPART BB

SUMMARY OF EQUIPMENT SUBJECT TO RCRA SUBPART BB REQUIREMENTS Main Plant Blue Grass Chemical Agent-Destruction Pilot Plant EPA I.D. No. KY8-213-820-105	
Subpart BB Equipment	Equipment List
Pressure Relief Devices in Gas/Vapor Service	See Table L-6 in Appendix L-4 of Attachment N
Sampling Connection Systems	See Table L-7 in Appendix L-4 of Attachment N
Open-Ended Valves or Lines	See Table L-8, Table L-10, Table L-12, and Table-13 in Appendix L-4 of Attachment N
Valves in Gas/Vapor Service or in Light Liquid Service	See Table L-8 in Appendix L-4 of Attachment N
Pumps in Heavy Liquid Service	See Table L-9 in Appendix L-4 of Attachment N
Valves in Heavy Liquid Service	See Table L-10 in Appendix L-4 of Attachment N
Pressure Relief Devices in Light Liquid or Heavy Liquid Service	See Table L-11 in Appendix L-4 of Attachment N
Flanges and Other Connectors	See Table L-12 and Table L-13 in Appendix L-4 of Attachment N

APPENDIX C. EQUIPMENT SUBJECT TO RCRA ORGANIC AIR EMISSIONS STANDARDS UNDER SUBPART CC

APPENDIX C-1: MAIN PLANT RCRA SUBPART CC EXEMPTED OR EXCLUDED UNITS

Unit Identification	Unit Type	Design Capacity	Subpart CC Exclusion or Exemption
MPT Cooling Conveyor Storage Area	• Containers	Various	Exempted per 40 CFR 264.1082(c)(1)
Crimp Station • MJ-RWCS-0107 • MJ-RWCS-0108	• Containers	<0.1 m^3	Not applicable per 40 CFR 264.1080(b)(2); Excluded due to capacity
Main Plant Container Storage Areas	Containers storing AFS filter cake, treated metal for recycling, and other treated solid secondary wastes	various	Treated to contain <500 ppmw VOs; Exempted per 40 CFR 264.1082(c)(2)
Waste Transfer Station (WTS) Storage Area	Tanker	Various (typical 5,000 gallons)	Receives only wastes treated that meet VO destruction and removal requirements; Exempted per 40 CFR 264.1082(c)(2)
OTM Off-Gas Treatment Units	Tanks, Containers, Miscellaneous Units	Various	Receives Effluent from TOX control device which provides >95% organics destruction; Exempted per 40 CFR 264.1082(c)(2)
Energetics Hydrolysate HSA Tanks • MT-HSS-0604 • MT-HSS-0704	Subpart J Tank Unit	316,192 gallons each	Receives only wastes treated that meet VO destruction and removal requirements. Exempted per 40 C.F.R. §264.1082(c)(2)
• SCWO Tanks and Miscellaneous Units	• SCWO Effluent Tanks – MT-SCWO-0101, MT-SCWO-0201, and MT-SCWO-0301 • Reverse Osmosis (RO) Unit – ML-RO-0101, ML-RO-0201, and ML-RO-0301 • RO Reject Tanks – MT-RO-0106 and MT-RO-0206 • RO Permeate Tanks – MT-SWS-0101 and MT-SWS-0201 • RO Multimedia Filters – MK-RO-0101A, MK-RO-0101B, MK-RO-0101C, MK-RO-0101D, MK-RO-0101E, MK-RO-0101F	Various	Receives only wastes treated that meet VO destruction and removal requirements; Exempted per 40 C.F.R. §264.1082(c)(2)
Main Plant Container Storage Areas	• Containers	<0.1 m^3	Not applicable per 40 CFR 264.1080(b)(2);

			Excluded due to capacity
RNDE System	• Containers	<0.1 m^3	Not applicable per 40 CFR 264.1080(b)(2); Excluded due to capacity

APPENDIX C-2. MAIN PLANT UNITS SUBJECT TO SUBPART CC

Unit Identification	Unit Type	Design Capacity	Subpart CC Applicability
Waste Transfer Station (WTS)	Subpart I Container Storage	176,500 gallons	40 CFR 264.1086
Agent Neutralization System (ANS) Storage Area	Subpart I Container Storage	2,750 gallons	40 CFR 264.1086
Tray/Container Transfer Room	Subpart I Container Storage	1,300 gallons	40 CFR 264.1086
Toxic Maintenance Area (TMA) Storage Area	Subpart I Container Storage	5,500 gallons	40 CFR 264.1086
Explosive Containment Vestibule (ECV) Storage Area, ECV-1	Subpart I Container Storage	275 gallons	40 CFR 264.1086
Explosive Containment Vestibule (ECV) Storage Area, ECV-2	Subpart I Container Storage	275 gallons	40 CFR 264.1086
Explosive Containment Room (ECR) Storage Area No. 1, ECR-1	Subpart I Container Storage	70 gallons	40 CFR 264.1086
Explosive Containment Room (ECR) Storage Area No. 2, ECR-2	Subpart I Container Storage	70 gallons	40 CFR 264.1086
Munitions Washout System Room	Subpart I Container Storage	2,755 gallons	40 CFR 264.1086
EBH Room	Subpart I Container Storage	1,000 gallons	40 CFR 264.1086
TMA Equipment Room	Subpart I Container Storage	1,100 gallons	40 CFR 264.1086
UPA Equipment Room	Subpart I Container Storage	1,100 gallons	40 CFR 264.1086
Off-Gas Treatment System – Energetics (OTE)	Subpart I Container Storage	2,750 gallons	40 CFR 264.1086
Off-Gas Treatment System for the Metal Parts Treater (OTM)	Subpart I Container Storage	2,750 gallons	40 CFR 264.1086
SCWO Building Storage Area	Subpart I Container Storage	8,550 gallons	40 CFR 264.1086
Container Storage Facility	Subpart I Container Storage	49,280 gallons	40 CFR 264.1086
Agent Collection System (ACS) Tanks • Agent Holding Tank – MT-ACS-0105 • Agent Surge Tank – MT-ACS-0106	Subpart J Tank Unit	1,856 gallons each	40 CFR 264.1084
Spent Decontamination System (SDS) Tanks • MV-SDS-0101 • MV-SDS-0201 • MV-SDS-0301	Subpart J Tank Unit	9,769 gallons each	40 CFR 264.1084
Agent Neutralization Reactors (ANR) Tanks • MV-ANS-0101 • MV-ANS-0201	Subpart J Tank Unit	2,251 gallons each	40 CFR 264.1084
Agent Hydrolysate Sampling (AHS) Tanks • MT-ANS-0103 • MT-ANS-0203 • MT-ANS-0303	Subpart J Tank Unit	5,865 gallons each	40 CFR 264.1084
Agent Hydrolysate HSA Tanks • MT-HSS-0104 (VX only) • MT-HSS-0105 (VX or GB) • MT-HSS-0205 (GB only)	Subpart J Tank Unit	103,195 gallons - MT-HSS-0104 (VX only) 336,943 gallons each - MT-HSS-0105 (VX or GB) and MT-HSS-0205 (GB only)	40 CFR 264.1084
Munitions Washout System (MWS) Miscellaneous Units: • MZ-MWS-0101A	Subpart X Miscellaneous Unit	Fifteen (15) M426 Projectiles or Twenty six (26) M121A1 Projectiles per hour	40 CFR 264.1084 (per 40 CFR 264.601)

Unit Identification	Unit Type	Design Capacity	Subpart CC Applicability
• MZ-MWS-0101B • MZ-MWS-0101C • MZ-MWS-0101D • MZ-MWS-0101E			
Rocket Handling System (RHS) Miscellaneous Units (nonleakers): • Rocket Shear Machine (RSM) – MY-RHS-0101 • Rocket Shear Machine (RSM) – MY-RHS-0102	Subpart X Miscellaneous Unit	Twenty-five (25) M55 Rockets per hour per line	40 CFR 264.1084 (per 40 CFR 264.601)
Rocket Handling System (RHS) Miscellaneous Units (leakers) • Rocket Shear Machine (RSM) – MY-RHS-0101 • Rocket Shear Machine (RSM) – MY-RHS-0102	Subpart X Miscellaneous Unit	Twenty-five (25) M55 Rockets per hour per line	40 CFR 264.1084 (per 40 CFR 264.601)
Vertical Rocket Cutting Machines (VRCMs) • MJ-VRCM-0106 • MJ-VRCM-0107 • MJ-VRCM-0126 • MJ-VRCM-0127	Subpart X Miscellaneous Unit	Twenty-five (25) M55 Rockets per hour per line	40 CFR 264.1084 (per 40 CFR 264.601)
Metal Parts Treaters • ME-MPT-0101 • ME-MPT-0201	Subpart X Miscellaneous Unit	8,000 pounds per hour each	40 CFR 264.1084 (per 40 CFR 264.601)

APPENDIX D. ALTERNATIVE MONITORING

Inspections of equipment, tanks, tank closures, control vents, and control units shall be performed prior to operation to identify leaks (e.g., during systemization activities prior to introduction of hazardous waste), visible cracks, holes, or gaps in materials of construction, broken, cracked, or otherwise damaged seals or gaskets on closure devices, and broken or missing closure devices. In addition, subsequent visual inspections shall be performed as required by Subpart BB and Subpart CC, except for areas that are unsafe to enter, in which case inspections shall be performed as soon as possible based on when entries into the areas are safe or be performed to the extent possible by CCTV. These unsafe areas will include the MDB rooms potentially containing Chemical Agent, and the TOX unit room during operation. The details of inspection during entry and by CCTV shall be included in the Main Plant LDAR Program.

Per Subpart BB requirements, BGCAPP Main Plant equipment that is not exempt must be monitored using methods described in 40 CFR 264.1063(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method. Due to the environment within the MDB rooms under HVAC system ventilation control that potentially contain Chemical Agent, the methods specified in 40 CFR 264.1063(b) cannot be safely implemented. Monitoring shall be performed by near-real-time MINICAMS® devices, which are field-deployed gas chromatograph based monitoring instruments designed to measure GB or VX vapor concentrations, as an alternative for identifying gross equipment leaks that would result in emissions regulated under Subpart BB within these MDB areas. This alternative monitoring by the MINICAMS® units rather than the methods specified in 40 CFR 264.1063(b) is suitable for the BGCAPP Main Plant Subpart BB equipment since either GB or VX will be the highest concentration organic compound in the wastes to be treated, and the MINICAMS® units will reliably indicate whether GB or VX is present in concentrations equal to or greater than 10,000 ppmv (as specified in 40 CFR 264.1058(b)). If these concentrations are detected, inspections shall be performed to identify any equipment leak sources, and if any are found, these shall be repaired. The fixed MINICAMS® units shall be placed throughout the MDB and shall be configured to measure GB or VX with a total cycle time (sampling and analysis) of less than 15 minutes, with continuous operation when waste is being processed. Continuous operation is defined as obtaining at least one result per 15-minute period, except when the unit is being verified with a challenge sample or under maintenance. The details of the monitoring plan (as part of the inspection plan) using MINICAMS® units shall be shall be included in the Main Plant LDAR Program. All monitoring results shall be kept as part of the Facility operating record.

Per Subpart CC requirements, procedures such as those specified in 40 CFR 264.1084(d) or those in 40 CFR 264.1034(b) are required to demonstrate no detectable emissions (defined as instrument readings less than 500 ppmv above background). As with Subpart BB monitoring, due to the environment within the MDB, the methods (e.g., FID or PID detector) specified cannot be safely implemented. Monitoring by near-real-time MINICAMS® devices shall be used as an alternative for identifying unexpected elevated organic levels that may represent leaks from tanks or miscellaneous units within the MDB areas. Alternative monitoring by the MINICAMS® units rather than the methods specified is suitable for Subpart CC since either GB or VX will be the highest concentration organic compound in the wastes to be treated, and the MINICAMS® units will reliably indicate whether GB or VX is present in concentrations equal to or greater than 500 ppmv above background, prompting investigation of potential sources of leaks in the control vents and control devices.

The MDB HVAC system carbon adsorption unit control device shall also be monitored with MINICAMS® units; any confirmed detection of GB or VX by MINICAMS® shall serve as the indicator of impending breakthrough of organics through the carbon adsorption units in accordance with 40 CFR 264.1033(h)(1).

The details of the monitoring plan using MINICAMS® units in the MDB and for the MDB HVAC system carbon adsorption units breakthrough monitoring method and interval shall be prepared prior to agent operations and included in the Main Plant LDAR Program. All monitoring results shall be kept as part of the Facility operating record.

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
UPA203	07-AMS-AIT5001	VSL/WPL	0.5	07-AMS-AI5201	CONF	VX	ECV/ECR ATTIC Rm 07-201	MDB-UPA 1-West Rm 07-101	C	13
UPA202	07-AMS-AIT5002	VSL/WPL	0.5	07-AMS-AI5202	CONF	VX	ECV/ECR ATTIC Rm 07-201	MDB-UPA 1-East Rm 07-101	C	13
ELA204	07-AMS-AIT5003	VSL/WPL	0.5	07-AMS-AI5203	CONF	VX	ECV/ECR ATTIC Rm 07-201	EONC Leaker Airlock 07-102	B/C	
ECV205	N/A	VSL/WPL	N/A	N/A	CONF	VX	ECV/ECR ATTIC Rm 07-201	ECV-1-West 07-103	A/B	19, 22
ECV205V	07-AMS-AIT5004-B	VSL	0.5	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	ECV-1-West 07-103	A/B	19
ECV261V	07-AMS-AIT5096	IDLH	70	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	ECV-1-West 07-103	A/B	19
ECV206	N/A	VSL/WPL	N/A	N/A	CONF	VX	ECV/ECR ATTIC Rm 07-201	ECV-1-East 07-103	A/B	19, 22
ECV206V	07-AMS-AIT5005-B	VSL	0.5	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	ECV-1-East 07-103	A/B	19
ECV262V	07-AMS-AIT5097	IDLH	70	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	ECV-1-East 07-103	A/B	19
ECR207	N/A	VSL/WPL	N/A	N/A	CONF	VX	ECV/ECR ATTIC Rm 07-201	ECR-1 07-104	A	19, 22
ECR207	07-AMS-AIT5006-A	VSL	0.5	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	ECR-1 07-104	A	19
ECR207V	07-AMS-AIT5006-B	IDLH	70	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	ECR-1 07-104	A	19
ECR208	N/A	VSL/WPL	N/A	N/A	CONF	VX	ECV/ECR ATTIC Rm 07-201	ECR-2 07-105	A	19, 22
ECR208	07-AMS-AIT5007-A	VSL	0.5	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	ECR-2 07-105	A	19
ECR208V	07-AMS-AIT5007-B	IDLH	70	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	ECR-2 07-105	A	19
ECV209	N/A	VSL/WPL	N/A	N/A	CONF	VX	ECV/ECR ATTIC Rm 07-201	ECV-2 07-106	A/B	19, 22
ECV209V	07-AMS-AIT5008-B	VSL	0.5	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	ECV-2 07-106	A/B	19
ECV263V	07-AMS-AIT5098	IDLH	70	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	ECV-2 07-106	A/B	19

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
BAL107V	07-AMS-AIT5009-B	VSL	0.5	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	Airlock B - ECR 07-107	B	19
BAL107VW	07-AMS-AIT5010-B	VSL	0.5	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	Airlock B - ECR (wand 15') 07-107	B	8, 19
CAL108	07-AMS-AIT5011	VSL/WPL	0.5	07-AMS-AI5204	CONF	VX	DPE Corridor 07-202	Airlock C - ECR 07-108	C	12
AAL109V	07-AMS-AIT5012-B	VSL	0.5	N/A	N/A	VX	DPE Corridor 07-202	Airlock A - ECR 07-109	A	19
AAL109VW	07-AMS-AIT5013-B	VSL	0.5	N/A	N/A	VX	DPE Corridor 07-202	Airlock A - ECR (wand 20') 07-109	A	8, 19
DPC113	07-AMS-AIT5014	VSL/WPL	0.5	07-AMS-AI5205	CONF	VX	Corridor 07-115	DPE Corridor 07-110	C	12
EBH225	N/A	VSL/WPL	N/A	N/A	CONF	VX	DPE Corridor 07-202	Energetics Batch Hydrolyzer Rm west 07-111	A	19, 22
EBH225T	07-AMS-AIT5015-A	IDLH	70	N/A	N/A	VX	DPE Corridor 07-202	Energetics Batch Hydrolyzer Rm west 07-111	A	2, 19
EBH225V	07-AMS-AIT5015-B	VSL	0.5	N/A	N/A	VX	DPE Corridor 07-202	Energetics Batch Hydrolyzer Rm west 07-111	A	19
EBH226	N/A	VSL/WPL	N/A	N/A	CONF	VX	DPE Corridor 07-202	Energetics Batch Hydrolyzer Rm east 07-111	A	19, 22
EBH226T	07-AMS-AIT5016-A	IDLH	70	N/A	N/A	VX	DPE Corridor 07-202	Energetics Batch Hydrolyzer Rm east 07-111	A	2, 19
EBH226V	07-AMS-AIT5016-B	VSL	0.5	N/A	N/A	VX	DPE Corridor 07-202	Energetics Batch Hydrolyzer Rm east 07-111	A	19
ESR112	07-AMS-AIT5018	VSL/WPL	0.5	07-AMS-AI5206	CONF	VX	Corridor 07-115	EBH Support Rm 07-113	B	12, 19
CAL114	07-AMS-AIT5019	VSL/WPL	0.5	07-AMS-AI5207	CONF	VX	Corridor 07-115	Airlock C EBH Support 07-114	C	12
COR115	07-AMS-AIT5020	VSL/WPL	0.5	07-AMS-AI5208	CONF	VX	DPE Corridor 07-110	Corridor North 07-115	C	12
COR110	07-AMS-AIT5021	VSL/WPL	0.5	07-AMS-AI5209	CONF	VX	Vestibule 07-116	Corridor South 07-115	C	12
HTR229	07-AMS-AIT5022	VSL/WPL	0.5	07-AMS-AI5210	CONF	VX	Observation Corridor South Platf 07-144	ANS Seco Heat Transfer Rm Platform 07-118	C	12
OBS111	07-AMS-AIT5023	VSL/WPL	0.5	07-AMS-AI5211	CONF	VX	Vestibule 07-116	OBS CORR west 2nd floor 07-117	C	12

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
OBS230	07-AMS-AIT5024	VSL/WPL	0.5	07-AMS-AI5212	CONF	VX	Observation Corridor South Platf 07-144	OBS CORR middle 2nd floor 07-117	C	12
OBS244	07-AMS-AIT5025	VSL/WPL	0.5	07-AMS-AI5213	CONF	VX	EBH/ENS/MPT offgas TRMT Rm So. 07-140	OBS CORR East 1st floor 07-117	C	12
HTR117	07-AMS-AIT5026	VSL/WPL	0.5	07-AMS-AI5214	CONF	VX	OBS CORR 07-117	ANS seco heat transfer Rm West 07-118	C	12
HTR118	07-AMS-AIT5027	VSL/WPL	0.5	07-AMS-AI5215	CONF	VX	OBS CORR 07-117	ANS seco heat transfer Rm East 07-118	C	12
ENS238	07-AMS-AIT5028	VSL/WPL	0.5	07-AMS-AI5216	CONF	VX	CORR platf 07-115	Energetics Neutralization Rm West 07-119	B	12, 19
ENS237	07-AMS-AIT5029	VSL/WPL	0.5	07-AMS-AI5217	CONF	VX	OBS CORR So. Platf 07-144	Energetics Neutralization Rm East 07-119	B	12, 19
DPC231V	07-AMS-AIT5030-B	VSL	0.5	N/A	N/A	VX	OBS CORR platf 07-144	DPE CORR 07-120	A	19
SGB116	N/A	VSL/WPL	0.5	07-AMS-AI5218	CONF	VX	OBS CORR North 07-117	ANS/ENS sampling glovebox Rm 07-121	C	12
SGB116V	07-AMS-AIT5032-B	VSL	0.5	N/A	CONF	VX	OBS CORR North 07-117	ANS/ENS sampling glovebox Rm 07-121	C	12
CAL122	07-AMS-AIT5033	VSL/WPL	0.5	07-AMS-AI5219	CONF	VX	ECV/ECR ATTIC Rm 07-201	Airlock C - EONC Leaker airlock 07-122	C	12
ANS120	07-AMS-AIT5034-B	IDLH	70	N/A	N/A	VX	OBS CORR North 07-137	Agent Neutralization North 07-123	A	2, 19
ANS119	07-AMS-AIT5035-B	IDLH	70	N/A	N/A	VX	OBS CORR North 07-117	Agent Neutralization South 07-123	A	2, 19
TTR232	N/A	VSL/WPL	N/A	TEMP	CONF	GB/VX	OBS CORR Platf 07-144	Tray/Container Transfer Rm North 07-124	B	19, 23
TTR232V	07-AMS-AIT5036-B	VSL	0.5	N/A	N/A	VX	OBS CORR Platf 07-144	Tray/Container Transfer Rm North 07-124	B	19
TTR233	N/A	VSL/WPL	N/A	TEMP	CONF	GB/VX	OBS CORR Platf 07-144	Tray/Container Transfer Rm South 07-124	B	19, 23
TTR233V	07-AMS-AIT5037-B	VSL	0.5	N/A	N/A	VX	OBS CORR Platf 07-144	Tray/Container Transfer Rm South 07-124	B	19
TMA215	07-AMS-AIT5038-A	VSL	0.5	N/A	N/A	GB	Unpack Area-2 Platf 07-128	Tox Maintenance	A/B	19

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
								Area West 07-125		
TMA215V	07-AMS-AIT5038-B	VSL	0.5	N/A	N/A	VX	Unpack Area-2 Platf 07-128	Tox Maintenance Area West 07-125	A/B	19
TMA216	07-AMS-AIT5039-A	VSL	0.5	N/A	N/A	GB	Unpack Area-2 Platf 07-128	Tox Maintenance Area Southeast 07-125	A/B	19
TMA216V	07-AMS-AIT5039-B	VSL	0.5	N/A	N/A	VX	Unpack Area-2 Platf 07-128	Tox Maintenance Area Southeast 07-125	A/B	19
TMA217	07-AMS-AIT5040-A	VSL	0.5	N/A	N/A	GB	Unpack Area-2 Platf 07-128	Tox Maintenance Area Northeast 07-125	A/B	19
TMA217V	07-AMS-AIT5040-B	VSL	0.5	N/A	N/A	VX	Unpack Area-2 Platf 07-128	Tox Maintenance Area Northeast 07-125	A/B	19
TMA218W	07-AMS-AIT5041-A	VSL	0.5	07-AMS-AI5220	CONF	GB	Unpack Area-2 Platf 07-128	Tox Maintenance Area (Wand 20') 07-125	A/B	8,16, 19
TMA218VW	07-AMS-AIT5092-A	VSL	0.5	07-AMS-AI5220	CONF	VX	Unpack Area-2 Platf 07-128	Tox Maintenance Area (Wand 20') 07-125	A/B	8,16,19
TMA260W	07-AMS-AIT5041B	WSL	0.5	N/A	N/A	GB	Unpack Area-2 Platf 07-128	Tox Maintenance Area (Wand 20') 07-125	A/B	8,16,19
TMA260VW	07-AMS-AIT5092-B	WSL	0.5	N/A	N/A	VX	Unpack Area-2 Platf 07-128	Tox Maintenance Area (Wand 20') 07-125	A/B	8,16,19
BAL126	07-AMS-AIT5042-A	VSL	0.5	N/A	N/A	GB	Unpack Area-2 Platf 07-128	Airlock B Tox Maint Area 07-126	B	19
BAL126V	07-AMS-AIT5042-B	VSL	0.5	N/A	N/A	VX	Unpack Area-2 Platf 07-128	Airlock B Tox Maint Area 07-126	B	19
BAL126W	07-AMS-AIT5043-A	VSL	0.5	N/A	N/A	GB	Unpack Area-2 Platf 07-128	Airlock B (wand 20') Tox Maintenance area 07-126	B	8, 19

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
BAL126VW	07-AMS-AIT5043-B	VSL	0.5	N/A	N/A	VX	Unpack Area-2 Platf 07-128	Airlock B (wand 20') Tox Maintenance area 07-126	B	8, 19
CAL127	07-AMS-AIT5044	VSL/WPL	0.5	07-AMS-AI5221	CONF	VX	Unpack Area-2 Platf 07-128	Airlock C Tox Maint 07-127	C	12
UPA105	07-AMS-AIT5045	VSL/WPL	0.5	07-AMS-AI5222	CONF	VX	UPA Equip Rm 07-134	UPA 2 northwest 07-128	C	13
UPA106	07-AMS-AIT5046	VSL/WPL	0.5	07-AMS-AI5223	CONF	VX	UPA Equip Rm 07-134	UPA 2 southwest 07-128	C	13
UPA102	07-AMS-AIT5047	VSL/WPL	0.5	07-AMS-AI5224	CONF	VX	Fire Equip Valve Rm 07-149	UPA 2 East 07-128	C	13
TRA219	07-AMS-AIT5048	VSL/WPL	0.5	07-AMS-AI5225	CONF	VX	UPA 2 Platf 07-128	Transfer Area 07-129	C	12
DDR220	07-AMS-AIT5049	VSL/WPL	0.5	07-AMS-AI5226	CONF	VX	UPA 2 Platf 07-128	DPE Dressing Rm 07-131	C	12
AAL132	07-AMS-AIT5050-A	VSL	0.5	N/A	N/A	GB	UPA 2 Platf 07-128	Airlock A TMA 07-132	A	19
AAL132V	07-AMS-AIT5050-B	VSL	0.5	N/A	N/A	VX	UPA 2 Platf 07-128	Airlock A TMA 07-132	A	19
AAL132W	07-AMS-AIT5051-A	VSL	0.5	N/A	N/A	GB	UPA 2 Platf 07-128	Airlock A (wand 20') TMA 07-132	A	8, 19
AAL132VW	07-AMS-AIT5051-B	VSL	0.5	N/A	N/A	VX	UPA 2 Platf 07-128	Airlock A (wand 20') TMA 07-132	A	8, 19
TER221	07-AMS-AIT5052-A	VSL	0.5	N/A	N/A	GB	UPA 2 Platf 07-128	TMA Equip Rm 07-133	B	19
TER221V	07-AMS-AIT5052-B	VSL	0.5	N/A	N/A	VX	UPA 2 Platf 07-128	TMA Equip Rm 07-133	B	19
TER222W	07-AMS-AIT5053-A	VSL	0.5	07-AMS-AI5227	CONF	GB	UPA 2 Platf 07-128	TMA Equip Rm (wand 25') 07-133	B	8, 6,19
TER222VW	07-AMS-AIT5053-B	VSL	0.5	07-AMS-AI5227	CONF	VX	UPA 2 Platf 07-128	TMA Equip Rm (wand 25') 07-133	B	8,16,19
UER223	07-AMS-AIT5054	VSL/WPL	0.5	07-AMS-AI5228	CONF	VX	UPA 2 Platf 07-128	UPA Equip Rm 07-134	C	12
MWS234	07-AMS-AIT5055-B	IDLH	70	N/A	N/A	VX	OBS CORR Platf 07-144	MUN Washout SYS 07-135	A	2, 19
AAL136	07-AMS-AIT5056-A	VSL	0.5	N/A	N/A	GB	OBS CORR North 07-137	Airlock A ANS/MWS 07-136	A	19
AAL136V	07-AMS-AIT5056-B	VSL	0.5	N/A	N/A	VX	OBS CORR North 07-137	Airlock A ANS/MWS 07-136	A	19

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
AAL136W	07-AMS-AIT5057-A	VSL	0.5	N/A	N/A	GB	OBS CORR North 07-137	Airlock A ANS/MWS (wand 30') 07-136	A	8, 19
AAL136VW	07-AMS-AIT5057-B	VSL	0.5	N/A	N/A	VX	OBS CORR North 07-137	Airlock A ANS/MWS (wand 30') 07-136	A	8, 19
OBS242	07-AMS-AIT5058	VSL/WPL	0.5	07-AMS-AI5229	CONF	VX	EBH/ENS/MPT/ Offgas TRMT Rm South 07-140	OBS CORR North 07-137	C	12
OBS243	07-AMS-AIT5059	VSL/WPL	0.5	07-AMS-AI5230	CONF	VX	EBH/ENS/MPT/ Offgas TRMT Rm South 07-140	OBS CORR South 07-137	C	12
OTR240	07-AMS-AIT5060	VSL/WPL	0.5	07-AMS-AI5231	CONF	VX	OBS CORR 07-137	EBH/ENS/MPT/ Offgas TRMT Rm Northwest 07-140	C	12
OTR241	07-AMS-AIT5061	VSL/WPL	0.5	07-AMS-AI5232	CONF	VX	OBS CORR 07-137	EBH/ENS/MPT/ Offgas TRMT Rm South 07-140	C	12
OTR103	07-AMS-AIT5062	VSL/WPL	0.5	07-AMS-AI5233	CONF	VX	OBS CORR 07-144	EBH/ENS/MPT/ Offgas TRMT Rm Northeast 07-140	C	12
BAL142	07-AMS-AIT5063-A	VSL	0.5	N/A	N/A	GB	OBS CORR Platf 07-144	Airlock B EBH/ENS/MPT/ Offgas TRMT Rm 07-142	B	19
BAL142V	07-AMS-AIT5063-B	VSL	0.5	N/A	N/A	VX	OBS CORR Platf 07-144	Airlock B EBH/ENS/MPT/ Offgas TRMT Rm 07-142	B	19
BAL142W	07-AMS-AIT5064-A	VSL	0.5	N/A	N/A	GB	OBS CORR Platf 07-144	Airlock B (wand 20') EBH/ENS/MPT Offgas TRMT Rm 07-142	B	8, 19
BAL142VW	07-AMS-AIT5064-B	VSL	0.5	N/A	N/A	VX	OBS CORR Platf 07-144	Airlock B (wand 20') EBH/ENS/MPT Offgas TRMT Rm 07-142	B	8, 19
CAL143	07-AMS-AIT5065	VSL/WPL	0.5	07-AMS-AI5234	CONF	VX	OBS CORR Platf 07-144	Airlock C EBH/ENS/MPT/ Offgas TRMT Rm 07-143	C	12
OBS121	07-AMS-AIT5066	VSL/WPL	0.5	07-AMS-AI5235	CONF	VX	Vestibule 07-151	OBS CORR West 07-144	C	12
OBS123	07-AMS-AIT5067	VSL/WPL	0.5	07-AMS-AI5236	CONF	VX	Vestibule 07-151	OBS CORR East 07-144	C	12

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
CAL145	07-AMS-AIT5068	VSL/WPL	0.5	07-AMS-AI5237	CONF	VX	Vestibule 07-151	Airlock C MPT 07-145	C	12
MPT235	07-AMS-AIT5069	VSL/WPL	0.5	07-AMS-AI5238	CONF	VX	OBS CORR Platf 07-144	MPT 07-146	B	13,18
CAL147	07-AMS-AIT5070	VSL/WPL	0.5	07-AMS-AI5239	CONF	VX	MPT Cooling Conveyor 07-150	Airlock C Washout/MPT Support Rm 07-147	C	12
WSR124	07-AMS-AIT5071	VSL/WPL	0.5	07-AMS-AI5240	CONF	VX	MPT Cooling Conveyor 07-150	Washout/MPT SPT Rm 07-148	C	12
CAL161	07-AMS-AIT5072	VSL/WPL	0.5	07-AMS-AI5241	CONF	VX	ECV/ECR ATTIC Rm 07-201	Airlock C Motor packing Rm 07-161	C	12
BAL162	07-AMS-AIT5073	VSL	0.5	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	Airlock B Motor packing Rm 07-162	B	19
BAL162W	07-AMS-AIT5074	VSL	0.5	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	Airlock B Motor packing Rm (wand 20') 07-162	B	8, 19
MPR212	07-AMS-AIT5075	VSL/WPL	0.5	07-AMS-AI5242	CONF	GB/VX	ECV/ECR ATTIC Rm 07-201	Motor Packing Rm 07-163	B	12, 19, 23
ATC227	07-AMS-AIT5076	VSL/WPL	0.5	07-AMS-AI5243	CONF	VX	DPE CORR 07-202	ECR Attic West 07-201	C	12
ATC224	07-AMS-AIT5077	VSL/WPL	0.5	07-AMS-AI5244	CONF	VX	UPA Platf 07-128	ECR Attic East 07-201	C	12
ATC228	07-AMS-AIT5078	VSL/WPL	0.5	07-AMS-AI5245	CONF	VX	DPE CORR 07-202	ECR Attic South 07-201	C	12
COR210	07-AMS-AIT5079	VSL/WPL	0.5	07-AMS-AI5246	CONF	VX	ECV/ECR ATTIC Rm 07-201	DPE CORR 07-202	C	12
EQP236	07-AMS-AIT5080	VSL/WPL	0.5	07-AMS-AI5247	CONF	VX	OBS CORR South Platf 07-144	Equip Platf 07-203	C	12
ONC211	07-AMS-AIT5086	VSL	0.5	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	EONC Leaker Airlock (Point Source) 07-102	C	8, 9
ICA213	07-AMS-AIT1084	VSL	0.5	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	MPR Inlet Conveyor Airlock 07-163	B	8, 19
MSR214A	07-AMS-AIT1091A	VSL/WPL	0.5	07-AMS-AI5248	CONF	VX	ECV/ECR ATTIC Rm 07-201	MSR Airlock Hood 07-164	C	8, 12, 15
MSR214B	07-AMS-AIT1091B	VSL	0.5	N/A	N/A	VX	ECV/ECR ATTIC Rm 07-201	MSR Airlock (default)/Airlock Hood 07-164	C	3, 8, 15

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
OFG245	07-AMS-AIT1938	VSL	0.5	07-AMS-AI5251	N/A	VX	EBH/ENS/MPT/ Offgas TRMT Rm South 07-140	MPT blower Disch to HVAC Filters 07-141	N/A	8, 15, 19
MPA104A	07-AMS-AIT0386A	VSL	0.5	07-AMS-AI5249	CONF	VX	OBS CORR 07-144	MPT Purge gases outlet offgas HDR for line 1 07-146	B	3, 15
MPA104B	07-AMS-AIT0386B	VSL	0.5	07-AMS-AI5250	CONF	VX	OBS CORR 07-144	MPT Purge gases outlet offgas HDR for line 2 07-146	B	3, 15
ONC101	07-AMS-AIT5087	VSL	0.5	N/A	N/A	VX	UPA Area-1 07-101	UPA EONC (Point Source) 07-101	N/A	8, 9
ANS250	07-AMS-AIT5090-B	IDLH	70	N/A	N/A	VX	OBS CORR North 07-137	Agent Neutralization south 3rd Floor 07-123	A	2, 19
ANS251	07-AMS-AIT5091-B	IDLH	70	N/A	N/A	VX	OBS CORR North 07-117	Agent Neutralization north 3rd Floor 07-123	A	2, 19
EAA401	07-AMS-AIT5093	VSL/WPL	0.5	07-AMS-AI5252	CONF	VX	DPE CORR 07-202	EBH Attic Area 07-401	C	12
RDA264	07-AMS-AIT5094	VSL	0.5	N/A	N/A	VX	Unpack Area-2 Platf 07-128	Unpack Area 2 - Tray Airlock/Conveyor	C	8
RDA265	07-AMS-AIT5095	VSL	0.5	N/A	N/A	VX	Unpack Area-2 Platf 07-128	Toxic Maint. Area - Tray Airlock/Conveyor	C	8
FIL801A	08-AMS-AIT5001	VSL	0.5	08-AMS-AI5201 - A	CONF	VX	Mon House 08-201	FIL 801 Midbed 1-2 FIL801	B	4,21
FIL801B		VSL	0.5	08-AMS-AI5201 - B	CONF	VX	Mon House 08-201	FIL 801 Midbed 2-3 FIL801	B	4,21
FIL801C		VSL/WPL	0.5	08-AMS-AI5201 - C	CONF	GB/VX	Mon House 08-201	FIL 801 Midbed 4-5 FIL801	B	4, 20,21
FIL801D		VSL/WPL	0.5	08-AMS-AI5201 - D	CONF	GB/VX	Mon House 08-201	FIL 801 Vestibule FIL801	B/C	4, 12, 14,21
FIL802A	08-AMS-AIT5002	VSL	0.5	08-AMS-AI5202 - A	CONF	VX	Mon House 08-201	FIL 802 Midbed 1-2 FIL802	B	4,21
FIL802B		VSL	0.5	08-AMS-	CONF	VX	Mon House 08-201	FIL 802 Midbed 2-3 FIL802	B	4,21

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
				AI5202 - B						
FIL802C		VSL/WPL	0.5	08-AMS-AI5202-C	CONF	GB/VX	Mon House 08-201	FIL 802 Midbed 4-5 FIL802	B	4, 20
FIL802D		VSL/WPL	0.5	08-AMS-AI5202 - D	CONF	GB/VX	Mon House 08-201	FIL 802 Vestibule FIL802	B/C	4, 12, 14,21
FIL803A	08-AMS-AIT5003	VSL	0.5	08-AMS-AI5203 - A	CONF	VX	Mon House 08-202	FIL 803 Midbed 1-2 FIL803	B	4,21
FIL803B		VSL	0.5	08-AMS-AI5203 - B	CONF	VX	Mon House 08-202	FIL 803 Midbed 2-3 FIL803	B	4,21
FIL803C		VSL/WPL	0.5	08-AMS-AI5203-C	CONF	GB/VX	Mon House 08-202	FIL 803 Midbed 4-5 FIL803	B	4, 20,21
FIL803D		VSL/WPL	0.5	08-AMS-AI5203 - D	CONF	GB/VX	Mon House 08-202	FIL 803 Vestibule FIL803	B/C	4, 12, 14,21
FIL804A	08-AMS-AIT5004	VSL	0.5	08-AMS-AI5204 - A	CONF	VX	Mon House 08-202	FIL 804 Midbed 1-2 FIL804	B	4,21
FIL804B		VSL	0.5	08-AMS-AI5204 - B	CONF	VX	Mon House 08-202	FIL 804 Midbed 2-3 FIL804	B	4,21
FIL804C	08-AMS-AIT5004	VSL/WPL	0.5	08-AMS-AI5204-C	CONF	GB/VX	Mon House 08-202	FIL 804 Midbed 4-5 FIL804	B	4, 20,21
FIL804D		VSL/WPL	0.5	08-AMS-AI5204 - D	CONF	GB/VX	Mon House 08-202	FIL 804 Vestibule FIL804	B/C	4, 12, 14,21
FIL805A	08-AMS-AIT5005	VSL	0.5	08-AMS-AI5205 - A	CONF	VX	Mon House 08-202	FIL 805 Midbed 1-2 FIL805	B	4,21
FIL805B		VSL	0.5	08-AMS-AI5205 - B	CONF	VX	Mon House 08-202	FIL 805 Midbed 2-3 FIL805	B	4,21
FIL805C		VSL/WPL	0.5	08-AMS-AI5205-C	CONF	GB/VX	Mon House 08-202	FIL 805 Midbed 4-5 FIL805	B	4, 20,21

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
FIL805D		VSL/WPL	0.5	08-AMS-AI5205 - D	CONF	GB/VX	Mon House 08-202	FIL 805 Vestibule FIL805	B/C	4, 12, 14,21
FIL806A	08-AMS-AIT5006	VSL	0.5	08-AMS-AI5206 - A	CONF	VX	Mon House 08-203	FIL 806 Midbed 1-2 FIL806	B	4,21
FIL806B		VSL	0.5	08-AMS-AI5206 - B	CONF	VX	Mon House 08-203	FIL 806 Midbed 2-3 FIL806	B	4,21
FIL806C		VSL/WPL	0.5	08-AMS-AI5206-C	CONF	GB/VX	Mon House 08-203	FIL 806 Midbed 4-5 FIL806	B	4, 20,21
FIL806D		VSL/WPL	0.5	08-AMS-AI5206 - D	CONF	GB/VX	Mon House 08-203	FIL 806 Vestibule FIL806	B/C	4, 12, 14,21
FIL807A	08-AMS-AIT5007	VSL	0.5	08-AMS-AI5207 - A	CONF	VX	Mon House 08-203	FIL 807 Midbed 1-2 FIL807	B	4,21
FIL807B		VSL	0.5	08-AMS-AI5207 - B	CONF	VX	Mon House 08-203	FIL 807 Midbed 2-3 FIL807	B	4,21
FIL807C		VSL/WPL	0.5	08-AMS-AI5207-C	CONF	GB/VX	Mon House 08-203	FIL 807 Midbed 4-5 FIL807	B	4, 20,21
FIL807D		VSL/WPL	0.5	08-AMS-AI5207 - D	CONF	GB/VX	Mon House 08-203	FIL 807 Vestibule FIL807	B/C	4, 12, 14,21
FIL808A	08-AMS-AIT5008	VSL	0.5	08-AMS-AI5208 - A	CONF	VX	Mon House 08-204	FIL 808 Midbed 1-2 FIL808	B	4,21
FIL808B		VSL	0.5	08-AMS-AI5208 - B	CONF	VX	Mon House 08-204	FIL 808 Midbed 2-3 FIL808	B	4,21
FIL808C		VSL/WPL	0.5	08-AMS-AI5208-C	CONF	GB/VX	Mon House 08-204	FIL 808 Midbed 4-5 FIL808	B	4, 20,21
FIL808D		VSL/WPL	0.5	08-AMS-AI5208 - D	CONF	GB/VX	Mon House 08-204	FIL 808 Vestibule FIL808	B/C	4, 12, 14,21
FIL809A	08-AMS-AIT5009	VSL	0.5	08-AMS-	CONF	VX	Mon House 08-204	FIL 809 Midbed 1-2 FIL809	B	4,21

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
				AI5209 - A						
FIL809B		VSL	0.5	08-AMS-AI5209 - B	CONF	VX	Mon House 08-204	FIL 809 Midbed 2-3 FIL809	B	4,21
FIL809C		VSL/WPL	0.5	08-AMS-AI5209-C	CONF	GB/VX	Mon House 08-204	FIL 809 Midbed 4-5 FIL809	B	4, 20,21
FIL809D		VSL/WPL	0.5	08-AMS-AI5209 - D	CONF	GB/VX	Mon House 08-204	FIL 809 Vestibule FIL809	B/C	4, 12, 14,21
FIL810A	08-AMS-AIT5010	VSL	0.5	08-AMS-AI5210 - A	CONF	VX	Mon House 08-205	FIL 810 Midbed 1-2 FIL810	**B**	4,21
FIL810B		VSL	0.5	08-AMS-AI5210 - B	CONF	VX	Mon House 08-205	FIL 810 Midbed 2-3 FIL810	B	4,21
FIL810C	08-AMS-AIT5010	VSL/WPL	0.5	08-AMS-AI5210-C	CONF	GB/VX	Mon House 08-205	FIL 810 Midbed 4-5 FIL810	B	4, 20,21
FIL810D		VSL/WPL	0.5	08-AMS-AI5210 - D	CONF	GB/VX	Mon House 08-205	FIL 810 Vestibule FIL810	B/C	4, 12, 14,21
FIL811A		VSL	0.5	08-AMS-AI5211 - A	CONF	VX	Mon House 08-205	FIL 811 Midbed 1-2 FIL811	B	4,21
FIL811B	08-AMS-AIT5011	VSL	0.5	08-AMS-AI5211 - B	CONF	VX	Mon House 08-205	FIL 811 Midbed 2-3 FIL811	B	4,21
FIL811C		VSL/WPL	0.5	08-AMS-AI5211-C	CONF	GB/VX	Mon House 08-205	FIL 811 Midbed 4-5 FIL811	B	4, 20,21
FIL811D		VSL/WPL	0.5	08-AMS-AI5211 - D	CONF	GB/VX	Mon House 08-205	FIL 811 Vestibule FIL811	B/C	4, 12, 14,21
FIL812A	08-AMS-AIT5012	VSL	0.5	08-AMS-AI5212 - A	CONF	VX	Mon House 08-205	FIL 812 Midbed 1-2	B	4,21
FIL812B		VSL	0.5	08-AMS-AI5212 - B	CONF	VX	Mon House 08-205	FIL 812 Midbed 2-3 FIL812	B	4,21

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
FIL812C		VSL/WPL	0.5	08-AMS-AI5212-C	CONF	GB/VX	Mon House 08-205	FIL 812 Midbed 4-5 FIL812	B	4, 20,21
FIL812D		VSL/WPL	0.5	08-AMS-AI5212 - D	CONF	GB/VX	Mon House 08-205	FIL 812 Vestibule FIL812	B/C	4, 12, 14,21
FIL813A	08-AMS-AIT5013	VSL	0.5	08-AMS-AI5213 - A	CONF	VX	Mon House 08-206	FIL 813 Midbed 1-2 FIL813	B	4,21
FIL813B		VSL	0.5	08-AMS-AI5213 - B	CONF	VX	Mon House 08-206	FIL 813 Midbed 2-3 FIL813	B	4,21
FIL813C		VSL/WPL	0.5	08-AMS-AI5213-C	CONF	GB/VX	Mon House 08-206	FIL 813 Midbed 4-5 FIL813	B	4, 20,21
FIL813D		VSL/WPL	0.5	08-AMS-AI5213 - D	CONF	GB/VX	Mon House 08-206	FIL 813 Vestibule FIL813	B/C	4, 12, 14,21
FIL814A	08-AMS-AIT5014	VSL	0.5	08-AMS-AI5214 - A	CONF	VX	Mon House 08-206	FIL 814 Midbed 1-2 FIL814	B	4,21
FIL814B		VSL	0.5	08-AMS-AI5214 - B	CONF	VX	Mon House 08-206	FIL 814 Midbed 2-3 FIL814	B	4,21
FIL814C		VSL/WPL	0.5	08-AMS-AI5214-C	CONF	GB/VX	Mon House 08-206	FIL 814 Midbed 4-5 FIL814	B	4, 20,21
FIL814D		VSL/WPL	0.5	08-AMS-AI5214 - D	CONF	GB/VX	Mon House 08-206	FIL 814 Vestibule FIL814	B/C	4, 12, 14,21
FIL819A	08-AMS-AIT5019	VSL	0.5	N/A	N/A	GB	Mon House 08-201	FIL 801 Vestibule FIL801	D	4,21
FIL819B		VSL	0.5	N/A	N/A	GB	Mon House 08-201	FIL 802 Vestibule FIL802	D	4,21
FIL820A	08-AMS-AIT5020	VSL	0.5	N/A	N/A	GB	Mon House 08-202	FIL 803 Vestibule FIL803	D	4,21
FIL820B		VSL	0.5	N/A	N/A	GB	Mon House 08-202	FIL 804 Vestibule FIL804	D	4,21
FIL820C	08-AMS-AIT5020	VSL	0.5	N/A	N/A	GB	Mon House 08-202	FIL 805 Vestibule FIL805	D	4,21
FIL821A	08-AMS-AIT5021	VSL	0.5	N/A	N/A	GB	Mon House 08-203	FIL 806 Vestibule FIL806	D	4,21
FIL821B		VSL	0.5	N/A	N/A	GB	Mon House 08-203	FIL 807 Vestibule FIL807	D	4,21

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
FIL822A	08-AMS-AIT5022	VSL	0.5	N/A	N/A	GB	Mon House 08-204	FIL 808 Vestibule FIL808	D	4,21
FIL822B		VSL	0.5	N/A	N/A	GB	Mon House 08-204	FIL 809 Vestibule FIL809	D	4,21
FIL823A	08-AMS-AIT5023	VSL	0.5	N/A	N/A	GB	Mon House 08-205	FIL 810 Vestibule FIL810	D	4,21
FIL823B		VSL	0.5	N/A	N/A	GB	Mon House 08-205	FIL 811 Vestibule FIL811	D	4,21
FIL823C		VSL	0.5	N/A	N/A	GB	Mon House 08-205	FIL 812 Vestibule FIL812	D	4,21
FIL824A	08-AMS-AIT5024	VSL	0.5	N/A	N/A	GB	Mon House 08-206	FIL 813 Vestibule FIL813	D	4,21
FIL824B		VSL	0.5	N/A	N/A	GB	Mon House 08-206	FIL 814 Vestibule FIL814	D	4,21
STK815	08-AMS-AIT5015A	VSL	0.5	08-AMS-AI5215	CONF	GB	Mon House 08-101	Filter Stack 801 Duct West Stack	NA	15
STK815V	08-AMS-AIT5015B	VSL	0.5		CONF	VX	Mon House 08-101	Filter Stack 801 Duct West Stack	NA	15
STK816	08-AMS-AIT5016A	VSL	0.5	08-AMS-AI5216	CONF	GB	Mon House 08-101	Filter Stack 801 Duct West Stack	NA	15
STK816V	08-AMS-AIT5016B	VSL	0.5		CONF	VX	Mon House 08-101	Filter Stack 801 Duct West Stack	NA	15
STK817	08-AMS-AIT5017A	VSL	0.5	08-AMS-AI5217	CONF	GB	Mon House 08-102	Filter Stack 802 Duct East Stack	NA	15
STK817V	08-AMS-AIT5017B	VSL	0.5		CONF	VX	Mon House 08-102	Filter Stack 802 Duct East Stack	NA	15
STK818	08-AMS-AIT5018A	VSL	0.5	08-AMS-AI5218	CONF	GB	Mon House 08-102	Filter Stack 802 Duct East Stack	NA	15
STK818V	08-AMS-AIT5018B	VSL	0.5		CONF	VX	Mon House 08-102	Filter Stack 802 Duct East Stack	NA	15
MED301HW	16-AMS-AIT5001A	VSL	0.5	N/A	N/A	H	Mech Equipment Rm 16-122	Decon Rm/Vestibule (wand 30'/20') 16-107/109	C	8
MED301GW	16-AMS-AIT5001B	VSL	0.5	N/A	N/A	GB	Mech Equipment Rm 16-122	Decon Rm/Vestibule (wand 30'/20') 16-107/109	C	8
MED301VW	16-AMS-AIT5001C	VSL	0.5	N/A	N/A	VX	Mech Equipment Rm 16-122	Decon Rm/Vestibule (wand 30'/20') 16-107/109	C	8
MED302H	NA	WPL	N/A	16-AMS-AI5201	HISM	H	Mech Equipment Rm 16-122	Medical Admin Area 16-105	D	
MED302G/V	NA	WPL	N/A	16-AMS-AI5201-B	HISM	GB/VX	Mech Equipment Rm 16-122	Medical Admin Area 16-105	D	
PMB303G/V	N/A	WPL	N/A	40-AMS-AI5201	HISM	GB/VX	Elect/Util Rm 40-103	OPCW Office Area 40-101	D	

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
PMB303H	N/A	WPL	N/A	40-AMS-AI5202	HISM	H	Elect/Util Rm 40-103	OPCW Office Area 40-101	D	
CHB601	06-AMS-AIT5001	VSL/WPL	0.5	06-AMS-AI5201	CONF	VX	CHB Transfer CORR 06-002	Transfer Area 06-003	C	12
CHB610	NA	VSL	NA	NA	HISM	VX	CHB	7-Day DAAMS EONC	NA	8,9,16
CSB901	N/A	WPL	NA	09-AMS-AI5201	HISM	GB/VX	MER 09-101	DSA Air Duct to CSB 09-101	E	8
CSF501	00-AMS-AIT5001A	VSL	0.5	00-AMS-AI5001	CONF	GB	Container Storage Facility Mon House 110FF	Container Storage Facility Bldg 110FF	C	9
CSF501V	00-AMS-AIT5001B	VSL	0.5	00-AMS-AI5001	CONF	VX	Container Storage Facility Mon House 110FF	Container Storage Facility Bldg 110FF	C	9
CSF501H	00-AMS-AIT5002A	VSL	0.5	00-AMS-AI5002	N/A	HD	Container Storage Facility Mon House 110FF	Container Storage Facility Bldg 110FF	C	9
CSF502V	00-AMS-AIT5002B	VSL	0.5	N/A	N/A	VX	Container Storage Facility Mon House 110FF	Container Storage Facility Bldg 110FF	NA	8,9
EDT301	70-AMS-AIT5001	VSL/WPL	0.5	70-AMS-AI5209	CONF	H	EDT Mon Shack (ESM) 302	EDT Service Magazine 301	D	14
EDT302	70-AMS-AIT5002	VSL	0.5	70-AMS-AI5210	CONF	H	EDT Mon Shack (ESM) 302	IONEX 1000 Filter Unit Midbed	C	
EDT303	70-AMS-AIT5003	VSL	0.5	70-AMS-AI5211	CONF	H	EDT Mon Shack (ESM) 302	IONEX 1000 filter unit Outlet	C	15
EDT304	70-AMS-AIT5004	N/A	N/A	N/A	N/A	H	EDT Stack Mon House	Hot Spare	N/A	9, 11, 19
EDT307	70-AMS-AIT5006	VSL/WPL	0.5	70-AMS-AI5204	CONF	H	EDT Corridor 103	EDT Airlock VES 100	C	12
EDT308	70-AMS-AIT5007	VSL/WPL	0.5	70-AMS-AI5205	CONF	H	EDT Corridor 103	Munitions Loading Area SDC Rm 104	C	13
EDT309	70-AMS-AIT5008	VSL	0.5	N/A	N/A	H	EDT Corridor 103	Buffer Tank Enclosure	B	19
EDT310	70-AMS-AIT5009	VSL	0.5	N/A	N/A	H	EDT Corridor 103	DET Chamber Enclosure	B	19
EDT311	70-AMS-AIT5010	VSL/WPL	0.5	70-AMS-AI5208	CONF	H	EDT Corridor 103	Scrap Exit Area SDC Rm 104	C	13
EDT312	70-AMS-AIT5011	VSL	0.5	70-AMS-AI5206	CONF	H	EDT Corridor 103	IONEX 16000HVAC Filter Midbed	C	

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
EDT313	70-AMS-AIT5012	VSL	0.5	70-AMS-AI5207	CONF	H	EDT Corridor 103	IONEX 16000HVAC Filter Stack	C	15
EDT314	70-AMS-AIT5022	SEL	0.5	N/A	N/A	H	EDT Mon House 201	IONEX 4000OTS Exhaust Carbon Midbed	D	6, 19
EDT315A	70-AMS-AIT5014A	SEL	0.4	70-AMS-AI5201	CONF	H	EDT Mon House 201	OTS Exhaust StackEDT Mon house 201	D	6, 15
EDT315B	70-AMS-AIT5014B	SEL	0.4	70-AMS-AI5202	CONF	H	EDT Mon House 201	OTS Exhaust StackEDT Mon house 201	D	6, 15
EDT316	70-AMS-AIT5020	VSL	0.5	N/A	N/A	H	EDT Mon Shack (ESM) 302	Spare/EDT Service Magazine301	D	19
EDT317	70-AMS-AIT5021	VSL	0.5	N/A	N/A	H	EDT Mon Shack (ESM) 302	EONC Point Source	N/A	8, 19
EDT318	70-AMS-AIT5017	IDLH	0.5	NA	NA	H	EDT Corridor 101	SDC Waste Monitoring SDC Rm 104	C	2, 8, 9, 19
EDTP01	70-AMS-AIT5015	VSL	0.5	N/A	N/A	H	EDT Corridor 101	SDC Waste Monitoring SDC Rm 104	C	7, 9, 19
EDTP02	70-AMS-AIT5016	VSL	0.5	N/A	N/A	H	EDT Corridor 102	EDT Airlock VES 100 Personnel Monitoring	C	7, 9, 19
LSS101	N/A	WPL	N/A	07-AMS-AI5261	HISM	VX	07-129	LSS101-1A 07-101	C	21
LSS102	N/A	WPL	N/A	07-AMS-AI5262	HISM	VX	07-201	LSS103-1A 07-103	A/B	21
LSS103	N/A	WPL	N/A	07-AMS-AI5263	HISM	VX	07-201	LSS103-2A 07-103	A/B	21
LSS105	N/A	WPL	N/A	07-AMS-AI5265	HISM	VX	07-201	LSS107-1A 07-107	B	21
LSS106	N/A	WPL	N/A	07-AMS-AI5266	HISM	VX	07-164	LSS110-1A 07-110	C	21
LSS107	N/A	WPL	N/A	07-AMS-AI5267	HISM	VX	07-202	LSS111-1A 07-111	A/B	21
LSS112	N/A	WPL	N/A	07-AMS-AI5272	HISM	VX	07-121	LSS120-1A 07-120	A	21
LSS113	N/A	WPL	N/A	07-AMS-AI5273	HISM	VX	07-117	LSS123-1A 07-123	A	21
LSS114	N/A	WPL	N/A	07-AMS-AI5274	HISM	VX	07-137	LSS123-2A 07-123	A	21

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
LSS116	N/A	WPL	N/A	07-AMS-AI5276	HISM	VX	07-137	LSS123-3A 07-123	A	21
LSS118	N/A	WPL	N/A	07-AMS-AI5278	HISM	VX	07-137	LSS124-1A 07-124	B	21
LSS119	N/A	WPL	N/A	07-AMS-AI5279	HISM	VX	07-128	LSS125-1A 07-125	A/B	21
LSS120	N/A	WPL	N/A	07-AMS-AI5280	HISM	VX	07-128	LSS126-1A 07-126	B	21
LSS121	N/A	WPL	N/A	07-AMS-AI5281	HISM	VX	07-128	LSS125-2A 07-125	C	21
LSS122	N/A	WPL	N/A	07-AMS-AI5282	HISM	VX	07-128	LSS128-1A 07-128	C	21
LSS123	N/A	WPL	N/A	07-AMS-AI5283	HISM	VX	07-144	LSS142-1A 07-142	B	21
LSS124	N/A	WPL	N/A	07-AMS-AI5284	HISM	VX	07-148	LSS146-1A 07-146	B	21
LSS125	N/A	WPL	N/A	07-AMS-AI5285	HISM	VX	07-144	LSS146-2A 07-146	B	21
PER001H	N/A	GPL	N/A	00-AMS-AI5201	HISM	H	Perimeter Site 1	Perimeter Site 1	D	15
PER002H	N/A	GPL	N/A	00-AMS-AI5202	HISM	H	Perimeter Site 2	Perimeter Site 2	D	15
PER003H	N/A	GPL	N/A	00-AMS-AI5203	HISM	H	Perimeter Site 3	Perimeter Site 3	D	15
PER004H	N/A	GPL	N/A	00-AMS-AI5204	HISM	H	Perimeter Site 4	Perimeter Site 4	D	15
PER005H	N/A	GPL	N/A	00-AMS-AI5205	HISM	H	Perimeter Site 5	Perimeter Site 5	D	15
PER006H	N/A	GPL	N/A	00-AMS-AI5206	HISM	H	Perimeter Site 6	Perimeter Site 6	D	15
PER007H	N/A	GPL	N/A	00-AMS-AI5207	HISM	H	Perimeter Site 7	Perimeter Site 7	D	15
PER008H	N/A	GPL	N/A	00-AMS-AI5208	HISM	H	Perimeter Site 8	Perimeter Site 8	D	15
PER001G/V	N/A	GPL	N/A	00-AMS-AI5209	HISM	GB/VX	Perimeter Site 1	Perimeter Site 1	D	15

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
PER002G/V	N/A	GPL	N/A	00-AMS-AI5210	HISM	GB/VX	Perimeter Site 2	Perimeter Site 2	D	15
PER003G/V	N/A	GPL	N/A	00-AMS-AI5211	HISM	GB/VX	Perimeter Site 3	Perimeter Site 3	D	15
PER004G/V	N/A	GPL	N/A	00-AMS-AI5212	HISM	GB/VX	Perimeter Site 4	Perimeter Site 4	D	15
PER005G/V	N/A	GPL	N/A	00-AMS-AI5213	HISM	GB/VX	Perimeter Site 5	Perimeter Site 5	D	15
PER006G/V	N/A	GPL	N/A	00-AMS-AI5214	HISM	GB/VX	Perimeter Site 6	Perimeter Site 6	D	15
PER007G/V	N/A	GPL	N/A	00-AMS-AI5215	HISM	GB/VX	Perimeter Site 7	Perimeter Site 7	D	15
PER008G/V	N/A	GPL	N/A	00-AMS-AI5216	HISM	GB/VX	Perimeter Site 8	Perimeter Site 8	D	15
PMT510	NA	VSL	0.5	NA	CONF	G/V/H	Portable Mon Trailer 001	Portable Mon Trailer	N/A	8,9
PMT511	NA	VSL	0.5	NA	CONF	G/V/H	Portable Mon Trailer 001	Portable Mon Trailer	NA	8,9
PMT512	NA	VSL	0.5	NA	CONF	G/V/H	Portable Mon Trailer 001	Portable Mon Trailer	NA	8,9
BTR401	NA	WPL	NA	07-AMS-AI5291-A	HISM	VX	BTR-1 07-165	Box Transfer Room - 1 (Wand) 07-165	D	8, 16
BTR402	NA	WPL	NA	07-AMS-AI5291-B	HISM	VX	BTR-1 07-165	Box Transfer Room - 1 (Wand) 07-165	D	8, 16
BTR403	NA	WPL	NA	07-AMS-AI5291-C	HISM	VX	BTR-1 07-165	Box Transfer Room - 1 (Wand) 07-165	D	8, 16
BTR404	NA	WPL	NA	07-AMS-AI5291-D	HISM	VX	BTR-1 07-165	Box Transfer Room - 1 (Wand) 07-165	D	8, 16
BTR405	NA	WPL	NA	07-AMS-AI5291-E	HISM	VX	BTR-1 07-165	Box Transfer Room - 1 (Wand) 07-165	D	8, 16
BTR406	NA	WPL	NA	07-AMS-AI5291-F	HISM	VX	BTR-1 07-165	Box Transfer Room - 1 (Wand) 07-165	D	8, 16
BTR407	NA	WPL	NA	07-AMS-	HISM	VX	BTR-1 07-165	Box Transfer Room - 1	D	8, 16

APPENDIX E. MINICAMS/DAAMS MONITORING TABLE

Station Name	MINICAMS Tag	Mon Level	MINICAMS Alarm Level	DAAMS Tag	DAAMS Mode	Agent	Station Location	Area Monitored	Sample Point HAZ CAT	Notes
				AI5291-G				(Wand) 07-165		
BTR408	NA	WPL	NA	07-AMS-AI5291-H	HISM	VX	BTR-1 07-165	Box Transfer Room - 1 (Wand) 07-165	D	8, 16
BTR409	NA	WPL	NA	07-AMS-AI5290-A	HISM	VX	BTR-2 07-166	Box Transfer Room - 2 Wand 07-166	D	8, 16
BTR410	NA	WPL	NA	07-AMS-AI5290-B	HISM	VX	BTR-2 07-166	Box Transfer Room - 2 Wand 07-166	D	8, 16
BTR411	NA	WPL	NA	07-AMS-AI5290-C	HISM	VX	BTR-2 07-166	Box Transfer Room - 2 Wand 07-166	D	8, 16
BTR412	NA	WPL	NA	07-AMS-AI5290-D	HISM	VX	BTR-2 07-166	Box Transfer Room - 2 Wand 07-166	D	8, 16
BTR413	NA	WPL	NA	07-AMS-AI5290-E	HISM	VX	BTR-2 07-166	Box Transfer Room - 2 Wand 07-166	D	8, 16
BTR414	NA	WPL	NA	07-AMS-AI5290-F	HISM	VX	BTR-2 07-166	Box Transfer Room - 2 Wand 07-166	D	8, 16
BTR415	NA	WPL	NA	07-AMS-AI5290-G	HISM	VX	BTR-2 07-166	Box Transfer Room - 2 Wand 07-166	D	8, 16
BTR416	NA	WPL	NA	07-AMS-AI5290-H	HISM	VX	BTR-2 07-166	Box Transfer Room - 2 Wand 07-166	D	8, 16

NOTES:

1 ~~MINICAMS audible horn disabled~~ (Not Used)

2 Station may be installed with Low Volume Sampler (LVS)

3 Station installed with two-port stream selector

4 Station installed with 12-port stream selector

5 ~~Stations installed and only used during the VX campaign~~ (Not Used)

6 Station installed with sample conditioning system when monitoring at the SEL in a wet stack condition.

7 Portable Cart

8 Stations sampling airlock wands, EONC's, waste bags/boxes, or items which don't sample rooms

9 Station not connected to FCS

10 ~~Station installed with SEL MINICAMS/sampling condition system when monitoring wet filter condition or station installed with WPL DAAMS when monitoring dry filter condition~~ (Not Used)

11 Hot spare

12 Process support area, WPL DAAMS analysis performed at least every 28 days

13 Work area, continuous WPL DAAMS analysis performed

14 Work area, WPL DAAMS analysis performed daily only when personnel are present

15 RCRA compliance Stations (highlighted in light gray), any changes to these stations must be approved by KDEP

16 Non-Baseline DAAMS sampling, only upon request

17 ~~The filter mid-beds will be monitored between filter beds 1 and 2 and 2 and 3, and 4 and 5~~. (Not Used)

18 Confirmation DAAMS Analysis, only upon request.

19 Process Stations

20 Continuous GB WPL Monitoring

21 Process Stations annotated as non-process for INACCMO reporting

22 Temporary process support area, DAAMS monitoring performed only when required to support entries in less than Level C dress.

23 Dual agent DAAMS WPL monitoring and campaign VSL monitoring performed only when required to support entries in less than Level C dress.

ACRONYMS

CONF	confirmation monitoring
COM	commercial
EGEN	emergency (generator)
GPL	general population limit
HISM	historical monitoring
SEL	source emissions limit
VSL	vapor screening level
WPL	worker population limit
WSL	waste screening limit

APPENDIX F. CRITICAL RCRA PARAMETERS						
Item	**System**	**Parameter Description**	**Instrument Tag**	**Units**	**Critical Point**	**Setpoint**
1	SDS	Category A Sump Level	07-SDS-LI-6000--- 07-SDS-LI-6001--- 07-SDS-LI-6002--- 07-SDS-LI-6004--- 07-SDS-LI-6006--- 07-SDS-LI-6008--- 07-SDS-LI-6009--- 07-SDS-LI-6010--- 07-SDS-LI-6011--- 07-SDS-LI-6012--- 07-SDS-LI-6013--- 07-SDS-LI-6015--- 07-SDS-LI-6016--- 07-SDS-LI-6018--- 07-SDS-LI-6019---	in	< 3-in residual liquid within 24 hours of fill	< 3-in residual liquid
2	SDS	Category B Sump Level	07-SDS-LI-6251--- 07-SDS-LI-6256--- 07-SDS-LI-6257--- 07-SDS-LI-6258--- 07-SDS-LI-6259--- 07-SDS-LI-6260--- 07-SDS-LI-6261--- 07-SDS-LI-6262--- 07-SDS-LI-6263--- 07-SDS-LI-6265--- 07-SDS-LI-6266--- 07-SDS-LI-6269--- 07-SDS-LI-6270--- 07-SDS-LI-6770--- 07-SDS-LI-6771---	in	< 3-in residual liquid within 24 hours of fill	< 3-in residual liquid
3	SDS	Category C Sump Level	07-SDS-LI-6573--- 07-SDS-LI-6575--- 07-SDS-LI-6576--- 07-SDS-LI-6578--- 07-SDS-LI-6579--- 07-SDS-LI-6580--- 07-SDS-LI-6582--- 07-SDS-LI-6583--- 07-SDS-LI-6587--- 07-SDS-LI-6589--- 07-SDS-LI-6594--- 07-SDS-LI-6596--- 07-SDS-LI-6597--- 07-SDS-LI-6730--- 07-SDS-LI-6731--- 07-SDS-LI-6732--- 07-SDS-LI-6733--- 07-SDS-LI-6734--- 07-SDS-LI-6735---	in	< 3-in residual liquid within 24 hours of fill	< 3-in residual liquid
4	ANS, HSS, OTM	TraceTek® Leak Detection System	NA	NA	Alarm or visual leak determined by daily inspection	No Alarm or no visual leak as determined by daily inspection

5	RHS VRCM	Rocket Throughput	Rocket Counter	#	> 50 rockets /hr	50 rockets/hr
6	RHS PDS	Rocket Throughput	Rocket Counter	#	> 50 rockets/hr	50 rockets/hr
7	HSS	MT-HSS-0104	LSHH0012--	Ft	Level Switch Alarm State Off (Liquid Level <30.3)	< 30.3
8	HSS	MT-HSS-0105	LSHH0071A--	Ft	Level Switch Alarm State Off (Liquid Level <38.8)	< 38.8
9	HSS	MT-HSS-0205	LSHH0071B--	Ft	Level Switch Alarm State Off (Liquid Level <38.8)	< 38.8
10	HSS	MT-HSS-0604	LSHH0121A--	Ft	Level Switch Alarm State Off (Liquid Level <39.0)	< 39.0
11	HSS	MT-HSS-0704	LSHH0121B--	Ft	Level Switch Alarm State Off (Liquid Level <39.0)	< 39.0
12	ACS	MT-ACS-0105	LSHH1613--	Ft	Level Switch Alarm State Off (Liquid Level <HH=7.3)	< 7.3
13	ACS	MT-ACS-0106	LSHH1587--	Ft	Level Switch Alarm State Off (Liquid Level <HH=7.3)	< 7.3
14	ANR	MV-ANS-0101	LSHHH2132A--	Ft	Level Switch Alarm State Off (Liquid Level <HHH=8.8)	< 8.8
15	ANR	MV-ANS-0201	LSHHH2132B--	Ft	Level Switch Alarm State Off (Liquid Level <HHH=8.8)	< 8.8
16	SDS	MV-SDS-0101	LSHH1757-A-	Ft	Level Switch Alarm State Off (Liquid Level <HH=11.5)	<11.5
17	SDS	MV-SDS-0201	LSHH1757-B-	Ft	Level Switch Alarm State Off (Liquid Level <HH=11.5)	<11.5
18	SDS	MV-SDS-0301	LSHH1757-C-	Ft	Level Switch Alarm State Off (Liquid Level <HH=11.5)	<11.5
19	OTM	TOX Exhaust Flow	07-OTM-FIT-1871A/B	SCFM		980 – 2130
20	OTM	TOX Operating Temperature	07-OTM-TIC-3207A--/B--	°F	1700 - 2250	1700 – 2250
21	OTM	OTM Off-Gas Agent Level	07-AMS-AIT1938	VSL	< 1.0	< 1.0
22	HVAC	MDB Filter Stacks Agent Emission Level	08-AMS-AIT5015A/B 08-AMS-AIT5016A/B 08-AMS-AIT5017A/B 08-AMS-AIT5018A/B	VSL	1.0	< 1.0
23	HVAC	Filter Flow	08-HVAC-FIC7219 A/B/C/D/E/F/G/H/J/K/L/M/ N/P	ACFM	16,000	≤ 16,000

APPENDIX G. MAIN PLANT INTERLOCKS

System	Interlock Activation	Interlock Action
OTM System	Start-up, shut-down, or off-normal TOX conditions (<1800°F) with valve XV1400A-- / B-- not closed or >1 VSL agent in OTM off-gas downstream of blowers MA-OTM-0101A / MA-OTM-0101B	Diversion of OTM Condensate to SDS System
Each Tank System	Fluid level reaches HH or HHH in the tank	Feed pump cutoff or feed isolation valve activation (or both)

APPENDIX H. OFF-NORMAL EVENTS

System	Off-Normal Events	Response to Events
Munitions Receipt and Unpacking	Leaking rocket	Execute appropriate leaker response operations to isolate leaking rocket(s) in a single round container (SRC) and return to Blue Grass Chemical Activity (BGCA) for processing in a Static Detonation Chamber (SDC)
Rocket Handling System (RHS)	VRCM unable to remove SFT or leak identified	If VRCM robot detects upper section of SFT does not separate from lower section, the VRCM performs a second cut of the SFT. If SFT is still not removed and/or liquid is observed, the Control Room Supervisor will confirm reject designation for the rocket, and it will be containerized in an SRC. Following the WH cut, the operator must select "approve" to proceed with processing or "reject" to containerize the rocket in an SRC.
	Pump Failure (Drained Agent Pump)	Pause operations and schedule maintenance to repair or replace pump.
	RHS Hydraulic Power Units (HPU) Failure	Manually switch operation to online spare unit. Schedule maintenance for repair of failed unit.
	Drain Line Plugged	Purge/flush connections are provided to manually flush solids as needed.
	RWCS rejects canister or WH	If crimp station laser lid device determines lid is not seated properly, the robot pushes down on the canister lid for 5 seconds and laser lid device assesses seat. If still not seated properly, the operator inspects the canister and lid. If operator determines the canister top cap O-rings or canister body are not satisfactory, the operator rejects the canister, and the robot moves it to clean reject tray. If operators identify a cause for rejection of a WH following the 60 second hold vertically (i.e., possible agent contamination), it is placed in the reject storage bay. If a full canister is rejected from the crimp station (to the agent reject tray) due to possible canister agent contamination or verification of an unsatisfactory crimp, operations will stop to investigate the reason for the reject before resuming operations. Toxic area entries are performed to clear reject tables periodically (i.e., placing items on agent reject table in SRCs).
	EBH Room alarm	Pause operations and investigate potential agent contamination
	Alarm in Container Monitoring Airlock (CMA)	Confirm alarm using alternate MINICAMS and/or DAAMS analysis. If reading is confirmed initiate isolation procedures.
	Greater than WPL reading in BTR	Transfer crate to permitted location under engineering controls for further investigation and management.
	Alarm in TMA Conveyor Airlock	Return conveyor to TTR or TMA and allow pallet to air wash or execute surface decontamination and repeat airlock monitoring
Agent Collection and Neutralization	Loss of Agent Feed Pump	Spare pump starts, completes transfer of agent to hydrolyzers. Repair or replace failed pump.
	Loss of Agent Hydrolyzer Recirculation Pump During Agent Addition	Suspend agent transfer, flush lines, restart agent transfer process and use spare recirculation pump. Repair or replace failed pump.
	Loss of Agent Hydrolyzer Recirculation Pump During Recirculation/Mixing	Abort and restart the batch. Use spare recirculation pump. Repair or replace failed pump.
	Loss of Agent Hydrolyzer Agitator	Transfer batch contents to second hydrolyzer when available and schedule repair.
	Loss of Secondary Heat Transfer System	If possible (reasonable temperature rise), complete neutralization process; otherwise, stop operations and repair or replace failed equipment in the heat transfer system.
	Overpressurization of Reactor	Reactor vent opens at 15 psig; at 50 psig, rupture disk opens. Repair rupture disk if it has opened.
	Failed Hydrolysate Batch	Reprocess batch.
	Agent Hydrolyzer Heat Exchanger Tube Rupture	Implement emergency operation per SOP. Investigate all unplanned level increases in ANRs. Low-low level in the secondary heat transfer water tank shuts pumps off. Assess if contamination control measures are required based on batch operation at the time of failure. Repair or replace equipment.
	Thermal Oxidizer Offline	Divert vent lines from ACS and ANS to MDB HVAC system.

APPENDIX H. OFF-NORMAL EVENTS		
System	**Off-Normal Events**	**Response to Events**
	High Oxygen Level in Off-Gas from ANRs or ACS tanks.	Divert vent lines from ACS and ANS to MDB HVAC system.
OTM System	High-High Temperature in TOX Units, Process Gases, or Outlet Gases	Shutdown TOX units. Investigate cause, and make repairs and replace equipment as needed.
	Cyclone Outlet Gas High-High Temperature	Shutdown TOX units. Investigate cause, and make repairs and replace equipment as needed.
	Upper Spray Lance Water Nozzle Failure or Clog	Shutdown TOX units. Investigate cause, and make repairs and replace equipment as needed.
	Upper or Lower Quench Low or Loss of Air Flow	Shutdown TOX units. Investigate cause, and make repairs and replace equipment as needed.
	Scrubber High-High Liquid Level	Use spare pump for recirculation, and make repairs or replace failed pump if is cause of high-high level. Investigate other causes, and make repairs and replace equipment as needed.
	Both MPT Blowers Not Running	Shutdown TOX units. Repair or replace blowers.