

## MODULE I

### STANDARD PERMIT CONDITIONS

#### I.A. EFFECT OF PERMIT

- I.A.1. The Permittee is allowed to store hazardous waste in containers, treat and store hazardous waste in tanks, and treat hazardous waste in incinerators at the TOCDF Facility in accordance with the conditions of this permit and in accordance with R315-5.
- I.A.2. Metal emissions from all Facility sources, including TOCDF, CAMDS, and Deseret Chemical Depot Open Burning/Open Detonations, shall remain in accordance with Tier I limits specified in Conditions V.A.2.d., V.B.2.d., V.C.2.d, and V.D.2.d. The permitted emission limits have been modified, in accordance with R315-3-15, upon completion of a Health Risk Assessment to incorporate the findings of the Health Risk Assessment.
- I.A.3. Any treatment, storage, or disposal of hazardous waste not authorized in this permit, or any other RCRA permits is prohibited.
- I.A.4. Pursuant to R315-3-13, compliance with this permit generally constitutes compliance, for purposes of enforcement, with the Utah Solid and Hazardous Waste Act and RCRA, as amended by HSWA, except for those requirements which become effective by statute, or future regulatory changes to include those requirements promulgated under R315-13 restricting the placement of hazardous wastes in or on the land.
- I.A.5. 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.

#### I.B. ENFORCEABILITY

Violations duly documented through the enforcement process and upheld through judicial action, pursuant to Utah Code Annotated 26-14.13, may result in penalties assessed in accordance R315-102.

#### I.C. OTHER AUTHORITY

The Board expressly reserves any right of entry provided by law and any authority to order or perform emergency or other response activities as authorized by law.

#### I.D. PERMIT ACTIONS

- I.D.1. This permit may be modified, revoked and reissued, or terminated for cause, as specified in R315-3-15 and R315-3-16.

auxiliary equipment or similar systems only when necessary to achieve compliance with the conditions of this permit.

**I.N. DUTY TO PROVIDE INFORMATION**

The Permittee shall furnish to the Board and the Executive Secretary, within a reasonable time, any relevant information which the Board or the Executive Secretary 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 Board and the Executive Secretary upon request, copies of records required to be kept by this permit.

**I.O. INSPECTION AND ENTRY**

**I.O.1** Pursuant to the Utah Solid and Hazardous Waste Act, UAC 26-14-9, the Permittee shall allow the Board, the Executive Secretary, or their authorized officer, employee, or representative, upon the presentation of credentials and other documents, as may be required by law, to:

- o Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept as required by the conditions of this permit;
- o Have access to and copy, at reasonable times, any records that are kept as required by the conditions of this permit;
- o Inspect at reasonable times any portion of the Facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- o Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Utah Solid and Hazardous Waste Act or RCRA, any substances or parameters at any location.

**I.O.2** The Executive Secretary, or an appointed representative, shall be allowed to make record of inspections by photographic, electronic, video tape, or any other reasonable medium. A written request for a permit for this purpose will be provided.

**I.P. MONITORING AND RECORDS**

**I.P.1.** The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings (or equivalent recordings) for continuous monitoring instrumentation, copies of all reports required by this permit, the certification required by R315-8-5.3. (40 CFR Section 264.73(b)(9) incorporated by reference), and records of all data used to complete the application for this permit for a

Spent Decontamination Holding Tank System  
Agent Tank System  
Liquid 1 Incinerator and Pollution Abatement System  
Liquid 2 Incinerator and Pollution Abatement System  
Metal Parts Furnace and Pollution Abatement System  
Deactivation Furnace and Pollution Abatement System  
Dunnage Incinerator and Pollution Abatement System  
Brine Reduction Area Tanks and Pollution Abatement System  
Container Handling Building  
Demilitarization Machines By Systems  
HVAC System  
Agent Quantification System

**I.T.            TRANSFER OF PERMIT**

This permit shall be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to R315-3-15. and R315-3-14. Prior to transferring ownership or operation of the TOCDF Facility during its operating life, the Permittee shall notify the new owner or operator, in writing, of the requirements of R315-3, R315-8, and this permit.

**I.U.            TWENTY-FOUR HOUR REPORTING**

**I.U.1.**            In accordance with R315-3-10(l)(6), the Permittee shall verbally report to the Executive Secretary any noncompliance with this permit which may endanger human health or the environment. Any such information shall be reported as soon as possible, but not later than twenty-four (24) hours from the time the Permittee becomes aware of the noncompliance.

**I.U.1.a.**            Potential endangerment to human health and the environment shall include, but not be limited to, non compliance with Condition II.A.1.

**I.U.1.b.**            Potential endangerment to human health or the environment shall include, but not be limited to, any release to the environment of a "P999" hazardous waste as listed in R315-2-11(e)(1) (chemical agents, i.e., VX, GB, H, HD, and HT) or a "F999" hazardous waste as listed in R315-2-10(d) (chemical agent residues) which results in the following:

- o            agent concentrations, at the Facility boundary or at any of the Facility monitoring stations, exceeding the General Population Limits specified in Table 1 for each agent.
- o            agent concentration, exceeding the Work Place Limits specified in Table 1 at any agent monitor within a TOCDF Facility area not in a contained area connected to the air filtration system.

## MODULE III CONTAINERS

[Note: The TOCDF shall be permitted for container storage areas, including the Container Handling Building(CHB), Unpack Area (UPA), Explosive Containment Room Vestibule (ECV), Upstairs Munitions Corridor (UPMC), the S-2 warehouse, and the TMA Container Storage Area. The CHB, UPA, and ECV shall be limited to the storage of munitions and bulk containers containing chemical agents, explosives, and propellants (hazardous waste numbers P999, D003, D005, D008). The TMA Container Storage Area shall be limited to the storage of wastes with the following waste codes: P999, D003, D005, and D008. The S-2 warehouse shall be limited to the storage of XXX-category site-generated wastes (hazardous waste numbers P999, D001, D002, D003, D005, D008, D011, F999, F002, F003, F005). The UPMC shall be limited to the storage of munitions and bulk containers containing chemical agents and explosives (hazardous waste numbers P999 and D003).]

**III.A.** The dust/ash collected from the Deactivation Furnace System cyclone shall be stored within the Deactivation Furnace System - cyclone discharge enclosure in accordance with the requirements specified in R315-5 or the area shall be permitted for storage in accordance with R315-3-17. Storage in this area shall continue until such time that the cyclone dust/ash is transferred for treatment or until the cyclone dust/ash is placed into permitted storage. Alternatively, the Permittee may demonstrate that the agent concentration of a sample of the residue generated from the operation of the DFS Cyclone is below 20 ppb for GB or VX, or below 200 ppb for H/HD/HT, by way of analytical testing according to the procedures in Attachment 2. If these analytical results indicate that the agent concentration of the cyclone residue is below these limits, then the residue may be transported off-site to an appropriate facility for treatment and/or disposal.

**III.B. PERMITTED AND PROHIBITED WASTE IN THE S-2 WAREHOUSE, THE TMA, AND THE CONTAINER STORAGE AREAS**

**III.B.1.** The Permittee shall store the following wastes in overpack containers in the Container Handling Building and the Unpack Area subject to the terms of this permit and as follows. Also, the Permittee shall store the following wastes in containers in the Explosive Containment Room Vestibule and the Upstairs Munitions Corridor subject to the terms of this permit and as follows:

Description of Hazardous Waste	Utah, EPA Hazardous Waste #	Maximum Volume, gal			
		CHB	UPA	ECV	UPMC
Agent GB	P999, D003	31721	2,972	680	3,855
Agent VX	P999, D003	36555	3,424	833	4,366

Description of Hazardous Waste	Utah, EPA Hazardous Waste #	Maximum Volume, gal			
		CHB	UPA	ECV	UPMC
Mustard Agents - (H, HD, HT)	P999, D003	30827	2,880	671	4,145
Explosives	P999, D003	-	-	-	note 1
Propellants	P999, D003	-	-	-	N/A
Fuzes	P999, D003	-	-	-	N/A
Detonators	P999, D005, D008, D003	-	-	-	N/A
Squibs	P999, D003	-	-	-	N/A
Igniters	P999, D003	-	-	-	N/A
Initiators	P999, D003	-	-	-	N/A
Bursters	P999, D003	-	-	-	note 1
Mine Bodies	P999, D003	-	-	-	N/A
Rocket Components	P999, D003	-	-	-	N/A
Munition Body Components	P999, D003	-	-	-	-
Mine Drums	P999, D003	-	-	-	N/A

Note 1: Normally, the energetics (e.g., bursters, explosives) will be removed from the projectiles/mortars in the ECRs before storage in the UPMC. However, if the burster detection systems, located at the Projectile Output Conveyor discharge stops in the UPMC, detects energetics, then the munitions with the detected energetics will be loaded onto reject tables in the UPMC for storage.

III.B.2. The Permittee shall not exceed a maximum storage capacity of 48 overpacks in the Container Handling Building at any one time. The permittee shall not exceed a maximum storage capacity of 9 ONCs, 12 Spray Tank Overpacks, or 40 MK-116 Bomb Overpacks in the Unpack Area at any one time.

III.B.3. The Permittee shall not exceed the maximum allowable number of munitions per individual overpack as specified below and shall not exceed the maximum allowable total number of munitions in the Container Handling Building (CHB), the Unpack Area (UPA), the Explosive Containment Room Vestibule (ECV), and the Upstairs Munitions Corridor (UPMC) as specified below:

Munition	Maximum Allowable Number/Overpack	Maximum Allowable Number			
		CHB	UPA	ECV	UPMC
155 mm projectile	96	4608	864	28	1,004
MC-1 Bomb	4	192	36	8	38
M55 rocket	30	1440	270	6	N/A
Mine	36	1728	324	60	N/A
Ton container	2	96	18	4	19
Spray tank	1	48	12	1	10
4.2" mortar	192	9216	1,728	38	1,957
105 mm projectile	96	4608	864	30	1,956
MK-116 bomb	1	48	40	4	19

[Note: Spray tanks and MK-116 bombs may be stored in the original transport overpacks in the Container Handling Building or the Unpack Area, if the original transport container meets the criteria specified in Condition III.C.]

- III.B.4. The Permittee shall not store hazardous waste that is not identified in Condition III.B.1. in the Container Handling Building, Unpack Area, Explosive Containment Room Vestibule, or Upstairs Munitions Corridor..
- III.B.5. The Permittee may store wastes in containers in the TMA Container Storage Area subject to the terms of this permit and provided that the maximum volume of containerized waste stored in the TMA Container Storage Area does not exceed 2,200 gallons. The Permittee may also store agent-contaminated parts and equipment in the TMA.
- III.B.6. The Permittee may store site-generated wastes in containers in the S-2 warehouse subject to the terms of this permit and provided that the maximum volume of containerized waste stored in the S-2 warehouse does not exceed 38,720 gallons.
- III.B.7. The Permittee shall not exceed a maximum volume of 600 gallons of containerized waste per secondary containment pallet in the S-2 warehouse at any one time. Except as provided in Attachment 12, the volume of a single container stored on a secondary containment pallet in the S-2 warehouse shall not exceed 60 gallons.

**III.C. CONDITION OF CONTAINERS**

If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this permit.

**III.D. COMPATIBILITY OF WASTE WITH CONTAINERS**

The Permittee shall assure that the ability of the container to contain the waste is not impaired, in accordance with R315-8-9.3.

**III.E. MANAGEMENT OF CONTAINERS**

In the CHB, the Permittee shall keep all containers closed during storage, except when it is necessary to add or remove waste and shall not open, handle, or store containers in a manner which may rupture the container or cause it to leak. In the S-2 warehouse, the Permittee shall keep all containers closed except when adding or removing waste (includes periodically monitoring the vapor space within the container) and shall not handle or store containers in a manner which may rupture the container or cause it to leak.

**III.F. SECONDARY CONTAINMENT SYSTEM**

III.F.1. The overpack meets secondary containment requirements of 40 CFR 264.175 for the munitions contained within. The types of overpacks used are On-Site Containers (ONC), Spray Tank Overpacks, and MK116 Bomb Overpacks. ONCs are used to store all munitions and bulk containers except spray tanks and MK116 bombs. The latter two items are stored in item-specific overpacks (also referred to as shipping containers). The sumps and corresponding trenching located in the Container Handling Building are not used as secondary containment but are used to collect moisture or precipitation (storm water runoff) that may drip from the overpack exterior.

III.F.2. With the exception of the munition loading activities that may occur in the UPA (ref. Attachment 12), ONCs shall be tested for vapor tightness every time munitions are placed into each ONC. Spray Tank and MK116 Bomb Overpacks shall also be tested for vapor tightness prior to receipt in the Container Handling Building.

III.F.3. Records of vapor tightness testing shall be kept on site as part of the TOCDF operating record and shall be subject to inspection.

III.F.4. The secondary containment systems for the ECV and UPMC shall be designed and operated as specified in Attachment 12.

**III.G. INSPECTION SCHEDULES AND PROCEDURES**

The Permittee shall inspect the container areas weekly, in accordance with the Inspection Plan, in Attachment 5, to detect leaking containers and deterioration of containers and the containment system caused by corrosion and other factors.

**III.H. RECORDKEEPING**

The Permittee shall document the results of all waste analyses and trial burn tests in the operating record, in accordance with Condition II.I.

**III.I. CLOSURE**

At closure of the container area, the Permittee shall remove all hazardous waste and hazardous waste constituents from the containment system, in accordance with the procedures in the Closure Plan in Attachment 10.

**III.J. REACTIVE WASTES**

The Permittee shall take precautions to prevent accidental reaction of wastes and follow the procedures specified in Attachments 8 and 12.

**III.K. INCOMPATIBLE WASTE**

III.K.1. The Permittee shall place containerized waste with only one type of chemical agent in the Container Handling Building, Unpack Area, Explosive Containment Room Vestibule, Upstairs Munitions Corridor, or the TMA Container Storage Area at a time. In the S-2 warehouse, the permittee shall place containers with only one type of XXX-category site-generated waste in a secondary containment pallet at one time.

III.K.2. The Permittee shall not place chemical agent or munitions containing that chemical agent in an unwashed container that previously held a different chemical agent or munitions containing that chemical agent. The Permittee shall not place waste in an unwashed container that previously held an incompatible waste or material.

## MODULE IV - TANK SYSTEMS

### IV.A. APPLICABILITY

The requirements of this Module pertain to the storage and treatment of hazardous waste in the tank systems identified IV.B.1. The Permittee shall comply with R315-8-10 and the conditions of this permit for all tank systems.

### IV.B. WASTE IDENTIFICATION AND TANK USAGE

IV.B.1. The Permittee may only store at the listed maximum capacity, and treat if applicable, the hazardous waste materials shown for the following tank systems:

HAZARDOUS WASTE STORAGE AND TREATMENT TANK SYSTEMS				
Tank Number	Maximum Storage Capacity Gallons	Nominal Tank Dimensions <sup>1</sup>	Allowable Waste Codes	Permitted Management Activity
ACS-TANK-101	500 agent 582 misc. liquids	3'-6" diameter 9'-9" high	D003, P999	Storage of agent and miscellaneous agent contaminated liquids
ACS-TANK-102	1,130	4'-6" diameter 11'-9" high	F999, D002, D003, P999	Storage of agent and miscellaneous agent contaminated liquids
SDS-TANK-101 SDS-TANK-102 SDS-TANK-103	2,200	6'-0" diameter 11'-6" high	F999, D002, D003, P999	Storage and treatment of spent decon solutions and miscellaneous agent contaminated liquids from a spill
BRA-TANK-101 BRA-TANK-102 BRA-TANK-201 BRA-TANK-202	42,900	20'-0" diameter 20'-0" high	F999, D002, D004 through D011	Storage and treatment spent scrubber brines and BRA liquids
<b>NOTES:</b>				
1. See Attachment 16 for design information for the ACS, SDS and BRA tank systems.				

IV.B.2. The sumps listed in Permit Table 14, used to collect decontamination solutions, agent and miscellaneous liquid spills are also regulated by this Module. These sumps, also called Intermittent Collection Units (ICUs) by the Permittee, may be used to treat agent and agent contaminated hazardous wastes with decontamination solution before they are pumped to one of the permitted spent decontamination tank systems. Only wastes with the codes F999, D002, D003 and P999 are allowed in these sumps. The maximum capacity of these sump systems as shown in Table 14 shall not be exceeded. Wastes shall not remain in these sumps for more than 24 hours.

IV.B.3. Off-site generated hazardous waste materials shall not be placed in any of the permitted tank or sump systems.

IV.B.4. Laboratory wastes shall not be placed in any of the permitted tank and sump systems except for brines and their salt residues as allowed by IX.B.3.

#### IV.C. GENERAL OPERATING REQUIREMENTS

IV.C.1. The Permittee shall not place hazardous wastes, treatment reagents, or other incompatible materials in a tank system if they could cause the tank, its ancillary equipment, or the secondary containment sump to rupture, leak, corrode, or otherwise fail.

IV.C.2. The Permittee shall not place hazardous wastes in a tank or sump system unless that system has been completely decontaminated and cleaned if it held a different chemical agent or stored an incompatible material.

IV.C.3. Diesel fuel and fuel oil may be stored in the Agent Storage Tanks ACS-Tank-101 and 102, and the Spent Decontamination Tanks SDS-Tank-101, 102, and 103, only for the purpose of decontaminating a tank system for maintenance or to clean a tank system between different agent campaigns. Diesel fuel and fuel oil with a flash point less than 140 °F shall not remain in any of the ACS and SDS tank systems for more than 72 hours. After use, these contaminated fuels must be burned in the primary combustion chamber of a Liquid Incinerators.

IV.C.4. The design and operating descriptions of the permitted tank systems are provided in Attachment 16. Operation of the permitted tank and sump systems shall comply with Attachment 16.

IV.C.5. Waste shall not be added to any of the tanks described in Condition IV.B.1. unless all level control instrumentation identified in Attachment 6 are operational in accordance with the manufacturer's specifications and the level devices are fully calibrated for the liquid density of the stored waste.

- IV.C.6. If treatment is conducted in a tank system, sufficient freeboard shall remain so the permitted tank capacity shall not be exceeded when decontamination solutions are added.
- IV.C.7. Any tank used to store or treat a hazardous waste at TOCDF shall be equipped with a level control device that prevents the tank system from exceeding the permitted capacity.
- IV.C.8. The Permittee may transfer liquids accumulated in PAS Sump 110 to the brine storage tanks provided that prior to transfer, the Permittee has analyzed the liquids in accordance with the waste analysis plan in Attachment 2.

**IV.D. SPECIFIC OPERATING CONDITIONS - AGENT STORAGE TANKS**

- IV.D.1. The only materials allowed in tanks ACS-Tank-101 and 102 are liquid hazardous waste chemical agents, miscellaneous agent contaminated liquid wastes that will be treated in the LIC primary combustion chambers, and decontamination or cleaning solutions used to decontaminate the system after agent campaigns and prior to maintenance activities.
- IV.D.2. The only chemical agents that can be placed in the Agent Collection System and Tanks ACS-Tank-101 and ACS-Tank-102, are GB, VX and Mustard (H/ HD/HT) and their natural occurring break-down products.
- IV.D.3. The miscellaneous agent contaminated wastes allowed in the Agent Collection System and Tanks are identified in Attachment 2, Waste Analysis Plan, Section 2.2.1.13.
- IV.D.4. The maximum storage capacity of the Agent Holding Tank, ACS-Tank-101, shall be 582 gallons, except for agent. No more than 500 gallons of agent shall be stored in this tank. The maximum tank level, measured from the tangent of the bottom dome, shall not exceed 7'-6" for non-agent wastes and 6'-3" for agent.
- IV.D.5. The maximum storage capacity of Agent Surge Tank, ACS-Tank-102, shall be 1,130 gallons. The maximum tank level, measured from the tangent of the bottom dome, shall not exceed 8'-9".

**IV.E. SPECIFIC OPERATING CONDITIONS - SPENT DECONTAMINATION STORAGE TANKS**

- IV.E.1. The only materials that shall be placed in Spent Decontamination Storage Tanks, SDS-Tank-101, 102 and 103, are spent sodium hydroxide and sodium hypochlorite decontamination solutions, the miscellaneous liquid wastes identified in Permit

Attachment 2, Section 2.2.1.13, and cleaning solutions used to decontaminate the system after agent campaigns and prior to maintenance activities.

- IV.E.2. The maximum storage capacity of the Spent Decontamination Storage Tanks, SDS-Tank-101, 102 and 103, shall not exceed 2,200 gallons in each tank. The maximum tank level, measured from the tangent of the bottom dome, shall not exceed 9'-5".
- IV.E.3. The only treatment allowed in the Spent Decontamination Storage Tanks shall be the addition of approved decontamination solutions when the chemical agents GB and VX are detected above 20 parts per billion (ppb), and the Mustard compounds H/HD/HT are detected above 200 ppb.
- IV.E.4. The Permittee shall maintain a minimum of one Spent Decontamination Tank (SDS-Tank-101, SDS-Tank-102, or SDS-Tank-103) free of waste when chemical agent (P999) is being processed or stored at TOCDF.
- IV.E.5. The Permittee may use the empty tank specified in Condition IV.E.4. to manage wastes in the event of a major spill as a result of a tank failure, munition over-pack failure, etc.
- IV.E.6. The Permittee shall not process any munitions at the time of a major waste spill if the munitions have not passed the Explosive Containment Vestibule until such time that the circumstance(s) which resulted in the major waste spill has been rectified and a minimum of one Spent Decontamination Tank is free of waste, as specified in Condition IV.E.4.
- IV.E.7. The permittee shall manage waste accumulated in each SDS tank as an operating batch. A batch of waste shall be the volume of liquid accumulated in the tank when filling of the tank has been stopped and the Permittee has determined that no additional waste will be added to the tank before it is to be emptied. Prior to emptying the tank, the Permittee shall sample and analyze each batch of waste for agent, pH, and total organics in accordance with the Waste Analysis Plan (Attachment 2).
- IV.E.8. Each batch of liquid waste accumulated in the SDS tanks that is derived from the decontamination of chemical agent shall be incinerated in the secondary chambers of the Liquid Incinerators. Only liquid wastes having an agent concentration at or below 20 part per billion (ppb) for GB, 20 ppb for VX, and 200 ppb for H/HT/HD shall be incinerated in the secondary chamber of the Liquid Incinerators.
- IV.F. SPECIFIC OPERATING CONDITIONS - BRINE STORAGE TANKS**
- IV.F.1. The only materials that shall be placed in Brine Storage Tanks, BRA-Tank-101, 102, 201, and 202, are spent scrubber brines from the incinerator pollution abatement systems (PAS), liquid wastes from Sump 110, decontaminating solutions, liquids

collected in the BRA secondary containment system, solutions used to clean the BRA heat exchanger, and decontamination or cleaning solutions used to decontaminate the system after agent campaigns and prior to maintenance activities.

- IV.F.2. The cleaning solutions referenced in Condition IV.F.1. shall be limited to 900 gallons per batch of a nominal 3% by weight hydrochloric acid solution or a citric acid solution. These solutions shall only be added to a BRA tank when there is a minimum of 10,000 gallons of brine in the tank.
- IV.F.3. No ignitable or reactive waste may be stored in the Brine Storage Tanks.
- IV.F.4. The maximum storage capacity of the Brine Storage Tanks, BRA-Tank-101, 102, 201 and 202, shall be 42,900 gallons per tank. The maximum tank level, measured from the bottom of the tank, shall not exceed 18'-3".
- IV.F.5. The only treatment allowed in the Brine Storage Tanks shall be the addition of approved decontamination solutions when the chemical agents GB and VX are detected above 20 parts per billion (ppb), and the Mustard compounds H/HD/HT are detected above 200 ppb.
- IV.F.6. Contaminated liquids shall not be pumped from the Brine Storage Tanks until concentration levels are at or below 20 parts per billion (ppb) for agents GB and VX, and 200 ppb for Mustard, H/HD/HT.
- IV.F.7. The permittee shall manage waste accumulated in the BRA tanks in batches. A batch of waste shall be the volume of liquid accumulated in the tank when filling of the tank has been stopped and the Permittee has determined that no additional waste will be added to the tank before it is to be emptied. At such time, the Permittee shall sample and analyze the waste contained in that tank in accordance with the Waste Analysis Plan in Attachment 2.
- IV.F.8. Waste in the Brine Storage Tank System shall be processed either through the Brine Reduction Area or transferred off-site to an approved facility for treatment and disposal.
- IV.G. **SUMPS DESIGNATED AS 24-HOUR INTERMITTENT COLLECTION UNITS (ICUs)**
- IV.G.1. Hazardous wastes may be stored in the sumps (Intermittent Collection Units) identified in Table 14 for a period not to exceed 24 hours. Sumps shall be pumped at least once every 24 hour period if liquids are detected.

IV.G.2. Compliance with Condition IV.G.1. shall be documented in the operating record by recording the time, and the duration between activation and deactivation of each sump's low level indicator instrument.

**IV.H. OPERATING PROCEDURES FOR BRINE TANKS SECONDARY CONTAINMENT SUMP**

IV.H.1. If the Permittee detects liquids in the Brine Storage Tank System sump (identified by the associated pump number, BRA-PUMP-103 in Table 14), within 24 hours the Permittee shall manage the liquids in one of the three following methods:

a. The accumulated liquids can be transferred to a BRA storage tank where the liquids shall be managed as a hazardous waste;

b. The accumulated liquids can be transferred off-site where these accumulated liquids will be managed as a hazardous waste (spent scrubber brines) as specified in Section 2.2.2.13 of the Waste Analysis Plan in Attachment 2; or

c. If it can be demonstrated, in accordance with R315-2-3, that the material removed from the sump is precipitation which does not contain listed hazardous wastes, the material may be managed as a non-hazardous waste. For the purposes of demonstrating that the material does not contain a listed waste (e.g., spent scrubber brine), or is not derived from a listed waste, the analytical results obtained must indicate that the concentrations for TCLP metals, and TCLP organics are below the corresponding detection limits and the density is equal to  $1 \pm 0.05$  g/ml. If these criterion are met the material may be managed as a non-hazardous waste.

**IV.I. INSPECTION SCHEDULES AND PROCEDURES**

IV.I.1. The Permittee shall inspect the tank and sump systems in accordance with the inspection schedule provided in Attachment 5, Table 1.

IV.I.2. The Permittee shall inspect the following components of the permitted tank systems, at a minimum, of once every 24 hours:

a. Above ground portions of the tank system, including the bottom of the tank(s), to detect corrosion or releases of waste;

b. 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;

c. Operating Record notes concerning the level control equipment to ensure that the tank systems are being operated according to their design and operating procedures.

IV.I.3. The Permittee shall inspect the following components of the sump systems, at the time intervals specified below:

a. The level probe PDARs readings should be reviewed once every 24 hours to verify that the correct signals are being transmitted from the sump systems;

b. A visual inspection of every sump system shall be conducted at least once per week whenever hazardous waste materials are present in the Munitions Demilitarization Building.

c. Inspections and equipment function testing during each agent campaign change-over shall comply with the activities described in Table F-2-1 in Attachment 5.

IV.I.4. PAS Sump 110 shall be visually inspected daily for the presence of liquids. Accumulated liquids, in excess of 3" depth, must be sampled, analyzed and removed within 24 hours of detection.

IV.I.5. If any SDS or BRA tanks have been out of service for 360 or more days, they shall be recertified by a qualified, independent professional engineer that the tank system is capable of storing liquid hazardous waste for the intended life of the system. The Permittee shall have this certification performed before the tank is put back into service. The certification report shall then be submitted to the Executive Secretary within 15 days of returning the tank system to service.

#### **IV.J. RESPONSE TO LEAKS OR SPILLS**

IV.J.1. In the event of a leak or a spill from a tank system, from a secondary containment sump system, or if a system becomes unfit for continued use, the Permittee shall remove the system from service immediately and initiate the following activities:

a. Stop the flow of hazardous waste into the system and inspect the system to determine the cause of the release.

b. Contain any visible release to the environment. The Permittee shall immediately conduct a visual inspection of all releases to the environment and based on that inspection: (1) prevent further migration of the leak or spill to soils or surface water and (2) remove and properly dispose of any visible contamination of the soil or surface water.

c. Remove waste and accumulated precipitation from the system within 24 hours of the detection of the leak to prevent further release and allow inspection and repair of the system. If the Permittee finds that it will be impossible to remove the waste within this time period, the Permittee shall notify the Executive Secretary within 24 hours of that determination;

d. For a release caused by a spill that has not permanently damaged the integrity of the system, the Permittee shall remove the released waste and make the necessary repairs to fully restore the tank or sump system before it is put back into service.

IV.J.2. If the Permittee replaces a component of the tank system to eliminate a leak, that component must satisfy the requirements for new tank systems or components in R315-8-10 (40 CFR Sections 264.192 and 264.193 incorporated by reference).

IV.J.3. After all major tank or sump system repairs, the Permittee shall obtain a certification by an independent, qualified, registered professional engineer that the repaired system is capable of handling hazardous wastes without release for the intended life of the system before returning the system to service. Examples of major repairs are: installation of an internal liner, repair of a ruptured tank, or repair or replacement of a secondary containment vault.

#### **IV.K. CALIBRATION REQUIREMENTS**

IV.K.1. The Permittee shall maintain, calibrate, and operate all process monitoring, control and recording equipment, as specified in Attachment 6, whenever hazardous waste materials are present in a permitted tank system.

#### **IV.L. RECORD KEEPING AND REPORTING**

IV.L.1. The Permittee shall verbally report to the Executive Secretary within 24 hours of detection, when a leak or spill occurs from a tank system or secondary containment system.

IV.L.2. Releases from a tank system that are contained within a secondary containment system need not be reported unless they occur from an unexplained source. All pertinent information about a release shall be recorded in the facility Operating Record.

IV.L.3. Within 30 calendar days of detecting a release to the environment from a tank system or a secondary containment system, except for P999 and F999 wastes which require a written report in five (5) days as specified by Permit Conditions in Section I.U., the Permittee shall report the following information to the Executive Secretary:

a. Likely route of migration of the release;

- b. Characteristics of the surrounding soil (including soil composition, geology, hydro geology, and climate) including proximity of down gradient drinking water, surface water, and populated areas;
- c. Results of any monitoring or sampling conducted in connection with the release. If the Permittee finds it will be impossible to meet the written report time period, the Permittee shall provide the Executive Secretary with a schedule of when the results will be available. This schedule must be provided in writing before the required submittal period expires;
- d. Description of response actions taken or planned to minimize the spill impact on the environment;
- e. Describe the repairs, design changes or operating procedures to the tank system to minimize the potential for addition spills or leaks.

IV.L.4. The Permittee shall keep on file at the facility, the written statements by those persons that certify the design, installation and integrity of the tank systems until such time that those tank systems are certified closed.

IV.L.5. In the event that a tank exceeds the maximum allowable capacity designated for that system, the Permittee shall document the following information in the facility Operating Record and notify the Executive Secretary in writing within seven (7) days of discovery:

- a. The date and time of occurrence;
- b. Identify the tank system and the contents at the time of the occurrence;
- c. Indicate if any other available tank storage volume within the system was available and if no additional storage capacity was available within the storage system, indicate if the associated collection and treatment activities were automatically stopped;
- d. Describe if the tank system automatically switched from the High-High level tank to a tank with the available storage capacity and the tank intake valves were automatically closed;
- e. Indicate if any associated incinerator automatic waste feed cutoff interlocks were required. Identify the required interlock and whether the interlocks were successfully activated; and
- f. Describe the operating control procedures that allowed the tank system to exceed the maximum allowable storage capacity (e.g., why the operator was

not successful in managing the waste within the high level volume working capacity).

IV.L.6. The Permittee shall document and record the results of each Spent Decontamination Holding Tank System waste analysis and any subsequent treatment.

IV.L.7. The Permittee shall document and record the results of each Brine Reduction Area Storage Tank System waste analysis and any subsequent treatment.

**IV.M. CLOSURE**

IV.M.1. The Permittee shall close the Tank Systems in accordance with the Closure Plan, included as Attachment 10 .

up monitor shall be stationed in the stack for contingency purposes, i.e., primary monitor malfunctions or calibration.

- V.A.1.m.i. Agent monitor ( DAAMS Tube) on the common stack shall be analyzed at a frequency of one tube per four hours of sampling with a corresponding QP sample.
- V.A.1.m.ii. Data from all ACAMS shall be reported on PDARS.
- V.A.1.l.m.iii. Data from all DAAMS analyze shall be reported in the operation record.
- V.A.1.m.iv. Confirmed Agent Alarms shall be verbally reported to the Executive Secretary within 24 hours of confirmation.

**V.A.2. PERFORMANCE STANDARDS**

V.A.2.a. The LICs must achieve a destruction and removal efficiency (DRE) of 99.9999% for the surrogate, and 99.9999% for the chemical agent, trial burn principal organic hazardous constituents (POHCs), designated below and in Condition VI.A.2.d.

Surrogate POHCs	Chemical Agent POHCs
Tetrachloroethylene Trichlorobenzene	GB, VX, Mustard individually

The DRE shall be calculated by the method specified in R315-14-7.

V.A.2.b. The particulate matter emission from the common stack, corrected to 7% oxygen in accordance with the formula given below, shall not exceed 180 milligrams per dry standard cubic meter.

$$P_c = P_m \times 14 / (21 - Y)$$

Where:

- $P_c$  = corrected concentration of particulate matter
- $P_m$  = measured concentration of particulate matter
- $Y$  = measured  $O_2$  in the stack gas

V.A.2.c. The hydrogen chloride emission from the common stack shall not exceed four (4) pounds per hour, or one (1) percent of the total hydrogen chloride in the combustion gas streams from the LICs, MPF, and DFS, prior to entering any pollution control equipment, whichever is greater. However, the sum of hydrogen chloride emissions from both stacks, common stack and DUN stack, shall not exceed 9.27\* pounds per hour.

V.A.2.d. Toxic metals emissions shall be controlled by limiting the metal constituent feed to the LICs in accordance with the Screening Risk Assessment (February 1996) findings. LIC feed rates are specified in Condition V.A.3.a.

V.A.2.e. The Permittee shall control emissions of products of incomplete combustion from the stack such that the carbon monoxide (CO) level in the redundant furnace exhaust blowers, corrected to 7% oxygen in accordance with the formula given below, shall not exceed 100 parts per million (ppm), dry volume, over a one hour rolling average.

$$Co_c = CO_m \times (21 - 7)/(21 - O_m)$$

Where:

- Co<sub>c</sub> = corrected CO ppm (dry volume)
- Co<sub>m</sub> = measured CO ppm (dry volume)
- O<sub>m</sub> = measured % O<sub>2</sub> (dry volume)

V.A.2.f. The Permittee shall continuously monitor and control emissions of chemical agents from each incinerator (LIC No. 1, LIC No. 2, MPF, DFS, and DUN), and the common stack (six monitoring systems). The emission level from each monitoring system shall not exceed the following concentrations:

	Chemical Agent Concentration (mg/m <sup>3</sup> )		
	GB	H/HD/HT	VX
Maximum Stack Emission:	0.0003	0.03	0.0003

V.A.2.g. Compliance with the operating conditions specified in Condition V.A.4., shall be regarded as compliance with the required performance standards identified in Conditions V.A.2.a. through V.A.2.f. However, if it is determined that during the effective period of this permit that compliance with the operating conditions in V.A.4., is not sufficient to ensure compliance with the performance standards specified in Conditions V.A.2.a. through V.A.2.f., the permit may be modified, revoked, or reissued, pursuant to R315-3-15.

**V.A.3. LIMITATION ON WASTE FEED**

V.A.3.a. Except during the short-term periods specified in Conditions VI.A.1. for shakedown, VI.A.2. for trial burn, and VI.A.3. for post-trial burn, the Permittee shall incinerate only the following hazardous wastes in each LIC, in compliance with the operating requirements specified in Condition V.A.4.

DESCRIPTION OF HAZARDOUS WASTES	MAXIMUM FEED RATE*
Chemical Agents:	
VX	580 lbs/hr.
GB	875 lbs/hr.
Mustard (H/HD/HT)	1,160 lbs/hr.
Decontamination Solution and Monitoring Support Building Wastes	2,000 lbs/hr.

- V.A.3.a.i. Only one chemical agent, or waste containing one chemical agent, shall be fed to the primary combustion chamber of LIC, at any given time.
- V.A.3.a.ii. The decontamination solution and the Monitoring Support Building waste, shall be fed only into the secondary combustion chamber of the LIC with, or without, the chemical agent feed to the primary combustion chamber.
- V.A.3.b. The Permittee shall not incinerate any chemical agent, or any waste containing the chemical agent, in which treatment has not been successfully demonstrated through a chemical agent trial burn, in accordance with Condition VI.A.
- V.A.3.c. The Permittee shall not incinerate any hazardous waste in the LICs that contains R315-50-10, organic hazardous constituents with a heat of combustion less than that of carbon tetrachloride (432 btu/lb).
- V.A.3.d. The feed rate of chlorine to each LIC shall not exceed 445\* pounds per hour based on chemical agent feed rates in the Screening Risk Assessment (February 1996) and Condition V.A.3.a.
- V.A.3.e. The feed rates specified in this condition have been superseded by the findings of the Screening Risk Assessment (February 1996) and Conditions V.A.2.d. and V.A.3.a.
- V.A.3.f. Only liquid, pumpable, waste with a maximum viscosity of 10 centipoise at 25°C shall be incinerated in the LIC.
- V.A.3.g. Throughout operation, the Permittee shall conduct sufficient analysis of the waste treated in the LICs to verify that the waste feed is within the physical and chemical composition limits specified, in accordance with the waste analysis requirements in Attachments 2 and 3.

**V.A.4.      OPERATING CONDITIONS**

- V.A.4.a.      The Permittee shall continuously monitor emissions of chemical agent from each incinerator (LIC No. 1, LIC No. 2, MPF, DFS, and DUN), and the common stack (six monitoring systems), as specified in Condition V.A.6.a. The waste feed(s) to the corresponding incinerator(s) shall be automatically cut off if any of the monitored emission levels exceed the values specified in Condition V.A.2.f.
- V.A.4.b.      Primary combustion chamber exhaust gas temperature, monitored as specified in Condition V.A.6.a., shall be maintained at or above 2,200\*°F
- V.A.4.c.      Secondary combustion chamber exhaust gas temperature, monitored as specified in Condition V.A.6.a., shall be maintained at or above 1,850\*°F.
- V.A.4.d.      Carbon monoxide concentration in the secondary combustion chamber exhaust gas, monitored as specified in Condition V.A.6.a., and corrected to 7% oxygen in accordance with the formula specified in Condition V.A.2.e., shall not exceed 100\* parts per million, dry volume, over a one hour rolling average.
- V.A.4.e.      Combustion gas velocity in the secondary combustion chamber, monitored at the secondary combustion chamber exhaust gas duct, as specified in Condition V.A.6.a., shall not exceed 17\* feet/second, which is equivalent to 0.5\* inches of water column on the differential pressure monitor.
- V.A.4.f.      Oxygen concentration in the secondary combustion chamber exhaust gas, monitored as specified in Condition V.A.6.a., shall be greater than 7% oxygen on a dry volume basis.
- V.A.4.g.      Atomizing air pressure for the waste burner nozzles, for both chemical agent and decontamination solution shall be maintained above the following set points:
- Primary Combustion Chamber, All Feed Rates (1-100%) - 35 psig
  - Secondary Combustion Chamber, All Feed Rates (1-100%) - 47 psig
- V.A.4.h.      The turndown ratio for the waste burner nozzles shall not exceed 4 to 1.
- V.A.4.i.      The Permittee shall control fugitive emissions from the combustion zone of the LIC by maintaining the pressure in the primary combustion chamber, monitored as specified in Condition V.A.6.a., below the atmospheric pressure.
- V.A.4.j.      Quench tower exhaust gas temperature, monitored as specified in Condition V.A.6.a., shall not exceed 225\*°F.
- V.A.4.k.      Exhaust gas pressure drop across the venturi scrubber, monitored as specified in Condition V.A.6.a., shall be maintained above 20\* inches of water column.

- V.A.4.l. Scrubber liquid feed rate to the venturi scrubber, monitored as specified in Condition V.A.6.a., shall be maintained at or above 100\* gallons per minute.
- V.A.4.m. Scrubber liquid feed rate to the scrubber tower, monitored as specified in Condition V.A.6.a., shall be maintained at or above 600\* gallons per minute.
- V.A.4.n. Scrubber liquid delivery pressure to the scrubber tower, monitored as specified in Condition V.A.6.a., shall be maintained at or above 15\* pounds per square inch gauge.
- V.A.4.o. Scrubber liquid effluent pH, monitored as specified in Condition V.A.6.a., shall always be maintained at or above a pH of 7.0\*.
- V.A.4.p. Scrubber purge liquid density, monitored as specified in Condition V.A.6.a., shall not exceed 80\* lbs./ft<sup>3</sup> at standard temperature (1.28 specific gravity units).
- V.A.4.q. Oxygen concentration in the exhaust blower exhaust gas, monitored as specified in Condition V.A.6.a., shall be maintained at or above 3%, but shall not exceed 15% oxygen on a dry volume basis.

**V.A.5. INSPECTION REQUIREMENTS**

- V.A.5.a. The Permittee shall inspect the LIC in accordance with the inspection requirements of Attachments 5 and 6.
- V.A.5.b. The inspection data for the LICs shall be recorded, and the records shall be placed in the operating record for each LIC, in accordance with Condition III.I.

**V.A.6. MONITORING REQUIREMENTS**

- V.A.6.a. The Permittee shall maintain, calibrate, and operate process monitoring, control, and recording equipment, as specified in Attachment 3, 6, 18, 20 and 22, Condition V.A.6.a.i. and Conditions V.A.1.m. through V.A.1.m.iv. while incinerating hazardous waste.
  - V.A.6.a.i. The RCRA monitors must monitor uninterrupted.
  - V.A.6.a.ii. A CEMS monitor may be taken off-line for calibration and minor maintenance as specified in Condition V.A.1.k.iii.
  - V.A.6.a.iii. Data from both monitors, the primary and redundant monitor, must be recorded in the operating record and PDARS.
  - V.A.6.a.iv. Data from one designated CEMS monitor and both ACAMS monitors will be used for reporting RCRA requirements.

- V.B.1.m.ii. Data from all ACAMS shall be reported on PDARS.
- V.B.1.m.iii. Data from all DAAMS analyze shall be reported in the operation record.
- V.B.1.m.iv. Confirmed Agent Alarms shall be verbally reported to the Executive Secretary within 24 hours of confirmation.

**V.B.2. PERFORMANCE STANDARDS**

V.B.2.a. The MPF shall achieve a destruction and removal efficiency (DRE) of 99.9999% for the surrogate, and 99.99% for the chemical agent, trial burn principal organic hazardous constituents (POHCs) designated below and in Condition VI.B.2.d.

Surrogate POHCs	Chemical Agent POHCs
Hexachloroethane (HCE) Monochlorobenzene (MCB)	GB, VX, Mustard individually.

The DRE shall be calculated by the method specified in R315-8-15.4(a).

V.B.2.b. The particulate matter emission from the common stack, corrected to 7% oxygen in accordance with the formula given below, shall not exceed 180 milligrams per dry standard cubic meter.

$$P_c = P_m \times 14 / (21 - Y)$$

Where:

- $P_c$  = corrected concentration of particulate matter
- $P_m$  = measured concentration of particulate matter ppm (dry volume)
- $Y$  = measured  $O_2$  in the stack gas

V.B.2.c. The hydrogen chloride emission from the common stack shall not exceed four (4) pounds per hour, or one (1) percent of the total hydrogen chloride in the combustion gas streams from the LICs, MPF, and DFS, prior to entering any pollution control equipment, whichever is greater. However, the sum of hydrogen chloride emissions from both stacks, common stack and DUN stack, shall not exceed 9.27\* pounds per hour.

V.B.2.d. Toxic metals emissions shall be controlled by limiting the metal constituent feed to the MPF in accordance with the Screening Risk Assessment (February 1996) findings. MPF feed rates are specified in Condition V.B.3.a.

V.B.2.e. The Permittee shall control emission of products of incomplete combustion from the stack such that the carbon monoxide (CO) level in the redundant furnace exhaust, corrected to 7% oxygen in accordance with the formula given below shall not exceed 100 parts per million (ppm), dry volume, over a one hour rolling average.

$$Co_c = CO_m \times (21 - 7)/(21 - O_m)$$

Where:

$Co_c$  = corrected CO ppm (dry volume)

$Co_m$  = measured CO ppm (dry volume)

$O_m$  = measured %  $O_2$  (dry volume)

V.B.2.f. The Permittee shall continuously monitor and control emissions of chemical agents from each incinerator (LIC No. 1, LIC No. 2, MPF, DFS, and DUN), and the common stack (six monitoring systems). The emission level from each monitoring system, shall not exceed the following concentrations:

	Chemical Agent concentration (mg/m <sup>3</sup> )		
	GB	H/HD/HT	VX
Maximum Stack Emission:	0.0003	0.03	0.0003

V.B.2.g. Compliance with the operating conditions specified in Condition V.B.4., shall be regarded as compliance with the required performance standards identified in Conditions V.B.2.a. through V.B.2.f. However, if it is determined that during the effective period that compliance with the operating conditions in V.B.4., is not sufficient to ensure compliance with the performance standards specified in Conditions V.B.2.a. through V.B.2.f., the permit may be modified, revoked, or reissued, pursuant to R315-3-15.

**V.B.3. LIMITATION ON WASTE FEED**

V.B.3.a. Except during the short-term periods specified in Conditions VI.B.1. for shakedown, VI.B.2. for trial burn, and VI.B.3. for post-trial burn, the Permittee shall incinerate only the following hazardous wastes in MPF, in compliance with the operating requirements specified in Condition V.B.4.

MUNITION	MODEL	MUNITIONS PER TRAY *	INTERVAL BETWEEN TRAY FEED IN MINUTES *	CHEMICAL AGENTS NOMINAL (LBS/TRAY) *			
				GB	VX	H,H D & HT	
Bulk Container s	Ton Container		1.0	35.0	75	75	90
	Bomb, 750 LB	MC-1	2.0	20.0	22		
	Bomb, Weteye	MK116	1.0	30.0	17.4		
	Spray Tank	TMU-28	1.0	60.0		67.8	
		TMU- 28/B				67.8	
Projectile s	Projectile , 105M Howitzer	M360	96	20.0	7.8		
	Projectile , 155M Howitzer	M104	48	20.0			28.1
		M110					28.1
		M121			15.6		
		M121A1			15.6	14.4	
		M122			15.6		
	Mortar, 4.2 inch	M2	96	20.0			27.8
		M2A1					28.8
Mine Drums	M23		24	20.0		12.6	

V.B.3.a.i. Only one chemical agent, or waste containing one chemical agent, shall be fed to the MPF, at any given time.

V.B.3.b. The Permittee shall not incinerate any chemical agent, or any waste containing the chemical agent, in which treatment has not been successfully demonstrated through a chemical agent trial burn, in accordance with Condition VI.B.

MUNITION	MODEL	MUNITIONS PER TRAY *	INTERVAL BETWEEN TRAY FEED IN MINUTES *	CHEMICAL AGENTS NOMINAL (LBS/TRAY) *			
				GB	VX	H,H D & HT	
Bulk Container s	Ton Container		1.0	35.0	75	75	90
	Bomb, 750 LB	MC-1	2.0	20.0	22		
	Bomb, Weteye	MK116	1.0	30.0	17.4		
	Spray Tank	TMU-28	1.0	60.0		67.8	
		TMU- 28/B				67.8	
Projectile s	Projectile , 105M Howitzer	M360	96	20.0	7.8		
	Projectile , 155M Howitzer	M104	48	20.0			28.1
		M110					28.1
		M121				15.6	
		M121A1				15.6	14.4
		M122				15.6	
	Mortar, 4.2 inch	M2	96	20.0			27.8
		M2A1					28.8
Mine Drums	M23		24	20.0		12.6	

V.B.3.a.i. Only one chemical agent, or waste containing one chemical agent, shall be fed to the MPF, at any given time.

V.B.3.b. The Permittee shall not incinerate any chemical agent, or any waste containing the chemical agent, in which treatment has not been successfully demonstrated through a chemical agent trial burn, in accordance with Condition VI.B.

MUNITION	MODEL	MUNITIONS PER TRAY *	INTERVAL BETWEEN TRAY FEED IN MINUTES *	CHEMICAL AGENTS NOMINAL (LBS/TRAY) *			
				GB	VX	H,H D & HT	
Bulk Container s	Ton Container		1.0	35.0	75	75	90
	Bomb, 750 LB	MC-1	2.0	20.0	22		
	Bomb, Weteye	MK116	1.0	30.0	17.4		
	Spray Tank	TMU-28	1.0	60.0		67.8	
		TMU- 28/B				67.8	
Projectile s	Projectile , 105M Howitzer	M360	96	20.0	7.8		
	Projectile , 155M Howitzer	M104	48	20.0			28.1
		M110					28.1
		M121				15.6	
		M121A1				15.6	14.4
		M122				15.6	
	Mortar, 4.2 inch	M2	96	20.0			27.8
		M2A1					28.8
Mine Drums	M23		24	20.0		12.6	

V.B.3.a.i. Only one chemical agent, or waste containing one chemical agent, shall be fed to the MPF, at any given time.

V.B.3.b. The Permittee shall not incinerate any chemical agent, or any waste containing the chemical agent, in which treatment has not been successfully demonstrated through a chemical agent trial burn, in accordance with Condition VI.B.

DESCRIPTION OF HAZARDOUS WASTES	MAXIMUM FEED RATE
Hazardous waste and non-hazardous waste test materials.	Primary Combustion Chamber 1,160 lbs/hr
Non-hazardous waste test solutions, decontamination solutions and Chemical Demil Building aqueous liquid wastes:	Secondary Combustion Chamber 2,000 lbs/hr

- VI.A.1.c.ii. The Permittee shall not feed the following wastes to the LIC, during the Shakedown Period I.
1. Acutely toxic hazardous wastes listed in R315-2-9(g).
  2. RCRA Hazardous Wastes FO20 through FO23, FO26, and FO27.
  3. Any waste containing chemical agents.
  4. Any wastes containing polychlorinated biphenyls.
- VI.A.1.c.iii. The feed rate of organic chlorine to each LIC shall not exceed 445 pounds per hour during the each shakedown and trial burn. The feed rate of organic chlorine to each LIC shall not exceed 222 pounds per hour during the post trial burn periods. Actual feed conditions shall be specified in each trial burn plan.
- VI.A.1.c.iv. Decontamination solution with the F999 waste code, may be fed to the secondary chamber of the LIC during shakedown II, only if the operating conditions specified in Condition VI.A.1.d. are satisfied and the waste feed cut-off limits specified in the trial burn plans are in effect.
- VI.A.1.c.v. The Permittee shall not feed hazardous waste into the LICs until such time that the Permittee has demonstrated compliance with the certification of construction or modification requirement, as specified in Condition I.S.
- VI.A.1.c.vi. Throughout the shakedown periods, the Permittee shall conduct waste analysis in accordance with the approved trial burn plan and Attachments 2 and 3 for agent and other hazardous waste materials.
- VI.A.1.d. Operating Conditions
- VI.A.1.d.i. During the shakedown periods, the Permittee shall operate the LIC furnace system in accordance with the approved trial burn plans and the following conditions:
- VI.A.1.d.ii. Primary combustion chamber exhaust gas temperature shall be maintained above 2,200 °F, but shall not exceed 2,850 °F.

- VI.A.1.d.iii. Secondary combustion chamber exhaust gas temperature shall be maintained above 1,850 °F, but shall not exceed 2,850 °F.
- VI.A.1.d.iv. Carbon monoxide concentration at the exhaust blower exit, corrected to 7% oxygen in accordance with the formula specified in Condition V.A.2.e., shall not exceed 100 parts per million, dry volume, over a one hour rolling average.
- VI.A.1.d.v. The sum of the combustion gas residence time within the primary and secondary chambers and the connecting ducts up to the waste feed cut-off thermocouple TE-129, shall not drop below 2.0 seconds. The pressure drop instruments, PDIT-854 (LIC 1) and PDIT 855 (LIC 2), which measures velocity, shall not exceed 0.6 inches of water column on the differential pressure monitor.
- VI.A.1.d.vi. Oxygen concentration at the exhaust blower exit shall be maintained at or above 3%, but shall not exceed 15% on a dry volume basis.
- VI.A.1.d.vii. The gas flow rate of the LIC system shall be maintained between 10,200 and 15,400 ACFM at the exit of the exhaust blower.
- VI.A.1.d.viii. Atomizing air pressure for the waste burner nozzles, for both chemical agent and decontamination solution shall be maintained above the following set points:
- Primary Combustion Chamber, All Feed Rates (1-100%) - 35 psig
  - Secondary Combustion Chamber, All Feed Rates (1-100%) - 47 psig
- VI.A.1.d.ix. The Permittee shall control fugitive emissions from the combustion zone of LIC by maintaining the pressure in the primary combustion chamber below the pressure of the LIC furnace room.
- VI.A.1.d.x. Quench tower exhaust gas temperature shall not exceed 225°F.
- VI.A.1.d.xi. Exhaust gas pressure drop across the venturi scrubber shall be maintained above 20 inches of water column.
- VI.A.1.d.xii. Clean liquor flow rate to the scrubber tower shall be maintained at or above 360 gpm.
- VI.A.1.d.xiii. Clean liquor pressure to the scrubber tower shall be maintained at or above 15 psig.
- VI.A.1.d.xiv. Quench brine liquid feed rate to the venturi scrubber shall be maintained at or above 100 gallons per minute.
- VI.A.1.d.xv. Quench brine blow down density shall not exceed 80 lbs/ft<sup>3</sup> (1.28 specific gravity).
- VI.A.1.d.xvi. The pH of the brine blow down shall be maintained at 7.0 or above.

DESCRIPTION OF HAZARDOUS WASTES	MAXIMUM FEED RATE
Hazardous waste and non-hazardous waste test materials	1,160 lbs/hr

- VI.B.1.c.ii. The Permittee shall not feed the following wastes to the MPF, during the Shakedown Period I.
1. Acutely toxic hazardous wastes listed in R315-2-9(g).
  2. RCRA Hazardous Wastes FO20 through FO23, FO26, and FO27.
  3. Any waste containing chemical agents.
  4. Any wastes containing polychlorinated biphenyls.
- VI.B.1.c.iii. The feed rate of organic chlorine to the MPF shall not exceed 119 pounds per hour during the surrogate shakedown period and 75 pounds per hour during the agent shakedown periods.
- VI.B.1.c.iv. The hourly feed rate of the residual chemical agent contained in the MPF feed, which was calculated, assuming a 5% heel, from the amount of agent in the munitions, shall not exceed the limits provided in Condition V.B.3.a.
- VI.B.1.c.v. When a GB filled munition cannot be automatically or manually drained below a 5% by weight heel, the facility shall comply with the operating conditions of VI.B.1.d.xxi. and the waste feed cut-off instrument setting shown in Table D-6-3 of Attachment 19.
- VI.B.1.c.vi. The Permittee shall not feed hazardous waste into the MPF until such time that the Permittee has demonstrated compliance with the certification of construction or modification requirement, as specified in Condition I.S.
- VI.B.1.c.vii. Throughout shakedown the periods, the Permittee shall conduct waste analysis in accordance with the approved trial burn plan and Attachments 2 and 3 for agent and other hazardous waste materials.
- VI.B.1.d. Operating Conditions
- VI.B.1.d.i. During the shakedown periods, the Permittee shall operate the MPF furnace system in accordance with the approved trial burn plans and the following conditions:
- VI.B.1.d.ii. Only one loaded tray containing the waste materials shall be fed into the MPF at any given time, with a minimum 20-minute interval between each tray feed.
- VI.B.1.d.iii. The number of munitions units fed to the MPF per batch feed shall not exceed the limit specified in Condition V.B.3.a.

**VI.B.3. Post Trial Burn Period**

During the post trial burn periods, in accordance with R315-8-15.5(c)(3), and for the minimum period sufficient for the Permittee to analyze samples, compute data, and submit trial burn results, and for the Executive Secretary to review the trial burn results and make any modifications necessary to the permit, the Permittee shall comply with the following conditions:

**VI.B.3.a. Limitation on Waste Feed**

VI.B.3.a.i. During the surrogate post trial burn period the waste feed rates, operating conditions and waste feed cut-off limits, as specified in the approved trial burn plans, shall apply.

VI.B.3.a.ii. During the agent post trial burn periods, the Permittee shall incinerate only the chemical agent that has been test burned during the immediately preceding chemical agent trial burn, at the munition feed rates specified below:

MUNITION		MODEL	MUNITIONS PER TRAY	INTERVAL BETWEEN TRAY FEED IN MINUTES	CHEMICAL AGENTS NOMINAL (LBS/TRAY)		
					GB	VX	H,H D & HT
Bulk Containers	Ton Container		1.0	70.0	75	75	90
	Bomb, 750 LB	MC-1	2.0	40.0	22		
	Bomb, Weteye	MK116	1.0	60.0	17.4		
	Spray Tank	TMU-28	1.0	120.0		67.8	
		TMU-28/B				67.8	

MUNITION		MODEL	MUNITIONS PER TRAY	INTERVAL BETWEEN TRAY FEED IN MINUTES	CHEMICAL AGENTS NOMINAL (LBS/TRAY)		
					GB	VX	H,H D & HT
Projectiles	Projectile, 105M Howitzer	M360	96	40.0	7.8		
	Projectile, 155M Howitzer	M104	48	40.0			28.1
		M110					28.1
		M121			15.6		
		M121A1			15.6	14.4	
		M122			15.6		
	Mortar, 4.2 inch	M2	96	40.0			27.8
		M2A1					28.8
Mine Drums	M23		24	40.0		12.6	

VI.B.3.a.iii. Only one type of chemical agent shall be burned in the MPF, at any given time.

VI.B.3.a.iv. Non-munition agent contaminated debris, Agent Collection System residues, Quantification System maintenance residues, MDB process equipment, MDB HEPA filters, MDB carbon filter trays, munitions overpack containers and discarded tools may be incinerated after the agent trial burn periods. Table 2-4 in Attachment 2 lists these non-munition wastes. The maximum per hour feed rate and per furnace charge weights are as follows:

WASTE DESCRIPTION	MAXIMUM FEED RATES		
	POUNDS PER HOUR	CHARGES PER HOUR	MAX. CHARGE POUNDS
Hazardous waste as identified in Attachment 2 (WAP), Table 2-0 and non-hazardous waste test materials	580	3	200

VI.C.1.a.ii. Shakedown Period IA shall begin with the initial introduction of waste into the DFS following the surrogate post trial burn period and shall end with the start of the Toxic Substance Control Act (TSCA) trial burn.

VI.C.1.a.iii. Shakedown Period II shall begin with the introduction of agent in the DFS system and shall end with the start of each chemical agent trial burn on the DFS. There shall be a separate Shakedown Period II for each of the following agents:

- VX
- GB
- Mustard

VI.C.1.b. Duration of the Shakedown Periods

Each shakedown period shall not exceed 720 hours of operation. The Permittee may petition the Executive Secretary for one extension of the shakedown period for up to 720 additional hours for the surrogate, TSCA or agent test in accordance with R315-8-15.5(c)(1).

VI.C.1.c. Allowable Waste Feed

VI.C.1.c.i. During the Shakedown Periods, the Permittee shall limit the hourly feed to the DFS as follows:

DESCRIPTION OF HAZARDOUS WASTES	MAXIMUM FEED RATE
ECR Maintenance Residues (See Attachment 2, Table 2.2a for allowable wastes)	9.5 lbs/hr (total weight assumed to be Agent)
Hazardous waste and non-hazardous waste test materials.	2,000 lbs/hr (excluding the munition housings)

VI.C.1.c.ii. The Permittee shall not feed the following wastes to the DFS, during the Shakedown Period I.

1. Acutely toxic hazardous wastes listed in R315-2-9(g).
2. RCRA Hazardous Wastes FO20 through FO23, FO26, and FO27.
3. Any waste containing chemical agents.
4. Any wastes containing polychlorinated biphenyls.

VI.C.1.c.iii. The Permittee shall not feed the following wastes to the DFS, during the Shakedown Period IA.

1. Acutely toxic hazardous wastes listed in R315-2-9(g).
2. RCRA Hazardous Wastes FO20 through FO23, FO26, and FO27.
3. Any waste containing chemical agents.

VIC.1.c.iv. The feed rate of organic chlorine to DFS shall not exceed 411 pounds per hour during the surrogate shakedown period and 6.4 pounds per hour during the TSCA and agent shakedown periods.

VIC.1.c.v. The hourly feed rate of the residual chemical agent contained in the DFS feed, which was calculated, assuming a 5% heel, from the amount of agent in the munitions, shall not exceed the limits provided in Condition V.C.3.a.

VIC.1.c.vi. The Permittee shall not feed hazardous waste into the DFS until such time that the Permittee has demonstrated compliance with the certification of construction or modification requirement, as specified in Condition I.S.

VIC.1.c.vii. Throughout the shakedown periods, the Permittee shall conduct waste analysis in accordance with the approved trial burn plan and Attachments 2 and 3 for agent and other hazardous waste materials.

VIC.1.d. Operating Conditions

VIC.1.d.i. During the shakedown periods, the Permittee shall operate the DFS furnace system in accordance with the approved trial burn plan and the following conditions:

VIC.1.d.ii. The number of munitions units fed to the DFS in one hour shall not exceed the limit specified in Condition V.C.3.a.

VIC.1.d.iii. The temperature of the unquenched DFS rotary kiln exhaust gas shall be maintained at or above 950\* °F.

VIC.1.d.iv. The temperature of heated discharge conveyor shall be maintained at or above 1,000 °F.

VIC.1.d.v. The DFS secondary combustion chamber temperature shall be maintained at or above 2,050 °F, but shall not exceed 2,400 °F.

VIC.1.d.vi. The rate of movement of the heated discharge conveyor shall be controlled so as to provide a minimum solid retention time of 15 minutes inside the heated enclosure.

VIC.1.d.vii. The rotational speed of the retort shall be maintained within the following parameters:

VIC.1.d.vii.(a) The speed shall not exceed 2\* revolutions per minute (rpm);

VIC.1.d.vii.(b) Except when in oscillation mode, the speed shall not drop below 0.33 revolutions per minute;

## MODULE VIII - MISCELLANEOUS UNITS

### VIII.A. APPLICABILITY

VIII.A.1. The requirements of this module pertain to the miscellaneous units described in Attachment 14 and listed below in Conditions VIII.A.1.a through VIII.A.1.d:

VIII.A.1.a. Two Rocket Shear Machines (RSMs), designated as RHS-RSM-101 and 102, including the associated rocket drain and shear stations, all of which are located in the Explosion Containment Rooms (ECRs);

VIII.A.1.b. Two Projectile/Mortar Disassembly Machines (PMDs), designated as PHS-PMD-101 and 102, located in the Explosion Containment Rooms (ECRs);

VIII.A.1.c. Three Multipurpose Demilitarization Machines (MDMs) and the associated Pick and Place Machines (PPMs), designated as shown below, located in the Munitions Processing Bay (MPB):

MDMs: PHS-MDM-101, 102, 103  
PPMs: PHS-PKPL-101, 102, 103; and

VIII.A.1.d. Two Bulk Drain Stations (BDSs), designated as MMS-BDS-101 and 102, located in the Munitions Processing Bay (MPB).

VIII.A.2. The Permittee shall submit a modification in accordance with R315-3-17 to add a description of the design and operation of the Mine Machines (MHS-MIN-101, 102) to this module and to Attachment 14 before mine operations begin.

### VIII.B ALLOWABLE WASTE FEED

VIII.B.1. The Permittee may treat M55 rockets and explosive components from munitions in the RSMs to comply with rates specified in Modules V and VI for the DFS.

VIII.B.2. The Permittee may treat 105-mm projectiles, 155-mm projectiles, and 4.2 inch mortars in the PMDs and the MDMs/PPMs to comply with rates specified in Modules V and VI for the DFS and MPF.

VIII.B.3. The Permittee may treat ton containers, MC-1 bombs, MK-116 bombs, and spray tanks in the BDSs to comply with rates specified in Modules V and VI for the MPF.

VIII.B.4. The Permittee is prohibited from treating waste in the miscellaneous units, identified in

Condition VIII.A.1, that is not identified in Conditions VIII.B.1, VIII.B.2, and VIII.B.3.

**VIII.C. IGNITABLE AND INCOMPATIBLE WASTES**

- VIII.C.1. Ignitable wastes shall not be treated in the ECRs or MPB.
- VIII.C.2. The Permittee shall place only one type of chemical agent in the ECRs and MPB at one time.
- VIII.C.3. The Permittee shall not place chemical agent or munitions containing that chemical agent in an unwashed container that previously held a different chemical agent or munitions containing that chemical agent.

**VIII.D DESIGN AND OPERATING REQUIREMENTS**

- VIII.D.1. The Permittee shall comply with the design and operating requirements specified in Attachment 14 of the Permit.
- VIII.D.2. The Permittee shall comply with the requirements specified in the Contingency Plan (Attachment 9) when there has been a release from the RSMs, PMDs, MDMs/PPMs, or BDSs that threatens human health or the environment.
- VIII.D.3. If equipment in the ECRs or downstream of the ECRs shuts down, any munitions or munition components being processed in the ECRs may remain in the ECRs until the equipment in question is operational. Alternatively, facility personnel may don appropriate PPE and physically retrieve the munitions or munition components from the ECRs and manually place the item(s) into Single Pallet Only Rocket Transporter(s) (SPORTs) or Single Round Container(s) (SRCs) for subsequent storage in the TMA.
- VIII.D.4. If the equipment in the MPB or downstream of the MPB shuts down, any bulk containers, munitions, or associated components being processed in the MPB may remain in the MPB until the equipment in question is operational. Alternatively, facility personnel may don DPE and physically retrieve munitions or munition components from the MPB and manually place the item(s) into SPORTs or SRCs for subsequent storage in the TMA.
- VIII.D.5. The Permittee shall maintain the sensors and interlocks identified in Attachment 14 so that they are functional when the associated miscellaneous unit is operating.
- VIII.D.6. Munition rejects exiting any of the miscellaneous units identified in Condition VIII.A will be transferred to the ECV or the TMA for pre-treatment under an Emergency Permit, returned to storage, or placed back into the miscellaneous unit to complete treatment.

**VIII.E**      **DETECTION, INSPECTION, AND MONITORING REQUIREMENTS**

- VIII.E.1.      As described in Attachment 14, the Permittee shall monitor the waste throughput for each miscellaneous unit by use of the Process Data Acquisition and Recording System (PDARS) and the manual records maintained by the control room operators. In addition, the Permittee shall use the Agent Quantification System (AQS) to quantify the amount of agent removed from the M55 rockets in the ECRs and the amount of agent removed via the MDMs in the MPB. The Permittee shall use weighing, before and after draining, to quantify the amount of agent removed in the BDSs.
- VIII.E.2.      The Permittee shall use the bubbler system associated with the BDS to determine if a bulk container processed in the BDS is drained. If the Permittee is unable to determine if the bulk container is drained using the bubbler system the Permittee shall inform the DSHW before any further action is taken to determine if the bulk container is drained. The Permittee shall record the bubbler reading for each bulk item drained in the Facility's operating record.
- VIII.E.3      The Permittee shall use the bubbler system associated with the MDM as the only method to determine if a projectile or mortar processed in the MDM is drained.
- VIII.E.4      The method used to determine if a bulk container, projectile, or mortar is empty shall be recorded in the facility operating record for each of these items processed.
- VIII.E.5      Prior to further processing of any bulk container, projectile, or mortar which cannot be verified as drained under Conditions VIII.E.2 and VIII.E.3., and within 24 hours, the permittee shall notify the DSHW. If pretreatment is required for further processing an Emergency Permit must be obtained.
- VIII.E.6.      The Permittee shall follow the inspection requirements for the equipment/processing lines associated with the miscellaneous units as specified in Attachment 5.
- VIII.E.7.      The Permittee shall initiate repair of all chips and cracks in the epoxy coatings on the floors of the ECR's and MPB within 72 hours of detection.
- VIII.E.8.      The Permittee shall not conduct any DPE or related entries into areas which have been contaminated with agent above the MPL.

**VIII.F.**      **CLOSURE**

- VIII.F.1.      At closure, the Permittee shall follow the procedures specified in the Closure Plan in Attachment 10.

## MODULE IX - BRA MISCELLANEOUS TREATMENT UNIT

### IX.A. APPLICABILITY

All numeric values included in any of the conditions under IX.D., which are marked with an asterisk (\*) are tentative and will be finalized through a Class 1 permit modification after the compliance test results have been evaluated by the Executive Secretary in accordance with R315-8-15.5(c). The Executive Secretary reserves the right to replace these values with any that are determined to be more protective of human health and the environment. The Executive Secretary also reserves the right to require additional compliance test runs based on analysis of brines from different types of agents. The Executive Secretary also reserves the right to modify permit conditions based on the results of the compliance tests.

IX.A.1. The requirements of this module pertain to the miscellaneous treatment unit described in Attachment 15 and designated below in Conditions IX.A.1.a through IX.A.1.c:

IX.A.1.a. Two Evaporator Packages, designated as BRA-EVAP-101 and 201, including the associated flash chambers and heat exchangers, all of which are located in the Brine Reduction Area (BRA) inside the Process and Utilities Building (PUB);

IX.A.1.b. Three Drum Dryers, designated as BRA-DDYR-101, 102, and 201, located in the Brine Reduction Area;

IX.A.1.c. One Pollution Abatement System (PAS), including the associated knockout box, gas burner, four baghouse modules, and blower and stack, designated as shown below, located in the BRA or outside the PUB:

Knockout Box	BRA-SEPA-105
Gas Burner	BRA-BURN-110
Baghouse Module	BRA-SEPA-101
Baghouse Module	BRA-SEPA-102
Baghouse Module	BRA-SEPA-103
Baghouse Module	BRA-SEPA-104
Exhaust Blower	BRA-BLOW-102
BRA PAS Stack	BRA-STAK-102.

### IX.B ALLOWABLE WASTE FEED

## MODULE IX - BRA MISCELLANEOUS TREATMENT UNIT

### IX.A. APPLICABILITY

All numeric values included in any of the conditions under IX.D., which are marked with an asterisk (\*) are tentative and will be finalized through a Class 1 permit modification after the compliance test results have been evaluated by the Executive Secretary in accordance with R315-8-15.5(c). The Executive Secretary reserves the right to replace these values with any that are determined to be more protective of human health and the environment. The Executive Secretary also reserves the right to require additional compliance test runs based on analysis of brines from different types of agents. The Executive Secretary also reserves the right to modify permit conditions based on the results of the compliance tests.

IX.A.1. The requirements of this module pertain to the miscellaneous treatment unit described in Attachment 15 and designated below in Conditions IX.A.1.a through IX.A.1.c:

IX.A.1.a. Two Evaporator Packages, designated as BRA-EVAP-101 and 201, including the associated flash chambers and heat exchangers, all of which are located in the Brine Reduction Area (BRA) inside the Process and Utilities Building (PUB);

IX.A.1.b. Three Drum Dryers, designated as BRA-DDYR-101, 102, and 201, located in the Brine Reduction Area;

IX.A.1.c. One Pollution Abatement System (PAS), including the associated knockout box, gas burner, four baghouse modules, and blower and stack, designated as shown below, located in the BRA or outside the PUB:

Knockout Box	BRA-SEPA-105
Gas Burner	BRA-BURN-110
Baghouse Module	BRA-SEPA-101
Baghouse Module	BRA-SEPA-102
Baghouse Module	BRA-SEPA-103
Baghouse Module	BRA-SEPA-104
Exhaust Blower	BRA-BLOW-102
BRA PAS Stack	BRA-STAK-102.

### IX.B ALLOWABLE WASTE FEED

- IX.B.1. The Permittee may treat brine from the Brine Storage Tanks, which accept brine from the Liquid Incinerators, Metal Parts Furnace, and the Deactivation Furnace Pollution Abatement Systems (PAS).
- IX.B.2. The Permittee may treat BRA decontamination solutions and brine that is regeneration waste from the water softener beds in the Water Treatment System.
- IX.B.3. The Permittee may treat waste from the Brine Storage Tanks, which accept brines and salt residue from laboratory testing of brines and salt residue. Brine and salt residue used in laboratory testing may be combined with unused brine and added to the Brine Storage Tanks through an existing tank port. Laboratory testing of brines and salt residue may include tests for agent concentration, corrosivity, specific gravity, density, metals, organics, PCBs total dissolved/suspended solids, and free liquids.
- IX.B.4. The Permittee may treat brine from the Brine Storage Tanks, which accept brine from the BRA sumps.
- IX.B.5. The Permittee may treat brine from the Brine Storage Tanks, which accept brine recirculated from the Brine Storage Tank feed pumps and from the BRA evaporator packages.
- IX.B.6. The Permittee may treat process water and cleaning solutions from operation and maintenance of the BRA miscellaneous treatment unit.
- IX.B.7. The Permittee is prohibited from treating waste in the miscellaneous treatment unit, identified in Condition IX.A.1, that is not identified in Conditions IX.B.1 through IX.B.6.

**IX.C. IGNITABLE AND INCOMPATIBLE WASTES**

- IX.C.1. Ignitable or reactive wastes shall not be treated in the BRA / BRA PAS.
- IX.C.2. The Permittee shall process brines from only one type of chemical agent at one time.
- IX.C.3. The Permittee shall not place brine / salt residue in an unwashed container that previously held chemical agent or munitions containing chemical agent.

**IX.D. DESIGN AND OPERATING REQUIREMENTS**

- IX.D.1. The Permittee shall comply with the design and operating requirements specified in Attachment 15 of the Permit.
- IX.D.1.a. The Permittee shall not process any waste in the BRA when the BRA PAS baghouse is bypassed.

- IX.D.1.b. The operating pressure of the brine circulation within the BRA evaporator shall be 15\* to 25\* psig.
- IX.D.1.c. The brine feed rate from the BRA surge tanks to each BRA evaporator shall not exceed 21\* gallons per minute.
- IX.D.1.d. Brine fed from the BRA surge tanks to the BRA evaporator shall meet the following conditions:
- Specific Gravity - 1\* to 1.25\*
  - pH - greater than 7\*
  - Chemical agent shall be below 20 ppb for GB and VX, below 200 ppb for mustard
- IX.D.1.e. Brine which contains PCBs above 3 ppb must be sent off-site to a facility permitted to treat and manage PCBs.
- IX.D.1.f. Steam feed to the BRA drum dryers shall be maintained between 280\*°F to 350\*°F while brine is being fed to the drum dryers.
- IX.D.1.g. The BRA drum dryers shall be rotating whenever brine is being fed to the drum dryers.
- IX.D.1.h. The Permittee shall have 3 of the 4 baghouse modules on-line in order to process waste in the BRA. If at any time less than 3 baghouse modules are on-line the Permittee must immediately cease processing waste in the BRA.
- IX.D.1.i. Gasses entering the BRA baghouse shall be maintained between 225\*°F and 275\*°F while waste is being processed in the BRA.
- IX.D.2. The Permittee shall comply with the requirements specified in the Contingency Plan (Attachment 9) when there has been a release that threatens human health or the environment.
- IX.D.3. If equipment in the BRA or BRA PAS shuts down, any brine being processed may remain in equipment or piping for 24 hours.
- IX.D.4. The sensors and interlocks identified in Attachment 15 and Condition IX.D.4.a. must be operating when the associated miscellaneous unit is operating.
- IX.D.4.a. Brine shall be stopped and/or controlled in accordance with the notations associated with the instruments in the following table:

### BRA & BRA PAS Automatic Waste Feed Cut offs and Set points

Tag ID	Description	Set point
23-FAHH-837	Brine feed for from any BRA-TANK to BRA-EVAP-101 High-High	21* gal/min <sup>1</sup>
23-FAHH-835	Brine feed for from any BRA-TANK to BRA-EVAP-201 High-High	21* gal/min <sup>1</sup>
23-LAHH-757	BRA-EVAP-101 Brine Level High-High	48* in w.c.
23-LAHH-720	BRA-EVAP-201 Brine Level High-High	48* in w.c.
23-FAHH-851	Brine feed to BRA-DDYR-101 High-High	12* gal/min <sup>2</sup>
23-FAHH-872	Brine feed to BRA-DDYR-102 High-High	12* gal/min <sup>2</sup>
23-FAHH-903	Brine feed to BRA-DDYR-201 High-High	12* gal/min <sup>2</sup>
23-LAHH-758	BRA-DDYR-101 Brine Level High-High	10* inches (height) <sup>2</sup>
23-LAHH-759	BRA-DDYR-102 Brine Level High-High	10* inches (height) <sup>2</sup>
23-LAHH-760	BRA-DDYR-201 Brine Level High-High	10* inches (height) <sup>2</sup>
27-TSH-172	BRA PAS Pre-Baghouse Exhaust Gas Temperature High	275* °F <sup>3</sup>
27-PDSLL-143	BRA PAS Baghouse BRA-SEPA-101 Differential Pressure Low-Low	0.25* in. WC <sup>4,5</sup>
27-PDSLL-144	BRA PAS Baghouse BRA-SEPA-102 Differential Pressure Low-Low	0.25* in. WC <sup>4,5</sup>
27-PDSLL-145	BRA PAS Baghouse BRA-SEPA-103 Differential Pressure Low-Low	0.25* in. WC <sup>4,5</sup>
27-PDSLL-186	BRA PAS Baghouse BRA-SEPA-104 Differential Pressure Low-Low	0.25* in. WC <sup>4,5</sup>

<sup>1</sup> Stops feed from selected BRA-TANK to BRA-EVAP's.

<sup>2</sup> Stops feed to effected BRA-DDYR.

<sup>3</sup> Stops feed to all BRA-DDYR's and closes damper located between BRA-EVAP's exhaust outlet and BRA PAS duct. Brine continues to circulate between selected BRA-TANK and BRA-EVAPs

<sup>4</sup> For one BRA-SEPA in alarm, damper to effected baghouse closes, backup baghouse module brought on-line.

<sup>5</sup> For more than one BRA-SEPA in alarm, stops feed to all BRA-DDYR's and closes damper located between BRA-EVAP's exhaust outlet and BRA PAS. Brine continues to circulate between selected BRA-TANK and BRA-EVAP's.

- IX.D.4.b. The Permittee shall not restart the BRA until the problem causing the interlock or waste feed cut-off has been corrected. Waste feed cut-offs and equipment interlocks shall be documented in the facility operating record.
- IX.D.5. Wastes exiting the miscellaneous treatment unit described in Condition IX.A will be considered to be newly generated waste subject to regulation under 40 CFR.
- IX.D.6. The Permittee shall comply with the applicable requirements for piping found in 40 CFR 264, Subpart J, for all brine piping associated with the Brine Reduction Area.
- IX.D.7. **Compliance Test**
- IX.D.7.a. **Shakedown Period**
- IX.D.7.a.i. The shakedown period shall not exceed 720 hours of operation. The Permittee may petition the Executive Secretary for one extension of the shakedown period for up to 720 additional hours in accordance with R315-8-15.5(c)(1).
- IX.D.7.b. **Conformity to Test Plans**
- IX.D.7.b.i. The Permittee shall operate and monitor the BRA during the test runs as specified in the Compliance Test Plan.
- IX.D.7.c. **Test Run Data Submissions and Certifications**
- IX.D.7.c.i. The Permittee shall submit to the Executive Secretary a test run report within 90 calendar days of completion of the test run. All submissions shall be certified in accordance with R315-3-8.
- IX.D.7.c.ii. If the preliminary calculations show that one or more of the performance standards listed in the test plan failed during the test run, the Permittee shall immediately stop waste feed to the BRA. The Executive Secretary shall be verbally notified within 24 hours of this discovery. As necessary, a revised post test feed rate can be approved to dispose of the hazardous waste present in the tank systems during this discovery.

**IX.E DETECTION AND MONITORING REQUIREMENTS**

- IX.E.1. As described in Attachment 15, the Permittee shall monitor the waste processed in the miscellaneous treatment unit by use of the local control panel, Process Data

Acquisition and Recording System (PDARS), and the manual records maintained by the control room operators.

IX.E.2. The Permittee shall follow the inspection requirements for the equipment/processing associated with the miscellaneous treatment unit as specified in Attachment 5.

IX.F. **CLOSURE**

IX.F.1. At closure, the Permittee shall follow the procedures specified in the Closure Plan in Attachment 10.