

PROCEDURES TO PREVENT HAZARDS

ATTACHMENT 2

Pueblo Chemical Depot

Pueblo, Colorado

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The information in this chapter describes procedures to prevent hazards in Pueblo Chemical Depot (PCD) hazardous waste storage areas. The minimum security procedures required at PCD by Resource Conservation and Recovery Act (RCRA) and Colorado Hazardous Waste Act (CHWA) are also described. The information provided in this section is submitted in accordance with the requirements of 6 Code of Colorado Regulations (CCR) 1007-3 § 100.41 (a)(4), (5), (8), and (9); 100.41(b)(1)(iii) and (iv). Other requirements addressed to complete this section are described in 6 CCR 1007-3 § 264.14, 264.15, 264.17, 264.31, 264.32, 264.33, 264.35, 264.73, 264.174, 264.176, 264.177, 264.198, 264.199, 264.1086, 264.1087, 264.1088, and 264.1089, PCD Standing Operating Procedures (SOPs) including **SOP-PU-0000-M-486** (Rev 35) February 26, 2014, DA Pam 385-64, latest edition of NFPA 780 along with Annex D Inspection and Maintenance of Lightning Protection Systems and Chapter 8 of NFPA 780 (2014 Edition), DoD 6055.9- STD Ammunition and Explosives Safety Standards July 1999, and other appropriate plans. The SOPs and plans contain information on the program or facility-specific procedures to prevent hazards. **SOP-PU-0000-M-486** (Rev 35) February 26, 2014, may be modified in accordance with 6 CCR 1007-3 Section 100.63. Class 1 and Class 1 with prior approval permit modifications to the SOP may be documented in e-mail correspondence. The SOP will be updated by revision number and date at least once annually to incorporate any Class 1 modifications. PCD permitted hazardous waste treatment units consist of two Explosive Destruction System (EDS) units in Environmental Enclosures located at the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP) EDS site. PCD permitted hazardous waste storage areas consist of the following: Building 540 (nonagent-related hazardous wastes), Chemical Limited Area (CLA)/G-Block magazines G203, G1009, G1107, G1109, and G1110 (agent-related hazardous wastes), and PCAPP EDS container storage units H1102, H1103, and the Roll-off Container Storage Area adjacent to H1103. The procedures relative to hazardous waste considerations are summarized below.

Attachment 2 addresses the following subject areas:

- Security provisions (Section 2-1)
- Inspection requirements, recordkeeping (Section 2-2)
- Design and operation of facility (Section 2-3)
- Documentation of preparedness/prevention requirements (Section 2-4)

- Preventive procedures, structures, and equipment (Section 2-5)
- Prevention of accidental reaction of ignitable and incompatible wastes (Section 2-6).

2-1 SECURITY [6 CCR 1007-3 § 264.14]

2-1a Security Procedures and Equipment [6 CCR 1007-3 § 264.14(a)]

This section describes the procedures and equipment used to prevent the unknowing entry, and to minimize the possibility for unauthorized entry, of persons or livestock onto the PCD installation and highly sensitive areas. Security methods include surveillance systems, barriers, an entry control system, and warning signs.

The PCAPP EDS site will be situated within the property of PCD. As shown in **Figure 2-1¹**, the perimeter of the PCAPP EDS site will have security fencing and gates. The EDS treatment units and Container Storage Unit (CSU) H1102 will be located within the perimeter. CSU H1103 and the permitted hazardous waste roll-off container storage unit adjacent to H1103 will both be located east of CSU H1102 outside the fenced area for the EDS units but within the larger fenced and secured area of PCD. The general security provisions for the PCAPP EDS site are in addition to the PCD security provisions for the depot and will include the following:

- Warning signs posted at the PCAPP EDS site perimeter and at each CSU
- Controlled entry point
- Access limited to persons and vehicles displaying appropriate identification badges or paperwork as appropriate
- Two-way radio and/or telephone communication among security personnel, PCAPP EDS site personnel, and the PCD Operations Center (OC).

¹ All figures are located at the end of this attachment.

2-1a(1) Surveillance System [6 CCR 1007-3 § 264.14(b)]

The Permittees employ a uniformed civil service security guard force to provide surveillance of the facility and to restrict the entry of unwanted or unauthorized visitors. All patrols are motorized, equipped with communications equipment, and are assigned specific areas to patrol. Typical activities include but are not limited to the following:

- Checking for intrusion or security violations
- Checking locks, fence lines, building security, and other areas within their patrol
- Challenging all persons entering or exiting the areas who may act suspicious, who are not carrying proper identification, or who are without required escorts
- Reporting all incidents to the OC
- Performing specific duties outlined in the daily log for that patrol area.

All guard vehicles are equipped with first aid kits and fire extinguishers. Personnel are assigned M40A1 protective masks for use in the CLA.

2-1a(2) Barrier and Means to Control Entry [6 CCR 1007-3 § 264.14(b)]

2-1a(2)(a) Barrier [6 CCR 1007-3 § 264.14(b)(2)(i)]

PCD is entirely surrounded by a fence with secured gates. All permitted units must be locked when not in use. Visitors entering permitted units must be escorted while inside the building/unit. The entire PCAPP EDS site will be surrounded by additional security fencing tied into the CLA.

2-1a(2)(b) Means to Control Entry [6 CCR 1007-3 § 264.14(b)(2)(ii)]

Entry to PCD is accessible from U.S. Highway 50/Colorado Highway 96 East. On the access road, signs are posted to notify visitors they are entering a military installation. The main entrance road takes personnel and visitors to a security gate which is manned 24/7. All visitors and unregistered vehicles are

challenged at the gate. Visitor passes are required. Passes are obtained from the security personnel at the security gate before proceeding. All other gates around the perimeter of PCD are kept locked with the additional exception of the Access Control Point (ACP) on the north end of PCD which is manned by security personnel.

To prevent unknowing or unauthorized entry, personnel access to the PCAPP EDS site will be controlled. During operating hours, routine worker access will be controlled through the use of badges and/or sign-in and sign-out rosters to indicate authorized individuals.

Temporary authorization will be given to workers and visitors who will not be onsite full time. Employees, such as electricians, craftsmen, etc., are in this “temporary entry” category. These personnel will be accompanied by an escort during their time within the PCAPP EDS site.

During off-hours, access to the PCAPP EDS site will be controlled by locked entrances, and at CSU H1103, a locked door. Roll-off containers containing hazardous waste in the permitted roll-off container storage unit adjacent to CSU H1103 will be closed and locked during off-hours to prevent access to their contents.

2-1a(3) Warning Signs [6 CCR 1007-3 § 264.14(c)]

Warning signs are posted on the main access road informing all vehicle drivers that they are entering a military installation. Warning signs are posted at permitted hazardous waste management units G203, G1009, G1107, G1109, and G1110. Warning signs are also posted on all four sides of the fences at Building 540. Refer to **Appendix 2-1** for photos of warning signs.

Warning signs with the text “Danger-Unauthorized Personnel Keep Out” or text indicating only authorized personnel are allowed and unauthorized entry is dangerous will be posted at each entrance of the PCAPP EDS site as well as other locations along the perimeter of the PCAPP EDS site and at CSUs H1102 and H1103 and the adjacent permitted hazardous waste Roll-off Container Storage Area, to be seen from any approach. These signs will be easily visible at a distance of 25 feet. The wording on the signs will be clearly legible, written in English and Spanish, and indicate that only authorized personnel are allowed to enter the active portion and that entry onto the active portion can be dangerous.

2-1b Waiver [6 CCR 1007-3 § 264.14(a)]

No waivers of security procedures or equipment requirements are requested by the Permittees.

2-2 INSPECTION SCHEDULE [6 CCR 1007-3 § 264.15(b)(1)]

2-2a General Inspection Requirements [6 CCR 1007-3 § 264.15(a) and (b)]

The buildings, equipment, permitted storage structures, and containers within PCD hazardous waste storage units must be inspected according to a prescribed schedule designed to detect deterioration, tampering, malfunctions, and discharges that could cause a release of hazardous waste to the environment or pose a threat to human health. Storage Area Inspection Log Sheets outline all areas that must be inspected and provide a sample inspection record (**Appendix 2-2**). Interior inspections of the permitted hazardous waste management units G203, G1009, G1107, G1109, and G1110 must be conducted on at least a quarterly basis. Inspection records (except for those associated with the PCAPP EDS site) must be maintained at the Environmental Management Office (EMO).

The EDS units and associated CSUs must be inspected according to prescribed inspection schedules designed to detect equipment deterioration and prevent possible equipment malfunctions that could cause a release of hazardous wastes to the environment or pose a threat to human health. The inspection schedule document and inspection logs will be located at the PCAPP EDS site. At a minimum, the inspection program will include inspections of the items listed in **Table 2-1**². Inspection logs and documents associated with the PCAPP EDS site will be retained and available at the PCAPP EDS site. Examples of inspection forms for the PCAPP EDS site are provided in **Appendix 2-3**.

² All tables are located at the end of this attachment.

2-2a(1) Types of Problems [6 CCR 1007-3 § 264.15(b)(3)]

Typical inspections of PCD permitted storage facilities include the following:

- Integrity check of doors, locks, and fences, plus visual verification that warning signs are in place and are legible from a minimum distance of 25 feet.
- Breaches of plastic-construction secondary containment pallets including presence of any containment cracks and/or support dimensional distortions, general condition of concrete (presence of existing and/or newly developed cracks since previous inspection, missing concrete portions due to spalling or other reasons, slab displacements upward or downward, previously repaired areas and condition of those repairs) including overhead support and floors, presence of liquid moisture inside buildings and magazines.
- Leaks or deterioration of containers
- Visible cracks, holes, gaps, or other open spaces between lids and containers
- Proper legible labeling, including content description, accumulation date(s), U.S. Environmental Protection Agency (USEPA) ID number, and applicable waste codes.
- Adequate aisle spacing such that visual inspection can occur, security of containers
- Presence of personal protective equipment (PPE), fire extinguishers, spill control kits, and eye washes where required.
- Material handling equipment
- Telephones or radios
- Detection equipment (including MINICAMS[®], Depot Area Air Monitoring System [DAAMS], and M-8 detection paper)

- Adequate fire-breaks and vegetation removal (mowing) around igloos (magazines), lightning terminals/conductor wire, and ventilators (rear filter housings or stacks).

The types of problems that must be looked for during inspections of the permitted hazardous waste treatment and storage units at the PCAPP EDS site are identified in **Table 2-2**.

2-2a(2) Frequency of Inspections [6 CCR 1007-3 § 264.15(b)(4)]

The required inspection frequencies for the hazardous waste treatment and storage units at PCD and the PCAPP EDS site are identified in **Tables 2-1 and 2-2**. The permitted agent-related hazardous waste management units G203, G1009, G1107, G1109, and G1110 are inspected monthly outside the structure and quarterly inside the structure. Air monitoring is performed inside permitted storage structures G203, G1009, G1107, G1109, G1110, and H1102 on a weekly basis to detect any leaking overpacked chemical munitions or other agent related wastes. Example log sheets for the following PCD conducted inspections are found in **Appendix 2-2** and **Appendix 2-3**.

2-2b Specific Process Inspection Requirements [6 CCR 1007-3 § 264.15(b) and 264.1088]

2-2b(1) Container Inspections [6 CCR 1007-3 § 264.174 and 264.1086(g)(4)]

All hazardous waste containers stored in Building 540 are inspected weekly for corrosion, damage, spills, deterioration, cracks, holes, gaps, and open spaces between lid and container, and other conditions that could affect container integrity. Visual inspections of containers inside the permitted hazardous waste management units are performed quarterly. Secondary containment pallets are inspected quarterly in the permitted hazardous waste management units designated for liquid storage. Also, weekly air monitoring is conducted.

All containers with design capacities greater than 0.1 cubic meter (m³) (26.42 gallons) used to store hazardous waste at PCD are managed according to the Container Level 1 standards described in 6 CCR 1007-3 Subpart 264.1086(c). Containers subject to Container Level 1 standards are stored in permitted hazardous waste management units. Except at the PCAPP EDS site and CSU H1103, no containers greater than 0.46 m³ (121.53 gallons) are used to store hazardous waste at PCD. Containers with design capacities greater than 0.46 m³ used for storage of hazardous waste at the PCAPP EDS site and CSU H1103 will not be in light material service and are thus subject to the Container Level 1

standards per 6 CCR 1007-3§ 264.1086(b)(1)(ii). Container inspection procedures applied to hazardous waste containers subject to Container Level 1 standards stored at PCD will meet or exceed the inspection requirements of 6 CCR 1007-3 Subpart 264.1086(c)(4). Sample inspection logs for PCD hazardous waste storage areas are provided in **Appendix 2-2**.

2-3 DESIGN AND OPERATION OF FACILITY [6 CCR 1007-3 § 264.31]

The Permittees must construct, maintain, and operate the facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or non-sudden release of hazardous waste or hazardous constituents to air, soil, surface water, or groundwater that could threaten human health or the environment. As described in **Attachment 5**, Personnel Training Plan, PCD and EDS Site personnel receive initial and annual training on the potential hazards as well as the protective policies and procedures instituted to minimize any potential exposures.

2-3a Fire and Explosion Minimization

In order to minimize the possibility of a fire or explosion, PCD employs a water system in the CLA with seven fire hydrants with a total water availability of 250,000 gallons from two tanks (one with 200,000 gallons and one with 50,000 gallons, which are kept full and replenished by the drinking water wells to ensure adequate pressure is available to supply the fire hydrants during an emergency). The PCD Fire Department responds with two fire pumpers with the capability to meet required fire flow rate. All government vehicles are equipped with portable fire extinguishers for use on incipient fires.

The PCD Fire Department maintains radio communication capability with a base radio in the alarm room of the PCD Fire Station. Other radio communication equipment is located in the Operations Center and the Site Security Control Center. All response equipment and security vehicles have permanently mounted compatible radios, and personnel have portable radios to maintain communications at all times. These radios are tested daily to ensure good working condition. Any deficiencies identified are referred to the PCD Directorate of Information Management for immediate repair or replacement. Fire alarm systems are installed in all required facilities and have the capability to self-test daily. To ensure adequacy of these systems, the Fire Department personnel test the alarm systems on a monthly basis. Deficiencies are repaired in a timely manner utilizing alarm company contractors. Fire protection equipment is checked daily.

At PCD, a Burn Permit must be completed prior to the start of all welding, cutting, or open-flame operations or other hazardous potential fire actions. Upon completion, the Burn Permit is reviewed and approved by the PCD Risk Management and Compliance Division (RMCD). Site Safety Inspectors perform random “on-the-spot” work process reviews for compliance. Follow on inspections are conducted as needed.

There are two approved smoking areas for PCD’s CLA, between the interior and exterior fences at the Site Security Control Center and approximately 100 feet east of Building 475. Signs designate the approved smoking areas; signed permits from the PCD Fire Department are posted; portable fire extinguishers are in place; approved receptacles for cigarette butts are on hand; signs designating “No Smoking” are posted on the entrance to the CLA; and signs are posted noting no lighters/matches at the site security entrance. Personnel are not allowed to smoke inside the interior CLA fence except in designated areas. Personnel do not handle explosive materials within the CLA in such a manner that explosive powders or residues would contaminate their clothing posing a fire hazard. Personnel are required to wash hands and practice proper hygiene before going to the designated smoking areas.

Another measure to minimize fire at PCD includes vegetation control measures, which are determined by the PCD Commander through routine inspections by fire, safety, security, and ammunition surveillance personnel that evaluate, through inspections, checklists, and current conditions, the probability of combustible vegetation causing potential fire. Control of combustible materials, such as long, dry grass or brush, is designed to slow the spread of vegetation fires. To prevent fires in the CLA, a 20-foot clear zone of bare mineral soil is maintained. The roadways are maintained and provide natural fire breaks between rows of igloos as well as rows encompassing the interior fence line. The igloos specifically have fusible links installed on the vent that are designed to close the vent in the event of excessive heat to prevent fire from entering or exiting the igloos. To address tumbleweeds trapped at fence lines, PCD Public Works personnel and PCD Fire and Emergency Services personnel perform weed abatement by burning in a controlled fashion to ensure safety of personnel, equipment, and structures.

Established fire breaks at PCD consist of paved roads running east to west, adjacent to the igloos, and concrete aprons leading to each igloo access door. All ground area within the CLA is maintained as unimproved grounds. Maintenance is limited to prevent waste of natural resources and to prevent or suppress fires. These areas are kept clear of all readily combustible material, such as dry grass, wood, or brush. Igloo vents and security fences have an established 5-foot fire break.

2-3b Prevention of Hazardous Waste and Constituents Releases

PCD and the EDS H1102 igloos have Igloo Containment Systems (ICSs) that are used to protect against the release of hazardous waste or hazardous waste constituents, including mustard agent, to the outside air. The ICS consists of a front filter unit, a rear filter unit with a fusible link to a fire damper actuator to prevent fire intrusion, controller for the igloo door air-inlet by-pass damper, and seals for the igloo door, fire dampers, and drains. The system allows the natural flow of air through the igloo to carry agent vapors in the event of a leak from inside the igloo, to carbon panel adsorbers, where the vapors are contained, when the dampers are open (e.g. during normal operation). The system is equipped with a manual airflow by-pass damper (front filter housing on door) that is opened only if agent is detected in the igloo and a Mobile Igloo Filter system is deployed.

The front filter unit, containing two carbon 1 foot x 2 foot adsorber panels and one 1 foot x 2 foot pre-filter, is mounted on the inside of the igloo door as shown in **Figure 2-2**. The pre-filter protects the adsorbers from fine particles that may pass through the insect screen located at the inlet vent and into the filter housing. Visual inspection items are included on the inspection forms in **Appendices 2-2** and **2-3**.

The filter unit was designed to allow in-place testing of the adsorbers from outside the igloo with the igloo door closed. Threaded couplings welded to the door exterior provide a means to connect challenge gas injection and sampling lines. Stainless steel piping extends from the various injection and sampling locations inside the filter housing to these couplings. Both front and rear filter adsorbers are designed to be operated in series with in-place testing sample ports (threaded couplings) located between the two activated carbon adsorbers.

The rear filter unit is mounted on the rear stack of the igloo as shown in **Figure 2-3**, with a rubber gasket placed between the unit and the stack. The unit contains two carbon adsorbers and one high efficiency particulate air (HEPA) filter.

The HEPA filter protects the adsorbers from particulate debris that may enter the igloo and travel upward to the rear filter unit. As the rear carbon adsorbers are larger and more costly to replace than those contained in the front filter unit, a HEPA filter was integrated into the rear filter unit to provide an added level of protection to the adsorbers. The rear filters are fully accessible and may be tested by connecting to threaded couplings located on the exterior surface of the filter housing. Both front and rear filters on the igloos will be tested (air-sampled for agent) between adsorbers after confirmed agent detection in any

agent-related storage igloo. Test results along with the determination made as to whether or not the first adsorbers need to be replaced with the second adsorbers and new carbon second adsorbers added will be reported to the Division within two weeks of the detection. An e-mail to Division personnel will suffice for this purpose. Should adsorber replacement be necessary, information including the date of the replacement, magazine number, front and/or rear filter at a minimum will also be reported to the Division. Carbon should be replaced in a timely manner when a determination is made that replacement is indicated (immediately). Replacement of filter adsorbers is accomplished via procedure outlined in accordance with **PCD SOP-PU-0000-M-486**, Rev 35 February 26, 2014, included in **Attachment 2** of this Permit. Records of detections, adsorber test results, determinations, Division notifications, and adsorber replacement dates will be retained onsite by PCD as part of the Operating Record.

1,000 Cubic Feet Per Minute (cfm) Mobile Filters

When air monitoring detects agent, these units are employed using the front door carbon filter bypass. The 1,000 cfm mobile filters have active carbon adsorbers in series and are sampled in accordance with **PCD SOP-PU-0000-M-491**, Revision 16, December 1, 2014, **Appendix 3-1 to Attachment 3** of this Permit, between the adsorbers for agent breakthrough. In addition, the adsorbers are tested for the presence of preferential pathways through the carbon that would make the filters ineffective. Records of filter testing will be retained onsite as part of the Operating Record. Specifics regarding the filter use, units available, testing as indicated above and test forms, and maintenance will be added to the Permit in accordance with Condition I.J. of this Permit.

2-4 EQUIPMENT REQUIREMENTS [6 CCR 1007-3 § 264.32]

The following sections address the equipment required by 6 CCR 1007-3 § 264.32.

2-4a Internal Communications [6 CCR 1007-3 § 264.32(a)]

In the event of an emergency, immediate emergency notification and instruction is provided to PCD personnel, contractors, and tenants using sirens and the public address system. The OC has the primary responsibility for initiating emergency notifications. PCD has sirens with public address systems on the installation. There are also sirens with public address systems that are strategically positioned offsite. The OC has the capability of sounding the sirens individually, in any combination, or all at the same time. The PCD Fire Department, the Pueblo County Sheriff's Department, or the Pueblo Police Department can also activate the sirens. Chemical work crews, supervisors, security guards, fire department personnel, and the OC personnel are outfitted with and monitor the communications equipment.

Internal communications at the PCAPP EDS site will consist of cellular and/or landline telephones, intercoms, throat microphones, hand-held radios, and headsets. Communication devices will be available throughout the EDS site and in all work areas for immediate access and use in the event of emergencies. Cellular and/or landline telephones will be capable of internal and external communications. Throat microphones and headset equipment will be the primary means of communication during EDS treatment operations. Personnel will be alerted of emergencies by hand-held radios or throat microphones/headset unit if wearing PPE.

2-4b External Communications [6 CCR 1007-3 § 264.32(b)]

In the event of a nonagent-related emergency or reportable quantity hazardous material spill, the On-Scene Incident Commander (OSIC) is responsible for notifying by telephone all appropriate local, county, state, and federal agencies. External communication procedures for chemical agent accidents/incidents are also addressed in the Contingency Plan, **Attachment 4** of this Permit. Most external notifications are made by telephone, cell phone, or radio.

Cellular and/or landline telephones will be the primary means for external communication between the EDS site, the PCD, and surrounding areas. Telephones to the outside area will be located in the EDS site Command Post.

2-4c Emergency Equipment [6 CCR 1007-3 § 264.32(c)]

An extensive inventory of emergency equipment is maintained at PCD to respond to emergency situations. The Fire Department is equipped with several types of fire trucks and equipment for extinguishing fires and responding to chemical agent and hazardous material spills. Fire extinguishers are located at all permitted hazardous waste storage sites. Emergency equipment is inspected regularly and is ready for immediate deployment in the event of an incident or accident. A list of available equipment for spill cleanup is listed in the Contingency Plan, **Attachment 4** of this Permit.

The permitted agent-related hazardous waste management units (igloos only) are fitted with passive filtration units on the door and on the rear vent. The filters protect against the release of agent vapors. The PCD ICSs are addressed in Section 2-3.

An inventory of emergency equipment will be maintained at the EDS site. Portable fire extinguishers and spill kits will be located at the EDS site. A list of emergency equipment to be available at the PCAPP EDS site is provided in **Table 4-3**, PCAPP EDS Site Emergency Equipment, in **Attachment 4**, Contingency Plan.

2-4d Water for Fire Control [6 CCR 1007-3 § 264.32(d)]

Water for fire control at PCD is supplied primarily from a system of wells in the alluvial aquifer. The moderately permeable alluvial layer is up to 77 feet thick and underlain by Pierre Shale. The source for the water in the alluvial aquifer is primarily underflow from the north.

A grid line water supply system is used to transport the water. The following underground reservoirs and overhead tank reservoirs provide storage for fire control:

- Three 75,000-gallon gravity-fed overhead reservoirs
- One 1,000,000-gallon underground reservoir
- One 250,000-gallon underground reservoir
- One 1,500,000-gallon underground reservoir.

The reservoirs are located in various areas of PCD. Lynda Ann Reservoir collects water from Boone Creek and several springs in the southeastern part of PCD. The reservoir is 17 acres in area, and provides additional water storage for fire control. This reservoir can also be dry at times and thus cannot always be relied upon to serve as a water source for firefighting or other purposes.

2-4e Aisle Space Requirements [6 CCR 1007-3 § 264.35]

Proper aisle space is maintained in all PCD hazardous waste storage areas and at all EDS Site storage and treatment units to allow visual inspection, unobstructed movement of personnel, material handling equipment (MHE), and fire protection, spill control and decontamination equipment. Aisle spacing in the permitted hazardous waste management units G203, G1009, G1107, G1109, and G1110 is 3 feet from the walls and 3 feet in between rows of pallets. Aisle spacing in Building 540 is 5 feet from walls or berms. Aisle spacing for H1102 and H1103 will be as indicated on **Figures 8-3 and 8-5** respectively, in **Attachment 8** EDS Process Description. In CSU H1103, three rows of pallets of containerized waste will be present and a minimum 3-foot space will be maintained between each row. Containers of waste in CSU H1102 and H1103 will not be stacked. At a minimum, there will be 36 inches between an EDS equipment item and enclosure wall.

2-5 PREVENTIVE PROCEDURES, STRUCTURES, AND EQUIPMENT

2-5a Unloading Operations

Hazards associated with handling, loading, and unloading operations are minimized through the implementation of local SOPs , including **PCD SOP 486 (Appendix 2-4, Attachment 2** of this Permit). Hazards are also minimized by personnel receiving the proper training as required by Army Regulations and the Training Plan, **Attachment 5** of this Permit. Hazardous waste containers are inspected prior to movement to make sure they are properly closed and tightly sealed. Containers are transported on pallets, and loaded and unloaded with a forklift. Ramps facilitate smooth movements of MHE in and out of storage units.

Overpacked munitions and other items slated for EDS treatment will be transported from the PCD permitted storage igloos directly to an Environmental Enclosure for EDS processing or to CSU H1102 for temporary storage in accordance with **PCD SOP 486** (see **Appendix 2-4 to Attachment 2** of this

Permit). If transported directly to an Environmental Enclosure, only the amount that will be treated that day will be delivered to the enclosure.

The wastes are transported atop pallets placed inside a Modified Ammunition Vehicle (MAV). Once at the enclosure or CSU H1102, the pallet(s) will be unloaded by forklift and placed into the enclosure or if at the CSU H1102, placed inside H1102. When transporting selected items for treatment from the CSU H1102 to an Environmental Enclosure, the items will be completely shrouded with plastic to enclose the wastes and then loaded onto a truck and moved and unloaded in accordance with **SOP CSC-193, Version 1.0**, Accountability and Transportation of Chemical Munitions and DOT Bottles in Support of the Pueblo Agent-Destruction Pilot Plant Explosives Destruction System Project at Pueblo Chemical Depot (see **Attachment 10** of this Permit).

Inside the Environmental Enclosure, munitions and other items will be unpacked per EDS Phase 2 Steam Series Units SOP (**Attachment 9** of this Permit). If the overpack or packing material is agent-contaminated either known through documentation or by headspace monitoring results of greater than 1 vapor screening level (VSL), the material will be decontaminated following procedures in Annex I, Decontamination/Disposal of Overpacks, Packaging Material, and Personal Protective Equipment of the EDS Phase 2 Steam Series Units SOP.

Unpack and decontamination activities will occur within a secondary containment pan that will sit atop the enclosure floor secondary containment system. Additionally, the enclosure floor is coated with a polyurea material, an added protection factor, to ensure that any spills will not permeate downwards to soils underneath.

Similarly, wastes produced from the EDS treatment processes in the Environmental Enclosures will be loaded onto a truck and moved to CSU H1103 for storage per **SOP CSC-194, Version 1.0** (see **Attachment 10** of this Permit).

Hazards associated with handling, loading, and unloading operations at the EDS site will be minimized by the use of trained personnel and compliance with this Permit. Additionally, personnel conducting waste loading and unloading operations will wear protective clothing appropriate to the area and work activity being conducted. The types of protective clothing that will be worn will be described in the site Health and Safety Plan.

2-5b Runoff

Building 540 is divided into four sections, each with an 8-inch concrete berm. The foundation has an 8-inch berm to prevent flooding inside the building. Building 540 was constructed so that significant precipitation goes around the building and drains to the east.

The permitted hazardous waste management units G203, G1009, G1107, G1109, and G1110 are totally enclosed, therefore runoff/run-on is not an issue. In the event of a container leak in the permitted hazardous waste management units, secondary containment is provided by containment pallets. Also, the floors have a 1-1/2-inch slope from the centerline toward each wall. Gutters run along the length of the permitted hazardous waste management units. Each drain opening is plugged to prevent hazardous material from being released to the exterior environment in the event of a spill.

At the EDS site, waste handling will take place in CSUs H1102, H1103, and the Environmental Enclosures, which are enclosed structures (handling of waste at the H1103 Roll-off Container Storage Area is described below). Design features of each of these structures, such as ceiling, walls, and flooring as well as use of secondary containment pallets, will protect the hazardous waste management units from precipitation and will prevent runoff from hazardous waste handling areas to other areas of the PCAPP EDS site or the environment. Only solid hazardous wastes will be stored in lined and covered/closed roll-off containers at the permitted H1103 Roll-off Container Storage Area. The bottom of each roll-off container is elevated approximately 4-inches above the sloped concrete pad. Additionally, the area around the concrete pad is graded away from the pad. The design features will minimize the potential for precipitation to contact hazardous wastes and for runoff to become contaminated.

As indicated, any spills that may occur during operations will be contained within an enclosed structure, thus precluding contaminated runoff to reach other areas.

2-5c Protection of Water Supplies

All permitted hazardous waste storage structures at PCD are enclosed, concrete-floored structures. Building 540 is constructed on a 6-inch foundation, which serves as secondary containment. Permitted hazardous waste management units H1102, H1103, G203, G1107, G1109, G1009, and G1110 store liquid waste and solid waste and have secondary containment pallets. All secondary containment is capable of

retaining at least 10 percent of the container capacity or the full volume of the largest container. Spill control equipment is stored at Building 540 (when utilized).

Storage and processing of all hazardous waste at the EDS site will take place inside the CSUs and the Environmental Enclosures, all enclosed structures. Except for the H1103 Roll-off Container Storage Area which stores only solid hazardous wastes, the structures are provided with secondary containment pallets/pans and the working floor space of the enclosures will be covered with a portable secondary containment system and berm that will prevent the downward percolation of liquids. Additional engineering and administrative controls include the following:

- Each EDS Containment Vessel has a secondary containment pan underneath to collect any liquids that might spill or leak during operation.
- In each CSU, waste containers will be placed on top of secondary containment pans capable of retaining at least 10 percent of the total volume of containers present or 100 percent of the largest container, whichever is greater. Any leaks or other liquids will be contained by the containment pans.
- Liquid waste containers of the EDS Waste Transfer Subsystem will be placed in portable secondary containment.
- Any spills or releases of hazardous materials will be cleaned up in accordance with the Contingency Plan (**Attachment 4**).

By these measures, contamination of clean water, process water, and potable water systems in use at PCD will be prevented.

2-5d Mitigation of Equipment and Power Failures

Emergency backup generators provide power for the Intrusion Detection Systems in the event of a power outage. PCD has numerous emergency portable generators to provide backup for any operations requiring emergency power. Building 540 does not require power. The OC has backup emergency generators to operate computers, sirens, and communications equipment in the event of a simultaneous accident/incident and power outage. The EDS site has an 800-kilowatt (kW) backup generator for

emergency power requirements as well as using site power (grid) during normal operations. The emergency power system will consist of one emergency diesel generator capable of carrying the entire emergency load of the PCAPP EDS site. The emergency power generating system will also provide backup power to all critical and essential loads in case of a power outage (for example, monitoring, lighting, and Air Filtration System [AFS]). This backup generator will be maintained per **Table 2-2** regarding emergency generator in **Attachment 8**.

The EDS units are designed to be fail safe. If there is an unlikely equipment failure, an EDS unit will contain the waste material within the Containment Vessel or secondary containment structures. Each EDS unit will be operated within an Environmental Enclosure with ventilation to an AFS that includes prefilter, HEPA, and high efficiency gas absorber (HEGA) filter units with sulfur-impregnated carbon (SIC).

2-5e Personal Protective Equipment

Various levels of PPE are worn to protect workers from chemical exposure at PCD. Department of Army Pamphlet (DA Pam) 385-61, *Toxic Chemical Agent Safety Standards*, and Army Regulation (AR) 385-10, *The Army Safety Program* specifies the proper level of PPE to be worn during different operations, which have also been incorporated into local SOPs provided in **Attachments 2, 3, 4, 9, 10, 11, and 13** of this Permit. Stocks of PPE appropriate for all hazardous materials managed at PCD are maintained onsite, per the specifications of the aforementioned Army regulations and procedures. Note that these levels are different from the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) levels specified in 29 CFR 1910.120(g)(5).

The potential for exposure of personnel to any hazardous materials or wastes during operations is minimized through monitoring and decontamination of PPE and other equipment before, during, and after use in an area contaminated or potentially contaminated. **PCD SOP 486 (Appendix 2-4)** and the procedures for air monitoring, **Appendix 2-5** to this Attachment and the Waste Analysis Plan, **Attachment 3** of this Permit are used to monitor the air in the igloos and prepare PPE for either reuse or storage for eventual disposal.

At the EDS site, use of PPE, monitoring systems, and engineering controls, such as the Environmental Enclosure AFS will reduce worker exposure where chemical vapors may be present in the event of an

upset condition. A site Health and Safety Plan will detail worker protection requirements and measures that will be followed for site operations.

2-5f Prevention of Releases to Atmosphere

Each EDS unit will be operated within an Environmental Enclosure. Both the emissions from the EDS unit and ambient air within the Environmental Enclosure will be ventilated to an AFS that includes prefilter, HEPA, and HEGA filter units with SIC. The AFS midbed will be continuously monitored during operations to ensure emissions to the atmosphere are minimized.

CSU H1102 has a carbon filtration system known as the ICS that protects against the release of hazardous constituents to the air. If a leak from inside the igloo was to occur, natural flow of air through the igloo would carry agent vapors to the carbon panel adsorbers, where vapors would be contained, if dampers are open.

2-6 PRECAUTIONS TO PREVENT REACTION OF IGNITABLE OR REACTIVE WASTE

[6 CCR 1007-3 § 264.17]

All wastes that are ignitable or reactive are protected from sources of ignition or reaction by administrative controls that prohibit open flames, smoking, welding, radiant heat, or heat from friction, sparks, and spontaneous ignition in hazardous waste management areas. As described in **Attachment 3** of this Permit this waste includes spent high efficiency particulate air filters, laboratory solvent wastes, paint residues, and degreasing solvents. All hazardous wastes, not just the ignitable or reactive waste, are protected from ignition sources.

Energetic chemical munitions and miscellaneous energetic items contaminated with mustard agent will be treated in an EDS unit designed to contain the shock, fragments, and fill material during the munition/item opening process. The EDS unit serves as the reaction vessel for the subsequent treatment of chemical fills and deactivation of energetics. After treatment in an EDS, the wastes will no longer be reactive or ignitable.

The Permittees will follow all aspects of this section regarding Lightning Protection Systems (LPSs) including LPS at the EDS site.

To prevent accidental ignition or reaction caused by a lightning strike, the permitted agent-related hazardous waste management units G203, G1009, G1107, G1109, and G1110 as well as CSUs H1102 and H1103, and the EDS shape charge storage magazines and EDS units plus associated equipment are protected with a lightning protection system. This Integral Type LPS consists of vertical equally-spaced air terminals (aerials) bonded to a bare grounding wire (down conductor) that runs along the top of the magazine on the long axis from the rear vent stack to the headwall or front of the magazine (see **Figures 2-4a, 2-4b, and 2-4c**). The down conductor is attached to at least 2 grounding rods (per Table 17-2, Ground Rod Quantity Requirements, DA Pam 385-64) embedded in the ground. Grounding rods are 0.75 inch in diameter or larger and are not less than 10 feet long consisting of copper or copper-clad steel,

pipe or solid rod the top of which must be at least 12 inches below the finished grade in accordance with Table 17-4, Lightning Protection Systems, DA Pam 385-64.

The 3/8-inch diameter as measured below the taper (Class I, buildings less than 36 feet high, per Table 17-4, Lightning Protection Systems, in DA Pam 385-64) air terminal (lightning rod) on the rear vent stack is placed at least one foot (10 inches minimum required) higher than the top of the vent with a minimum aerial length for of 24 inches for each terminal at least 10 inches of which must extend above the structure (per Table 17-4, Lightning Protection Systems, in DA Pam 385-64) and be bonded to the vent cap. The main conductor consists of a copper solid strip with an outside diameter of at least 0.5 inch, minimum thickness 0.051 inch, and minimum width of 1 inch (per Table 17-4, Lightning Protection Systems, in DA Pam 385-64). Down conductor will also be as vertical as possible with bends not to exceed 90° and with a minimum bend radius of 8 inches (per Table 17-4, Lightning Protection Systems, in DA Pam 385-64).

Bonding is used to reduce the possibility of side flashing and to ensure no electrical potential differences (via induction) are produced by lightning current. Bonding requirements are per Chapter 4, DA Pam 385-64. For magazines (igloos) H1102, H1103, EDS shape charge magazines, G203, G1009, G1107, G1109, and G1110, which are less than 36 feet in height, bonding is required for large masses of metal (400 inches square or larger surface area) located on the exterior, or within facilities and bonding is also required if the object is within 6 feet of an opening or within 6 feet of any part of the LPS (per Section 17-22 b(1) and B(2) Bonding in DA Pam 385-64). DA Pam 385-64 requires metal ventilators, steel doors, door frames, and steel reinforcement to be bonded to the structure's grounding system. Incoming power cables for security power should be bonded to steel reinforcement as it enters the structure.

The Permittee shall visually inspect and document the inspection of the LPS for evidence of lightning strike damage to LPS components and secure bond connections per Section 17-27, Visual Inspection Requirements, DA Pam 385-64, NFPA 780 Annex D, Inspection and Maintenance of Lightning Protection Systems, paragraph D-2, and **Table 2-3**, Lightning Protection System Visual Inspection Elements. In addition, every 24 months, resistance continuity (bonding) testing is performed to ensure the grounding system is viable (see **Table 2-1** for frequency of inspections). The required resistance for bonding testing is 1 ohm and for ground rods is 25 ohms (every 24 months) using a different test method from bonding testing. The log for this inspection is found in **Appendix 2-2** and the frequency is found in **Table 2-1**. Also, DA Pam 385-64 requires the earth electrode subsystem ground rods to be tested every 24 months (maximum resistance is 25Ω) and those parts that can be viewed, visually inspected at least

every 7 months. If there are any issues with the conditions of any of the components of the LPS, the structures would fail the verification of the ground circuit continuity/bonding tests and the visual inspection will assist in indicating whether repair or electrical testing is necessary. There is no power going into the igloos other than what is needed for security operations, and that power is linked into the existing system through electrical service boxes and is fully grounded per DA Pam 385-64. Any Surge Protection Devices (SPDs) present (see EDS systems, **Attachment 8** of this Permit) must be inspected per manufacturer's recommendations at least every 7 months when visual inspections are conducted. Inspection and Test records must be maintained onsite as part of Operating Permit.

Under Section 17-23 of DA Pam 385-64, a Lightning Warning System is utilized at PCD. The PCD LPS is an on-line system that is part of the National Lightning Detection System (LDS). Upon receiving notification from the LDS for 10 and/or 18 miles, Tone Alert Radio or visual observation, the OC takes several actions. The public address system and radio broadcasts (Chemical Operations and Security channels) are initiated. The Operations Officer and the Installation Commander are notified. At the first indication of lightning within 10 miles, chemical operations are terminated and the igloo doors are closed. All Clear messages are announced by radio and public address when lightning clears greater than 10 miles. EDS operations will be tied into the PCD Lightning Warning System, including communications and all other aspects, and will follow procedure regarding cessation of chemical and/or energetic waste treatment and transport operations under the above conditions.

Smoking and spark producing devices are not allowed in Munitions Storage Area A. Automatic lighters are installed in permitted smoking areas. No smoking signs are posted in the Munitions Storage Area A and Building 540. Building 540 has four quadrants to separate incompatibles. The Fire Department must issue hot work permits for all operations that involve spark- or flame-producing operations.

2-6a General Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Wastes [6 CCR 1007-3 § 264.17(b)]

A list of ignitable (D001) and reactive (D003) wastes stored in permitted hazardous waste management units is provided in the Waste Analysis Plan, **Attachment 3** of this Permit. Precautions are taken with regard to storage to ensure that ignitable and reactive wastes are not exposed to ignition sources or other conditions that could initiate a reaction (e.g., use of non-sparking tools, intrinsically safe equipment, and anti-static procedures/equipment). No Smoking signs are posted at all permitted units. Workers are trained annually in proper handling and storage of hazardous waste. Training for PCD workers provides instruction for proper handling and protection from sources that could ignite or cause a reaction with munitions. The training for workers also provides instruction on the proper handling of munitions and related waste. General safety requirements in local SOPs, including **PCD SOP 486**, reviewed with chemical workers, provide instructions for properly handling munitions.

Both the Modified Level A PPE and the Self-Contained Toxic Environment Protective Outfit (STEPO) PPE have the potential for static electricity discharge. This potential is increased in cold, low humidity environments and is a reason for additional caution when handling explosive material. Incompatible wastes are not mixed or stored at PCD.

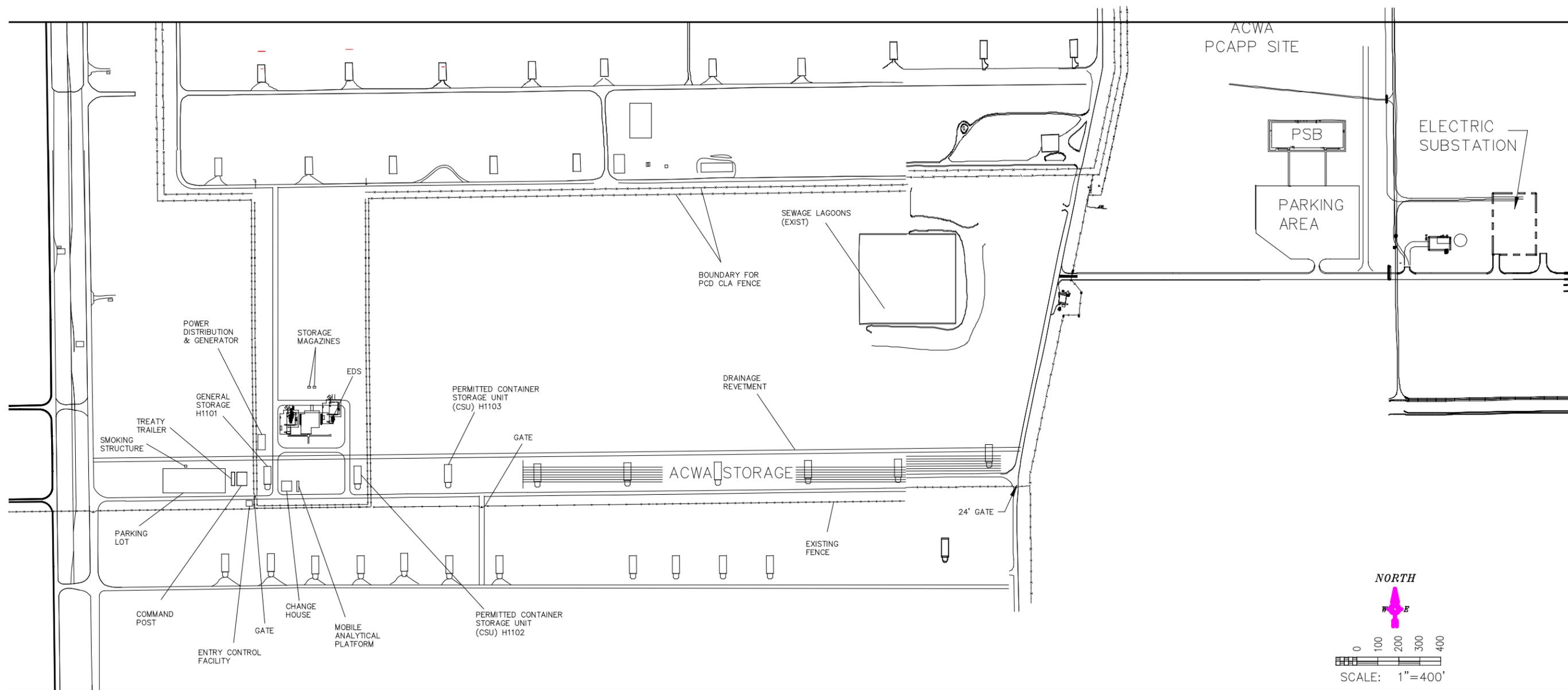
2-6b Management of Ignitable or Reactive Wastes in Containers [6 CCR 1007-3 § 264.176]

Containers holding ignitable or reactive waste are stored in permitted hazardous waste management units H1102, G203, G1009, G1107, G1109, G1110, and Building 540. Setbacks of ignitable or reactive waste in these areas more than exceed the requirement for containers to be more than 15 meters (50 feet) from the property line of the installation.

2-6c Management of Incompatible Waste in Containers [6 CCR 1007-3 § 264.177]

Incompatible wastes and materials are not placed in the same container or stored near other containers of incompatible wastes. Storage compatibility criteria, as described in 49 CFR 177 Subpart C Department of Transportation (DOT) Hazard Class (Division), are used when segregating wastes. No incompatibles are stored in the permitted hazardous waste management units H1102, H1103, H1103 Roll-off Container Storage Area, G203, G1009, G1107, G1109, and G1110. Building 540 is designed with segregated

quadrants to ensure incompatibles as defined in 6 CCR 1007-3 Part 264 Appendix V, are not stored together. Drums that have previously held an incompatible hazardous material are not re-used.



Pueblo Site Plan Full 04-28-2014.dwg

Figure 2-1. PCAPP EDS Site

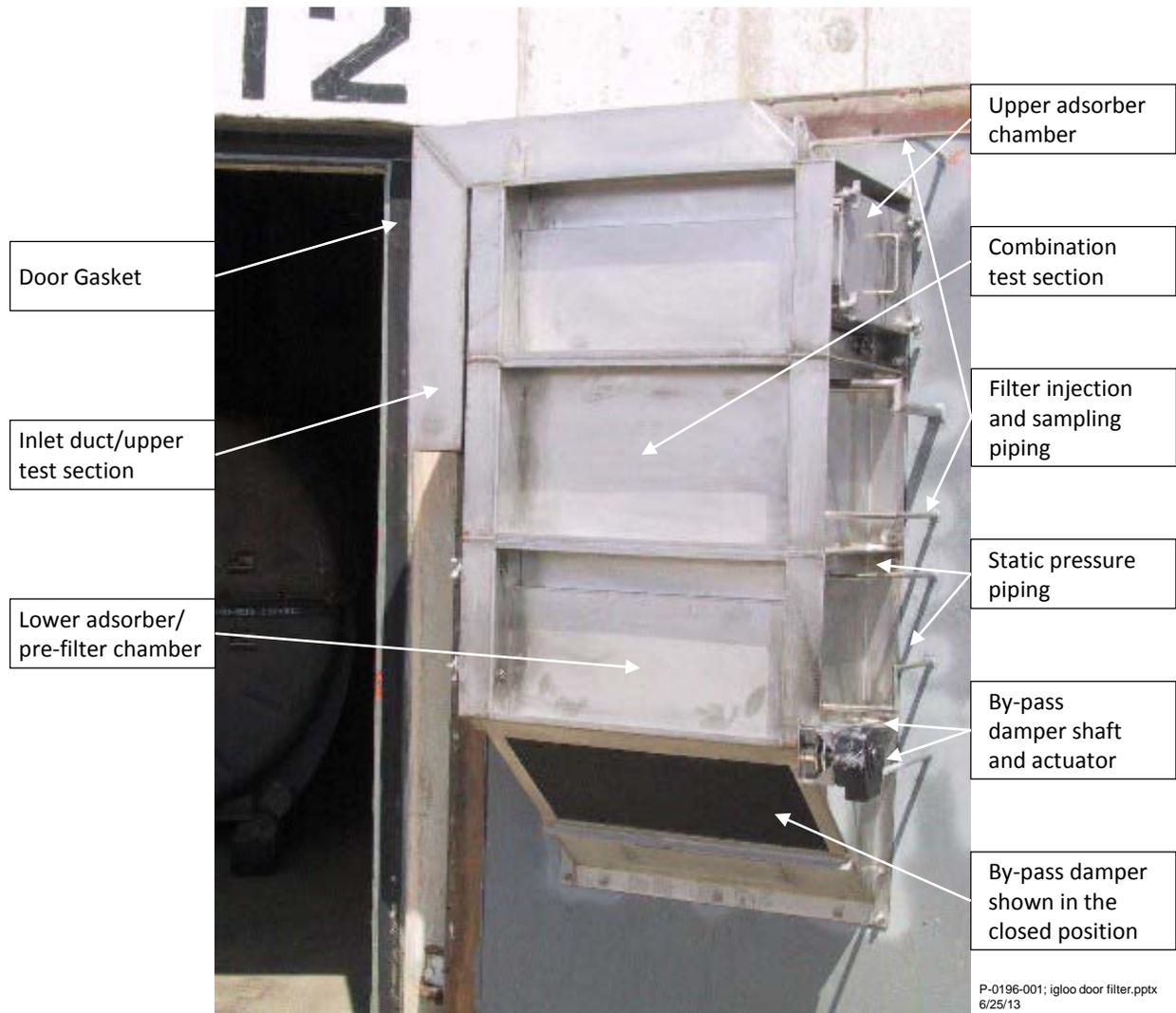


Figure 2-2. Igloo Door with Filter System Installed

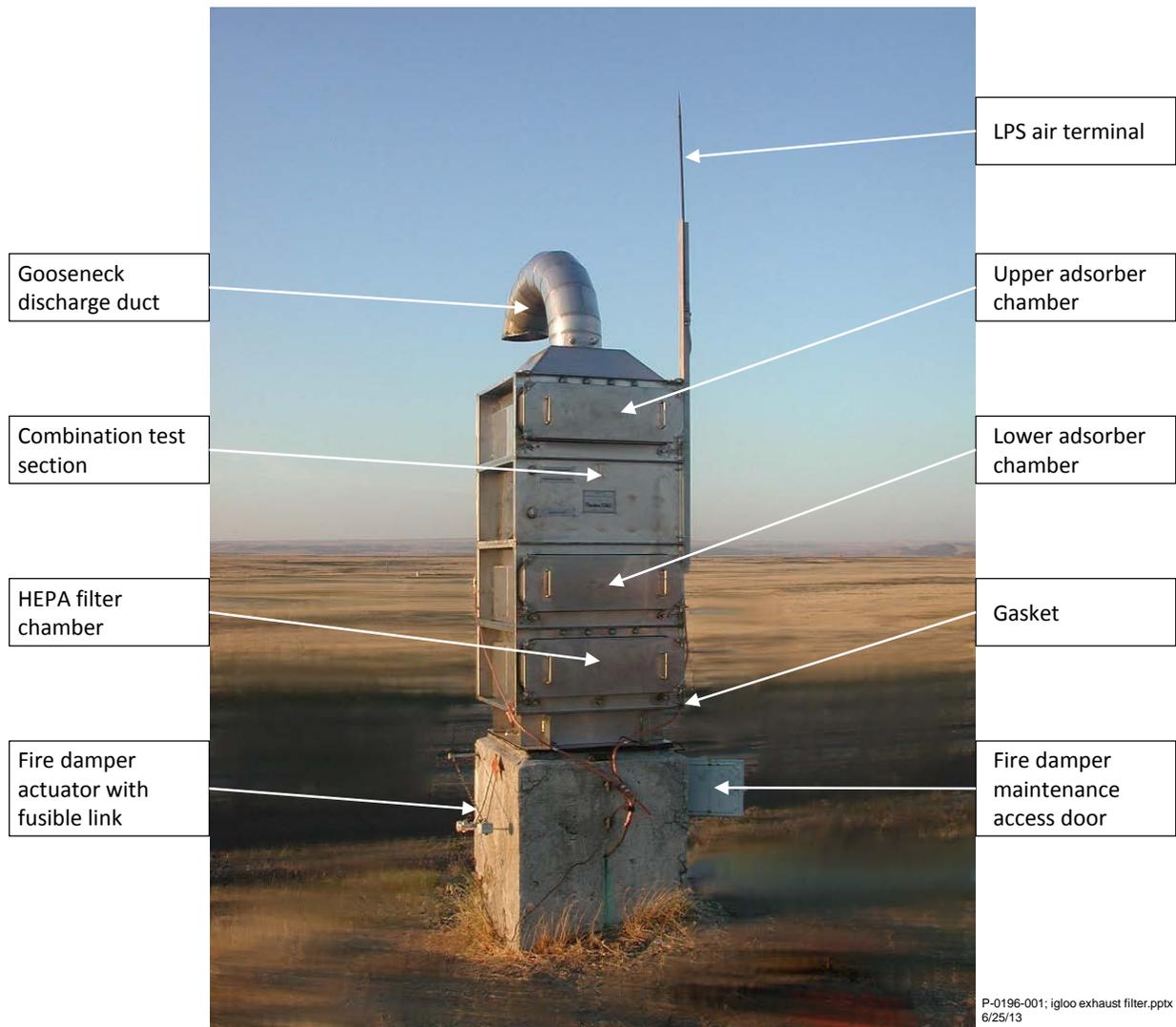
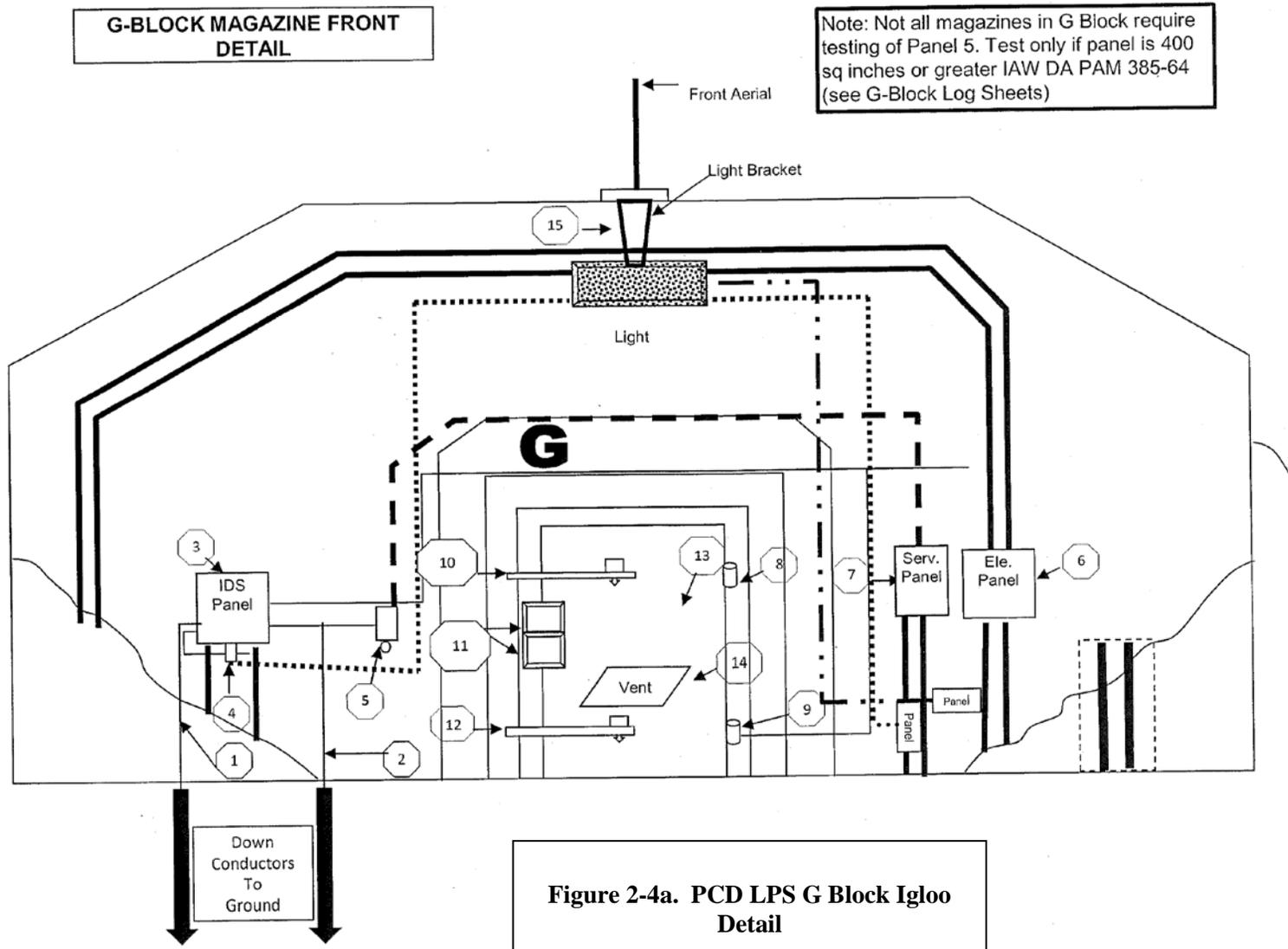


Figure 2-3. Igloo Exhaust Stack Door with Filter System Installed

LPS Check Points-G Block Igloo Detail



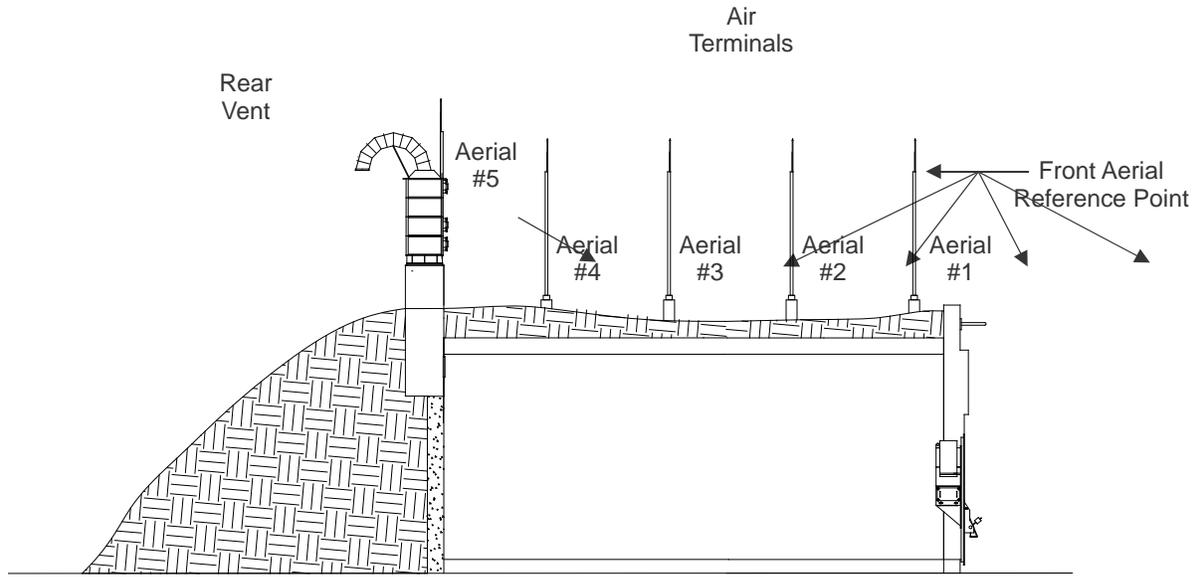


Figure 2-4b. G Block Igloo - Side View

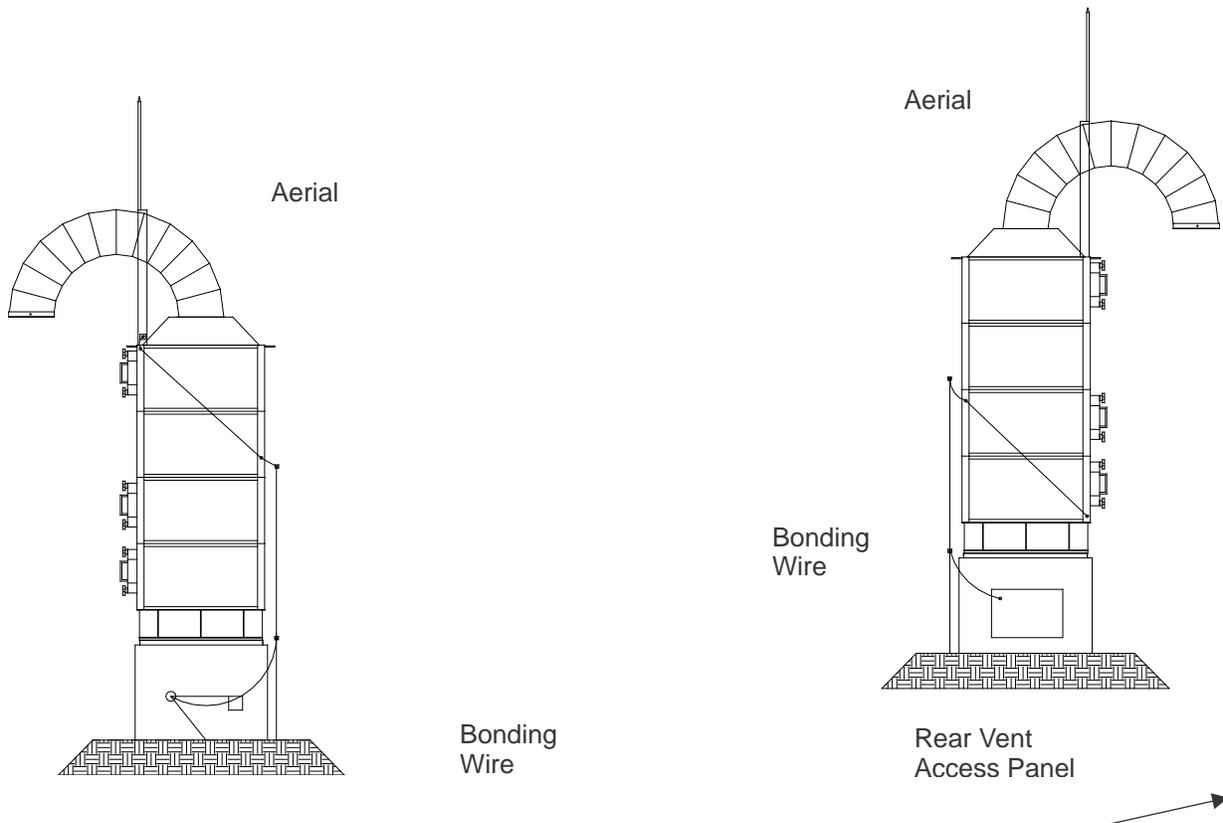


Figure 2-4c. G Block Igloo Rear Views - Vent Sid

Table 2-1. Inspections and Frequency Conducted on Permitted Hazardous Waste Storage Areas at PCD

Storage Area Location	Waste Type	Inspection	Frequency
Bldg 540	Hazardous (nonagent-related)	Hazardous Waste Unit (interior and exterior)	Weekly
G203, G1009, G1107, G1109, G1110 Magazines (CLA)	Hazardous (agent-related)	Hazardous Waste Unit Outside (exterior)	Monthly
		Hazardous Waste Unit Inside (interior)	Quarterly
		Air Monitoring	Weekly*
		Surveillance Section	Monthly
		Surveillance Section (Semi-annual Magazine Inspection)	Semi-annual
		Chemical Operations	Monthly**
		Munitions Inventory	Annual
		Lightning Protection System (LPS) (both types of electrical testing and inspection will be done prior to EDS operation to be documented as initial frequency start time)	Semi-annual*** (visual insp to include any SPDs)
	24 Months*** (electrical continuity testing of bonds)		
	24 Months*** (Grounding Rods Subsystem Testing)		

* Also daily during Open Door Operations

** Also daily during Chemical Operations

*** LPS and SPD (Surge Protection Devices) visual inspection and grounding rod subsystem testing and electrical bonding testing (25Ω and 1Ω max respectively) per DA Pam 385-64, Chapter 17 and Appendix D.

Note: Visual inspection of LPS will include physical checking of bond clamps for looseness, tightening of clamps when found loose, and retesting for <1 ohm resistance. Permittees will document loose bond connections, retightening, and retesting. LPS protection includes as a minimum H1102, H1103, magazines, equipment on EDS concrete pads, power distribution and emergency backup generator, and control area.

For the purposes of this plan, the inspection frequencies are defined as follows:

Daily: once each calendar day, including weekends and holidays;

Weekly: once per calendar week;

Monthly: once per calendar month;

Semi-annually: twice during a 12-month calendar year not to exceed two hundred ten (210) days since previous semi-annual inspection; and

Annually: at least once during a 12-month calendar year.

Table 2-2. Inspection Schedule for EDS Units and CSUs at PCAPP EDS Site

6 CCR 1007-3 § 264.15(b)(1)	Frequency ^a 6 CCR 1007-3 § 264.15(b)(4)	Types of Problems 6 CCR 1007-3 § 264.15(b)(3)
EDS Trailer		
Containment Vessel	Daily when in use	Visually inspect exterior, including tubing, hoses, and valves for evidence of corrosion, leakage, or other physical damage such as tears, stresses, gouges, dimples, rips, cracks, loose screws, etc.
	Daily when in use	Visually inspect interior for evidence of physical damage such as gouges and dimples, etc.
	Daily when in use	Conduct inspection and cleaning of sealing surfaces.
	On Day 1 of operation	Conduct Hi-potting test through open vessel door and conduct continuity check of feedthrough and detonator terminal blocks to check for proper functioning prior to operation.
	On Day 1 of operation	Confirm that a vacuum test for evidence of leakage or other physical damage to the vessel or piping, valves, or instruments connected to vessel door, has been conducted on this unit prior to operation.
EDS Trailer Secondary Containment Pan	Daily when in use	Visually inspect for presence of liquid or evidence of corrosion, leakage, or other physical damage such as cracks, gaps, or holes.
Waste Transfer Subsystem	Daily when in use	Visually inspect containers to ensure good condition; visually inspect hoses and quick disconnects for evidence of leakage and physical damage such as tears, rips, and corrosion. Inspect to confirm hose connections are in place.
Lift Assist	Daily when in use	Visually inspect that unit is marked with load rating and date of next inspection.
Communication		
Landline Telephones, Cellular Telephones, Hand-Held Radios, Throat Microphones/Headsets	Daily when in use	Check for availability and operability.
Alarm Panels (EDS unit)	Daily when in use	Check function and operability of audible/visual alarm.
Closed-Circuit Television System	Daily when in use	Check for availability and operability. Check visual clarity/tilt, pan, and zoom functions.

Table 2-2. Inspection Schedule for EDS Units and CSUs at PCAPP EDS Site (Continued)

6 CCR 1007-3 § 264.15(b)(1)	Frequency ^a 6 CCR 1007-3 § 264.15(b)(4)	Types of Problems 6 CCR 1007-3 § 264.15(b)(3)
CSUs H1102 and H1103		
Containers	Weekly	Visually inspect containers for leaks, deterioration, rust, and corrosion. Ensure proper labeling, identification, aisle spacing, and container stacking. Inspect general area for signs of leakage. Verify inventory is within permitted capacity for permitted storage.
Secondary Containment (Pallets)	Weekly	Inspect the containment pallets for cracks, chips, or gouges, and areas that indicate excessive wear or deterioration; visually examine grating and inside containment pan with regard to structural integrity. Examine inside pallet for apparent drips, spills, or leaks from munitions. Also examine pallet for spills due to other potential sources, such as precipitation, which may contribute liquids on the CSU floor or within secondary containment pallets.
Floor Area	Weekly	Visually inspect floor area for evidence of precipitation or liquids; damaged seams and deterioration.
CSU H1102 Carbon Filtration System	Monthly	Visually inspect carbon filtration system with regard to structural integrity, operability, adequacy, clean and in good condition; free of visible damage or deterioration that may affect performance. Visually inspect vents for evidence of cleanliness, free of visible damage or significant deterioration; exterior and interior screens intact and dampers properly positioned.
	Annual	Performance validation in accordance with PCD SOP PU-0000-M-491 as detailed in Attachment 2 of the PCD Hazardous Waste Permit, December 2013.
Roll-off Containers (adjacent to CSU H1103 only)	Weekly	Visually inspect roll-off container(s) to ensure good physical condition. Ensure proper labeling and proper use (i.e., covered and locked except when adding waste, liner present). Visually inspect roll-off for leaks, deterioration, rust, and corrosion. Visually inspect concrete pad for precipitation or other accumulated liquids. Ensure all components are functioning properly.
Boiler/Chiller Container		
Steam Generator	Daily when in use	Perform visual inspection of components to ensure good physical condition and that there is no damage present.
Flow Meter & Controls Mounted on Small Skid	Daily when in use	Check function and operability. Visually inspect the flow meter and controls for physical integrity.

Table 2-2. Inspection Schedule for EDS Units and CSUs at PCAPP EDS Site (Continued)

6 CCR 1007-3 § 264.15(b)(1)	Frequency ^a 6 CCR 1007-3 § 264.15(b)(4)	Types of Problems 6 CCR 1007-3 § 264.15(b)(3)
Environmental Enclosures		
Air Filtration Systems (two on each enclosure)	Daily when in use	Ensure each unit is functioning and operable.
Enclosure Floor Area Secondary Containment System	Daily when in use	Check the enclosure floor area secondary containment system and berm for signs of cracks, flaking, chips, gouges, or obvious wear or deterioration. Ensure there are no signs of drips, spills, or leaks or any accumulated liquids.
Satellite Accumulation Areas	Weekly	Each satellite accumulation area must be inspected for signs of container deterioration and leakage, compatibility with the hazardous waste stored inside the container, that the container is in overall good condition and properly maintained, and that the container is labeled, dated when accumulation began and closed appropriately. When container becomes full, it must be moved to CSU H1103 within 24 hours.
Environmental Enclosure structure	Daily when in use	Visually inspect the structural integrity of each environmental enclosure for signs of rips, tears, holes, gaps, or other deterioration that may result in a release of hazardous constituents to the environment. Visually check for signs of precipitation leaking into the structure.
Security		
Fences & Gates	Monthly	Check for integrity, intrusion, or obstruction by vegetation; gaps at fence base. Locked gates.
Warning Signs	Monthly	Check for presence and legibility.
Fire Protection/Safety Equipment		
Fire Extinguishers	Monthly	Check gauge pressure, general condition, and service date.
Personnel Decontamination Station	Daily when operating	Check for adequate decontamination solution supply, direct access, and operability.
Emergency Response Equipment (Spill Kits and Hand Tools)	Daily when operating	Check for sufficient inventory, items in good condition, and expiration dates have not lapsed (where applicable).

Table 2-2. Inspection Schedule for EDS Units and CSUs at PCAPP EDS Site (Continued)

6 CCR 1007-3 § 264.15(b)(1)	Frequency ^a 6 CCR 1007-3 § 264.15(b)(4)	Types of Problems 6 CCR 1007-3 § 264.15(b)(3)
Monitoring		
MINICAMS® and DAAMS (Chemical Agent)	Daily when operating	Visually inspect monitors for physical integrity; check diagnostic indicators on front panel of monitor housing for proper operation; inspect sample lines and connections, ensure heat trace is functional, ensure proper ventilation for exhaust, perform chemical agent challenge test and calibration.
Emergency Backup Power		
Emergency Generators	See footnote ^c	At a minimum, start unit, check voltage, current, and frequency output regularity and filter differential pressure.
CSU (Exterior)		
CSUs H1102 and H1103	Monthly	Check security, warning signs, doors, locks, fire extinguisher, door vent, rear vent for proper placement and operation. Ensure area is clear of debris and vegetation.
Lightning Protection Systems^b		
CSUs H1102 and H1103 (visual)	Semi-Annually	No evidence of lightning strikes; ground and bond connections intact and in accordance with DA Pam 385-64. (Check bonds for tightness with appropriate tool. If loose, tighten and test < 1 ohm. Record as part of Operating Record.) See Table 2-3 .
Environmental Enclosure (visual, each enclosure)	Semi-Annually	No evidence of lightning strikes; ground and bond connections intact and in accordance with DA Pam 385-64. (Check bonds for tightness with appropriate tool. If loose, tighten and test < 1 ohm. Record as part of Operating Record.) See Table 2-3 .

Notes:

^a Inspections of the EDS unit(s) and CSUs will be conducted in accordance with the checklist during operations and when waste is present; during periods of temporary closeout, inspections must be conducted at least quarterly (not to exceed 120 calendar days between inspections).

^b There are also specific LPS electrical tests required per **Table 2-1** including scheduled frequency and new systems require these prior to operations per NFPA 780 and DA Pam 385-64 as part of site Operating Record and on ongoing basis.

Table 2-2. Inspection Schedule for EDS Units and CSUs at PCAPP EDS Site (Continued)

Notes: (Continued)

^c Daily, monthly, semi-annual, and annual checks and inspections must be conducted for emergency generators. See associated Permit **Attachment 8**, EDS Process, Section 8-2a(1)(a)(xi), Electrical Subsystem, and **Appendix 8-6**, EDS 800 kW Generator Set Preventive Maintenance, Checks, and Services (PMCS) checklist, August 2014 regarding this.

CCR	=	Colorado Code of Regulations
CSU	=	Container Storage Unit
DA Pam	=	Department of the Army Pamphlet
DAAMS	=	Depot Area Air Monitoring System
EDS	=	Explosive Destruction System
PCD	=	Pueblo Chemical Depot
SOP	=	Standing Operating Procedure

Table 2-3. Lightning Protection System Visual Inspection Elements

1	System is in good repair.
2	There are no loose connections that might result in high resistance joints. Tighten joints to verify.
3	No part weakened by corrosion or vibration (e.g., wind).
4	All ground conductors and terminals (visible portions) are intact (e.g., non-severed).
5	All down conductors and system components are fastened securely to their mounting surfaces.
6	No additions or alterations to the protected structure that would that would require additional protection.
7	There is no visual indication of damage to surge suppression (overvoltage) devices if present.

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