ATTACHMENT 8

CLOSURE PLAN

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1.0 Closure Performance Standard

1.1 The Hazardous Waste Management Units (HWMUs) at the Tooele Army Depot (TEAD) shall be closed according to the requirements of Condition II.N, Utah Admin. Code R315-264-110 through 120 and the following closure and post-closure plan. Prior to closure of any or all HWMUs, when necessary, this plan shall be modified to add detailed procedures for sampling and decontamination or removal of all contaminated soil, groundwater, equipment and structures. The closure information in this document is general and is based on current information and future estimates of the use, current inventory and potential contamination and remediation of each of the HWMUs.

1.2 When necessary, prior to initiating closure, a baseline-sampling program shall be completed to determine background concentrations of contaminants in all appropriate media, equipment, structures and decontamination waters. Any sampling and analysis plans will be approved by the Director of the Division of Waste Management and Radiation Control (Director) prior to implementation.

1.3 The HWMUs operated by the Permittee shall be closed in a manner that minimizes the need for further maintenance and eliminates, minimizes, or controls the possible hazards to human health and the environment. When Open Burn/Open Detonation (OB/OD) operations at the Facility are terminated, the unit shall be closed in a manner that eliminates the need for post-closure care. Closure of the OB/OD unit shall comply with the environmental performance standards of R315-264-601 relative to closure activities and post-closure facility conditions.

1.4 This plan does not address corrective actions concerning past activities that are identified as Solid Waste Management Units (SWMUs) with Known Releases and SWMUs with Suspected Releases since these SWMUs are addressed in the Industrial Waste Lagoon Post Closure Permit issued by the Director January 7, 1991, and the TEAD Federal Facilities Agreement.

1.5 The removal of all hazardous waste inventories, and the treatment and disposal of all hazardous wastes stored at the Facility, at either HWMUs operated by the Permittee or off-site Treatment, Storage and Disposal Facilities (TSDFs), will minimize the need for further maintenance, and eliminate the possibility of a post closure escape of hazardous constituents from the HWMUs included in this permit.

1.6 The HWMU's included in this closure plan are:

1.6.1 Building 528 - Container storage of wastes with free liquids.

1.6.2 Ammo Igloo A-101 - Container storage of wastes with free liquids.

1.6.3 Ammo Igloos A-101, C-514, C-815, C-816, K-401, K-402, K-403, K-404, K-801, K-802, and K-803. Container storage of wastes without free liquids.

1.6.4 Service Magazines 1368, 1369, 1370, & 1371 - Container storage of wastes without

free liquids.

1.6.5 Above Ground Magazine 1205 - Container storage of wastes without free liquids.

1.6.6 APE-1236 Deactivation Furnace (incinerator at Bldg.1320) – Thermal treatment of reactive (D003, explosive) wastes. Wastes are limited to Propellant Explosive and Pyrotechnic (PEP) items having military application. Container storage of wastes without free liquid.

1.6.7 Small Caliber Disassembly Line – Initiation of primers after the propellant is removed from the projectile.

1.6.8 OB/OD Unit – Open burn and open detonation treatment of waste propellant and conventional military munitions and components in burn pans, static silos and open detonation pits.

1.6.9 Hydrolysis Facility – Destruction of explosives by hydrolysis in a sodium hydroxide solution.

1.7 Throughout closure of any HWMU, all operations shall be performed in a manner that will protect personnel, human health, and the environment. The necessary level of protection shall be achieved by ensuring that various precautions are put in place and properly implemented. Precautions will include:

1.7.1 Security: All existing security (e.g., signs, gates) will be maintained and, as necessary, supplemented.

1.7.2 Inspections: The facility inspection program will inspect areas where hazardous waste and residues are temporarily stored during remediation and decontamination.

1.7.3 Personnel Training: All personnel associated with facility closure will receive the training necessary to perform their duties.

1.7.4 Preparedness and Prevention: During closure activities, all equipment necessary to respond to potential emergencies at the facility will remain available. The facility will be maintained in such a manner as to minimize the potential for emergencies during closure.

1.7.5 Contingency Plan and Emergency Procedures: The facility Contingency Plan will be maintained, and, as necessary, augmented to describe proper responses in the event of emergencies during closure.

2.0 Maximum Waste Inventory

2.0.1 The maximum inventory each container storage HWMU will have is determined from the maximum permitted storage capacity for each unit as contained in Attachment 9 (Containers)

and is listed below:

2.0.1.1 Building 528 – 57,800 gallons.

2.0.1.2 Igloo A-101 – 7,584 cubic feet.

2.0.1.3 Igloo C-514, C-815, C-816, K-401, K-402, K-403, K-404, K-801, K-802, and K-803 – 10,272 cubic feet each.

2.0.1.4 Service Magazines 1368, 1369, 1370, & 1371 – 480 cubic feet each.

2.0.1.5 Above Ground Magazine 1205 – 72,000 cubic feet.

2.0.1.6 Building 1320 – 720 cubic feet.

2.0.2 The maximum inventory of wastes on site at the 1236 Deactivation Furnace (Bldg. 1320) at the time prior to closure is the sum of two waste streams. The first waste stream is comprised of the waste PEP item (munitions) that will be deactivated in the furnace and the second is comprised of the ash that results from furnace operations. The furnace can treat reactive (explosive) waste at a Net Explosive Weight (NEW) feed rate of 200 to 300 lbs/hr. Only the amount of waste PEP items that can be treated in one day are stored at the furnace site. Using 250 lbs/hr NEW feed rate, and 8 hours of operation/day as a basis, the maximum inventory of waste awaiting treatment stored at the furnace site is 2,000 pounds NEW.

2.0.3 Ash resulting from furnace operations is collected in the cyclone, the baghouse, and the containers into which this equipment empties. At the time of closure, the baghouse and cyclone will be emptied and all the bags shall be removed from the baghouse. Less than ten 55 gallon drums will be required to contain the residue resulting from this clean-up activity.

2.0.4 The total maximum inventory of wastes that may be at the 1236 Deactivation Furnace (Bldg. 1320) when closure begins is 550 gallons (ash) plus 320 gallons (PEP items), for a total of 870 gallons.

2.0.5 The maximum inventory of waste on site at the Small Caliber Disassembly Lines (Bldgs. 1325 and 1335) at the time prior to closure is the sum of two waste streams. The first waste stream is comprised of the PEP (munitions) that will be disassembled and the second is comprised of residue collected in the pollution abatement system. Only the amount of waste PEP that can be disassembled in a day will be stored at the facility. The maximum amount that will be disassembled in one day is 50,000 rounds.

2.0.6 The maximum inventory of wastes on-site at the Hydrolysis Facility (Bldg. 1400) at the time prior to closure is the sum of two waste streams. The first waste stream is comprised of the waste PEP items (CADs and PADs) that will be deactivated via hydrolysis reaction, and the second is comprised of the hydrolysate solution used to process the Reactive (explosive) waste. The hydrolysis facility can treat the explosives at an average NEW feed rate of 163 lbs/hr

(average rate takes bath heat up time into account, normal processing rate is 250 lbs/hr). Only the amount of waste PEP items that can be treated in one day is stored at the hydrolysis facility. Using 163 lbs/hr NEW feed rate, and 10 hours of operation/day as a basis, the maximum inventory of waste awaiting treatment stored at the hydrolysis site is 1,630 pounds NEW.

2.0.7 Hydrolysis facility residues from hydrolysis operations remain in their respective tanks until collected. At the time of closure, the hydrolysis tanks shall be emptied. The total maximum inventory of wastes that may be at the Hydrolysis Facility (Bldg. 1400) when closure begins is therefore ~2,200 gallons (hydrolysate), plus 300 gallons (PEP items), 2,500 gallons total.

2.0.8 The inventory of waste at the OB/OD unit is discussed in Sections 2.6 and 3.9.

2.1 Building 528

2.1.1 The Permittee does not operate any HWMU capable of treating or disposing of the types of wastes stored in Building 528. All wastes stored in Building 528 require some type of treatment before land disposal. Wastes shall be treated and disposed of at off-site TSDFs.

2.2 Igloos A-101, C-514, C-815, C-816, K-401, K-402, K-403, K-404, K-801, K-802, K-803; Service Magazines 1368, 1369, 1370, and 1371; Above Ground Magazine 1205; and Building 1320

2.2.1 The Permittee does operate HWMUs capable of treating the types of wastes stored in Igloos A-101, C-514, C-815, C-816, K-401, K-402, K-403, K-404, K-801, K-802, K-803; Service Magazines 1368, 1369, 1370, and 1371; Above Ground Magazine 1205; and Building 1320 (Reactive, D003 (explosive)). Wastes stored in these HWMUs will be treated at either the 1236 Deactivation Furnace (the incinerator located at Bldg. 1320), the Hydrolysis Facility, or the Open Burn/ Open Detonation areas operated by the Permittee. There will be no need to transport the wastes stored at these HWMUs off-site, since the deactivation of these waste can be done at the Facility.

2.3 1236 Deactivation Furnace (Bldg. 1320)

2.3.1 At closure, the 1236 Deactivation Furnace (Bldg. 1320) shall be dismantled, and components that were in contact with hazardous waste and treatment residues shall be decontaminated and then recycled as scrap metal. This is an appropriate method of management of these components since they are made of metal and there is a market for scrap metal.

2.4 Small Caliber Disassembly Lines (Bldgs. 1325 and 1335)

2.4.1 At closure, the Small Caliber Disassembly Lines (Bldgs. 1325 and 1335) shall be disassembled, decontaminated and the components that were in contact with hazardous waste and treatment residues shall be recycled as scrap metal. This is an appropriate method of management of these components since they are made of metal and there is a market for scrap

metal.

2.5 Hydrolysis Facility

2.5.1 At closure, the Hydrolysis Facility (Building 1400) shall be disassembled, and the components that were in contact with hazardous waste and treatment residues shall be decontaminated and recycled as scrap metal. This is an appropriate method of management of these components since they are made of metal and there is a market for scrap metal.

2.6 OB/OD Unit

2.6.1 Waste ordnance and munitions are not accumulated at the OB/OD Unit. Because these waste materials are transported to the OB/OD Unit on the day of treatment and treated on that day, there will be no inventory of such materials at this unit at closure. The maximum daily inventory of explosive material subject to OB/OD at the facility is also limited by the environmental performance standards specified in Module VI.

2.6.2 Shrapnel on the surface of the range created as a result of OD activities shall be collected and recycled at the time of unit closure. Ash generated from OB activities shall be collected, analyzed, and disposed of appropriately at the time of closure. Soil contaminated above risk-based or background levels (whichever are higher), shall be removed for off-site treatment.

3.0 Disposal or Decontamination of Equipment, Structures, Soils and Residues

3.0.1 Prior to any sampling of media or structures, historical records including the operating record shall be reviewed to determine if any spills or releases or hazardous waste or constituents has occurred. The HWMU shall be inspected for the presence of any stains or other discoloration that may indicate the potential release of a hazardous constituent or waste. This information will be used in a sampling and analysis plan to help determine the number and location of samples to be collected as well as the potential contaminates to be analyzed. If there is no evidence of a spill or release then sampling may not be required.

3.1 Building 528

3.1.1 Building 528 stores hazardous wastes containing free liquids. The EPA waste codes that describe the type of wastes stored there, and also define the nature of the possible contaminants and hazardous constituents expected to be present as a result of spills or leaks from containers can be found below in Table 1.

TABLE 1-EPA Waste Codes						
D001	D006	D018	D028	D035	D043	F001
D002	D007	D019	D029	D036		F002
D003	D008	D022	D030	D039		F003
D004	D009	D023	D032	D040		F004
D005	D011	D026	D033	D042		F005

3.1.2 Possible contaminated areas are; 1) the secondary containment base, 2) soil beneath the secondary containment base, 3) the containment trench surrounding Building 528, and 4) the load/unload area located directly in front of the entrance gate to Building 528.

3.1.3 To determine the need to decontaminate the secondary containment storage base of Building 528, samples shall be taken and analyzed and the operating record reviewed. Thirty-seven samples of the concrete base shall be taken, the location of which shall be based on a hexagonal sampling pattern developed using the methodology described in EPA-560/5-86-017, "EPA Field Manual for Grid Sampling of PCB Spill Sites". The 36 samples shall be combined into 4 composite samples which shall be analyzed for the constituents described by the EPA waste codes found in Table 1. If these samples show contamination to be present, the secondary containment base of Building 528 shall be decontaminated.

3.1.4 Decontamination of the secondary containment base shall be done by steam cleaning. Steam cleaning will provide adequate decontamination considering the following:

3.1.4.1 The base is sealed with a coating that prevents the concrete from absorbing spill residue.

3.1.4.2 Required inspections lessen the possibility of a spilled waste contacting the base for long periods of time.

3.1.4.3 The only wastes that come into contact with the base are those that are spilled from containers (i.e. there are no waste piles stored in Building 528), and the condition of containers used to store hazardous waste makes this an infrequent occurrence.

3.1.4.4 Any volatile contamination will be driven off by the steam

3.1.4.5 Other types of waste stored in Building 528 will be suspended in the steam condensate.

3.1.5 Condensate generated while steam cleaning the secondary containment base of Building 528 shall be collected, sampled and either taken to the Tooele City Wastewater Treatment Plant or to an off-site TSDF, depending on the sampling results.

3.1.6 After procedures have been performed to decontaminate the secondary containment base of Building 528, 36 samples shall be taken using the same location determination described above. The 36 samples shall be combined into 4 composite samples that shall be analyzed for the constituents described by the EPA waste codes found in Table 1.

3.1.7 The contamination of soil beneath the secondary storage base of Building 528 is minimized by the integrity of both the containment base and the containers used to store the hazardous waste. Permit conditions require the weekly inspection of the base of Building 528 for any cracks or structural defects, and the condition of containers stored in Building 528 to

ensure they are in good condition and closed.

3.1.8 Any discolored areas of the floor (or areas where the concrete sealant deteriorated) shall be grit blasted until all discoloration is removed. The operator will be able to determine the depth of penetration of contamination by observing the color change of the blasted concrete. Should the discoloration continue to the soil underlying the concrete base, soil samples shall be taken at the soil surface and 1 foot below. Any soil samples shall be analyzed for the constituents described by the EPA waste codes found in Table 1. The building shell will hold the spent blast grit, which shall be containerized and managed depending on the results of the analysis of the spent blast grit. Any contaminated soil shall be removed and sent to an off-site TSDF.

3.1.9 To determine the extent of possible contamination in soil of the exterior containment trench, samples shall be taken from the centerline of the trench. When viewed from above, the trench forms a square around the secondary containment base. Both squares share the same center. Since the only source of contamination of the soil in the containment trench is the pipes found at the corner of the secondary containment base, any contamination present would be found at the highest concentration at the four corners of the square formed by the centerline of the exterior containment trench. Nineteen samples shall be taken at each corner of the exterior containment trench. The samples shall be taken along the centerline, at one-foot intervals.

3.1.10 The sample area shall be the area along the centerline 10 feet prior to the corner and 10 feet past the corner. The 19 samples from each corner shall be combined into 2 composite samples. Four corners will therefore yield 8 composite samples for analysis of the constituents described by the EPA waste codes found in Table 1.

3.1.11 The load/unload area shall be sampled to determine the extent of possible soil contamination. The sample area size shall be the entire area where hazardous wastes have been handled, and shall be determined by the TEAD Environmental Office. The appropriate number of samples and sampling points shall be determined using the methodology mentioned above for PCB spills, and is based on the size of the area to be sampled. Samples shall be analyzed for the parameters described by the EPA waste codes listed in Table 1.

3.1.12 If necessary, action and cleanup levels regarding contaminated soils shall be negotiated with the Director and presented in a detailed closure plan that shall be submitted to the Director one year prior to the commencement of closure activities.

3.2 Igloo A-101

3.2.1 Steam cleaning shall be used to decontaminate the secondary containment base of Igloo A-101. All wastes stored in A-101 are containerized (i.e. no waste piles). The only way for waste to contact the secondary containment base directly is if a container fails. This is not a common occurrence. The base is coated with a concrete sealant that is impermeable to moisture, and therefore impermeable to condensate. The condensate will be collected in the drain ditches that run the length of the igloo, down both sides. A portable sump pump will be used to

containerize the condensate. The collected condensate shall be analyzed for explosive contamination.

3.2.2 Whether the condensate is a hazardous waste or not shall be based on the concentration of 2,4-dinitrotoluene (D030), and hexachlorobenzene (D032), the constituents of concern present in explosives. If the concentration of either of these two constituents is above that specified in Table 1 of 40 CFR 261.24, then the condensate shall be managed as a toxicity characteristic hazardous waste and disposed of at an off-site TSDF. Sampling of the containment base shall be conducted to determine the effectiveness of the decontamination procedures. The number and the method of sampling shall be the same as for Building 528.

3.2.3 The possibility of soil contamination is remote, however the most likely place for contamination to exist is where the plugged drain ditches once exited the igloo, and at the boundary where the concrete apron meets the dirt. Samples shall be taken at one-foot intervals along the concrete apron/dirt boundary (the apron is in front of the igloo entrance). These samples shall be composited into two samples.

3.2.4 Action and cleanup levels shall be negotiated with the Director and presented in a detailed closure plan that shall be submitted by the Permittee to the Director one year prior to the commencement of closure activities.

3.3 Igloos A-101, C-514, C-815, C-816, K-401, K-402, K-403, K-404, K-801, K-802, K-803; Service Magazines 1368, 1369, 1370, and 1371; Above Ground Magazine 1205; and Building 1320

3.3.1 Since these HWMUs store containerized wastes that do not contain free liquids and, wastes only contact the floor if a container fails (i.e. no waste piles), and neither of these areas has secondary containment capability, the floor sweepings shall be collected and analyzed for explosive contamination. If not present, the concrete bases of the HWMU shall be considered clean because the floor sweepings give a representative sample of what has been in contact with the floor surface.

3.3.2 If explosive contamination is present, the concrete floor shall be sandblasted. This method is chosen because there are no methods to contain liquids at any of these HWMUs. The spent grit blast will be collected and managed as a hazardous waste if upon analysis the blast grit is toxicity characteristic for the constituents 2,4-dinitrotoluene (D030) and/or hexachlorobenzene (D032) (constituents found in explosives).

3.3.3 Samples of the blasted concrete base shall be taken from Igloos A-101, C-514, C-815, C-816, K-401, K-402, K-403, K-404, K-801, K-802, K-803; Service Magazines 1368, 1369, 1370, and 1371; Above Ground Magazine 1205; and Building 1320. The sample number and method used shall be that described in the section relating to Building 528. Due to the small size of Service Magazines 1368, 1369, 1370, and 1371, only 9 samples shall be taken of each building. Samples taken in Igloos A-101, C-514, C-815, C-816, K-401, K-402, K-403, K-404, K-801, K-802, K-803; Above Ground Magazine 1205; and Building 1320, shall be composited into four

samples, while samples taken from the Service Magazines shall be composited into one sample.

3.3.4 Action and cleanup levels shall be negotiated with the Director and be presented in a detailed closure plan which shall be submitted by the Permitee to the Director one year prior to the commencement of closure activities.

3.4 1236 Deactivation Furnace (Bldg. 1320)

3.4.1 The components of the Deactivation Furnace which continually come into contact with hazardous wastes are the, Rotary Kiln, Waste Feed Conveyor, Waste Feed Housing, Kiln Discharge Conveyor, All duct work associated with the Pollution Abatement System (PAS), Cyclone and Bag House and the Afterburner.

3.4.2 At closure, the waste feed conveyor and the waste feed housing shall be dismantled and fed through the 1236 Deactivation Furnace. During this time the furnace's operating parameters shall be those specified through permit conditions. The waste feed conveyor and the waste feed housing shall be fed through the furnace since these pieces of process equipment function prior to the rotary kiln (which is where PEP wastes are deactivated). This will ensure that any possible explosive residues that may be present on this process equipment are deactivated.

3.4.3 After the waste feed conveyor and the waste feed housing have been fed through the rotary kiln, the furnace shall be operated at parameters specified through permit conditions for one hour. During this time waste shall not be fed to the furnace. This will ensure that any possible PEP residue remaining in the furnace is deactivated.

3.4.4 The rotary kiln, kiln discharge conveyor, Pollution Abatement System (PAS) duct work, afterburner, cyclone, and bag house function after the rotary kiln. Therefore no explosive contamination will be present in the treatment residue (ash) contacting their surfaces. The process equipment listed above shall be dismantled and cleaned of any loose, accumulated treatment residue (ash) that may be present.

3.4.5 The collected treatment residue (ash) shall be containerized and managed in the same way as ash that was generated throughout the operational life of the furnace.

3.4.6 The disassembled 1236 Deactivation Furnace process equipment shall then be sold as scrap metal through the Defense Reutilization and Marketing Office (DRMO).

3.4.7 The room housing the waste feed conveyor shall be swept and the sweepings shall be collected and analyzed. Sweeping will be adequate because the furnace does not treat wastes containing free liquids. If the analysis of the floor sweepings does not show the presence of explosives, the room housing the waste feed conveyor shall be considered clean.

3.4.8 If analysis shows the floor sweepings to contain the Toxicity Characteristic waste mentioned in paragraph 3.3.2, or the presence of explosives, the room that housed the waste feed conveyor shall be decontaminated by sandblasting the floor to the bare concrete. Solutions or

steam cleaning cannot be used since there are no provisions for capturing liquids (i.e. no secondary containment). The spent blast grit shall be characterized and disposed properly based on the characterization.

3.4.9 Action and cleanup levels shall be negotiated with the Director and be presented in a detailed closure plan that shall be submitted by the Permittee to the Director one year prior to the commencement of closure activities.

3.4.10 A concrete apron is found at the unload area to the 1236 Deactivation Furnace Waste Feed Conveyor Room (Building 1320). Soil samples shall be taken along the concrete apron/dirt boundary at one foot intervals. These samples shall be analyzed for the presence of explosives and the constituents of concern described by the EPA waste codes D004 through D011 (i.e. Toxicity Characteristic Metals).

3.5 Small Caliber Disassembly Lines (Buildings 1325 and 1335)

3.5.1 All filter media shall be removed and disposed of as hazardous waste. Any residues present on the process of material handling equipment shall be removed with brushes. The residues and the filter media shall be disposed of based on an analysis of its characteristics. The equipment shall be disposed of as scrap metal.

3.6 Hydrolysis Facility

3.6.1 All equipment that came into contact with the hydrolysis solution shall be rinsed with water to remove any contaminants. The rinse water shall be collected, sampled and properly managed. The equipment shall be disposed of as scrap metal.

3.7 Material Handling Equipment

3.7.1 If necessary, forklifts and trucks used to transport hazardous waste within the facility boundaries will be decontaminated on-site. The Permittee does not operate any disposal HWMUs and waste handled by material handling equipment (MHE) is in containers. The only way hazardous waste can contact the surface of MHE is if a container fails. The failure of a hazardous waste container is not a regular occurrence; therefore the MHE is not expected to be contaminated.

3.7.2 The determination as to the necessity of decontaminating MHE used in hazardous waste operations shall be made by a review of HWMU operating records, and spill report records. If it is demonstrated through this record review that no container failures occurred involving hazardous waste loading/unloading operations, no decontamination of MHE will be done.

3.7.3 The MHE shall be steam cleaned in a temporary facility erected with a containment system for the residues. Residues from the cleaning of the MHE shall be handled as hazardous waste until it can be properly characterized by sampling and analysis. Based upon the results of the analysis, the residues shall be appropriately managed.

3.8 OB/OD Unit

3.8.1 Methods for determining the presence of contamination, performing decontamination, and evaluating the effectiveness of decontamination procedures during closure of the OB/OD Unit are described in this section. Closure activities will be conducted in phases. Activities to be conducted during the first phase include the identification and removal of visible and/or readily identifiable waste residues from the area. This is followed by the classification, sorting, containerization, labeling, and storage of those materials.

3.8.2 The second phase of closure involves the sampling and analysis of soils and groundwater to determine whether contamination associated with OB/OD is present at statistically significant concentrations above risk-based or background levels (whichever are higher). A baseline characterization of the site shall be conducted prior to closure of the OB/OD unit. In addition, prior to closure of the OB/OD Unit, sampling will be needed to delineate the extent of contamination and to determine the extent of any remediation needed at closure.

3.8.3 The background area to be sampled is located on a 4-acre tract to the northeast of the OB/OD Unit, completely outside any potential impact area. This area was chosen because of the similar soil type (same alluvial fan morphology) as the OB/OD Unit, and the undisturbed nature (i.e., non-graded ridge and swale) with no roads or buildings. The determination of risk-based or background levels shall be discussed prior to closure and presented in a baseline Sampling and Analysis Plan (SAP). Equipment that may have become contaminated shall be decontaminated if sampling determines this is necessary. The analytical results from the equipment samples shall be compared to appropriate performance standards.

3.8.4 Should sample analysis indicate the presence of contaminants in the OB/OD Unit and/or soils at concentrations above risk-based or background levels (whichever are higher) that are statistically significant, remediation shall be required. Contaminated materials shall be classified, sorted, containerized, and sent off-site for treatment or (if appropriate) for disposal. If surface contamination of equipment is found, an appropriate cleaning agent shall be used. All of the equipment and decontamination residues shall be containerized prior to off-site transport.

3.8.5 The third phase of closure will involve verification sampling. Sampling shall be done to confirm that the closure remediation and decontamination were adequate. If contamination above risk-based or background levels (whichever are higher) is still present, additional remediation and decontamination shall be done, followed by an additional round of verification sampling.

3.8.6 The wastes generated during closure will fall into one of four categories: (1) reactive or explosive materials that must be treated by OB/OD; (2) solid materials or soils that are not reactive, or explosive, but which may be contaminated with constituents (e.g., lead, TNT, and RDX) remaining as a result of OB/OD and which require treatment to remove this contamination; (3) contaminated liquids resulting from closure activities, primarily equipment decontamination; and (4) solid, nonhazardous wastes that require no further treatment.

3.8.7 Any unstable materials detected shall be either detonated in-place or burned in the pans. Following removal of the burn pans and contaminated soil (if determined to be appropriate to meet risk-based levels or background conditions) and unexploded ordinance (UXO), the unit shall be re-graded using native soils to match the contours of the remainder of the surrounding area and it shall be re-vegetated.

3.8.8 As stated previously, four categories of wastes will be expected to be generated during closure. The categories are:

3.8.8.1. UXO - These are items that pose a risk of explosion or detonation. These materials may be detonated in place; however, if any such materials are brought to the staging area, they shall be segregated and moved to the open detonation (OD) area for detonation.

3.8.8.2. Contaminated Materials or Soils - These are materials, debris, and contaminated soils that are generated after OD activities have reached completion and cannot be reinitiated. These materials or soils are not reactive or explosive, but may be contaminated with constituents (e.g., lead, TNT, and RDX) remaining as a result of OB/OD and which require treatment to remove this contamination.

3.8.8.3. Contaminated Liquids - These are liquids resulting from closure activities, primarily equipment decontamination and any collected run-on or runoff.

3.8.8.4. Solid, Nonhazardous Wastes - These are wastes that require no further treatment and shall be disposed of in a Subtitle D Landfill.

3.8.9 UXO may be detonated in place at the OD area. Contaminated materials/soils shall be removed from the OB/OD Unit and brought to the temporary staging area located near the water tank and trailer outside the perimeter of the OB/OD Unit. Materials shall be sorted, if necessary, at the staging area as they arrive. Sorting is done to divide wastes into similar categories for management and disposition. The method used for sorting will include, if necessary, the use of screens of varying mesh size, selection and removal of discrete items by hand, and other methods that protect workers while permitting the separation of wastes. At the staging area, the contaminated materials/soils shall be placed in U.S. Department of Transportation (DOT)-approved drums, roll-off boxes, or other suitable containers for off-site transport. Similar materials will be consolidated to the maximum extent practical to minimize the number of containers that must be handled. Only compatible wastes of similar nature shall be placed in the same container.

3.8.10 These materials/soils shall be analyzed for the Toxicity Characteristic Leaching Procedure (TCLP) characteristics of arsenic, barium, cadmium, chromium, lead, mercury, and energetics. If these materials/soils exhibit a characteristic of a hazardous waste, they shall be managed in accordance with state and federal regulations. The hazardous materials/soils shall be sent off-site to a permitted treatment, storage, disposal, or recycling facility.

3.8.11 All liquids shall be consolidated into appropriate leak-proof shipping containers. A

representative sample shall be collected for chemical analysis. If the liquid is determined to exhibit a hazardous characteristic, the liquids shall be sent off-site for treatment and disposal in accordance with state and federal regulations.

3.8.12 Any solid, nonhazardous wastes that do not require further treatment shall be managed in accordance with the State of Utah solid waste regulations. These solid wastes shall be sent to an off-site solid waste management facility. Materials to be managed as solid wastes may include personal protective equipment and materials/soils that do not exhibit a characteristic of a hazardous waste.

3.8.13 Wastes shall be packed into metal or plastic shipping containers, except for unreacted and ignitable wastes that shall be detonated. The shipping containers shall meet appropriate DOT shipping and labeling requirements, as specified in 49 CFR Parts 172, 173, and 179. Items classified as hazardous waste shall be labeled in accordance with 49 CFR Section 172.304 and Utah Admin. Code R315-262-31.

3.9 Inventory Removal and Disposal of Burn Pans

3.9.1 The maximum amount of waste materials present at the OB area at any one time would be 12,000 pounds NEW of material. The quantity can be treated in one treatment event using 12 of the 15 burn pans. Prior to closure of the OB area, this material shall be treated. Therefore, no untreated material will be in the OB area when closure activities begin.

3.9.2 After treatment of the final volume of wastes the burn pans will contain treatment residuals. These materials shall be managed as follows:

3.9.2.1 The treatment residue in each burn pan shall be collected and a composite sample shall be analyzed for energetics.

3.9.2.2 If the treatment residue fails the reactivity characteristic test, it shall be re-burned. Step 1 shall be repeated until the treatment residue passes the reactivity characteristic test.

3.9.2.3 If the treatment residue passes the reactivity test, the treatment residue shall be analyzed for the TCLP. The TC constituents include arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, 2,4-dinitrotoluene, and nitrobenzene.

3.9.2.4 If the treatment residue results exceed the regulatory TC levels, the treatment residue shall be removed from the pan(s), placed into containers, and disposed of at an off-site hazardous waste landfill.

3.9.2.5 If the treatment residue results are below the regulatory TC levels, the treatment residue shall be removed from the pans and placed into containers. The material shall be disposed of in a solid waste landfill.

3.9.3 After all of the treatment residue has been removed from the burn pans, the burn pans shall be inspected, certified as explosive-free, and sold for recycling as scrap metal. The steel lids shall be certified as explosive-free and sold as scrap metal. The pan supports shall be disposed of as a solid waste after certification as explosive-free.

3.10 Inventory Removal and Decontamination of Static Silos

3.10.1 The below ground, concrete static silos shall be removed and either decontaminated, sampled and sent to either a solid waste disposal facility or a hazardous waste TSDF, depending on sampling results. The remaining soil shall be sampled, analyzed and remediated depending on the sampling results. Details of the removal, decontamination and remediation of all contaminated materials, soils and equipment shall be presented by amending this plan in accordance with Utah Admin. Code R315-264-112.

3.11 Determination of the Presence, Nature, and Extent of Contamination

3.11.1 For all sampling events certified explosive personnel shall be on site. Because of the nature of the operations at the OB/OD unit, the potential exists for surface and subsurface unexploded ordnance (UXO) and metal objects related to munitions, propellants, pyrotechnics and explosives from the treatment operations. A UXO survey shall be performed to provide access for the closure field investigation and sampling activities and a UXO survey and evaluation shall be performed prior to the excavation or removal of any unidentified contaminated soils. Prior to any sampling, the OB/OD Unit shall be swept using a magnetometer and cleared of all metal objects to ensure that the surface and subsurface are clear of UXO. Once this is done, sampling activities may commence.

3.11.2 At closure, the OB/OD Unit shall be inspected for the presence of visible and/or readily identifiable wastes and residues. The inspection shall include a search for stained, discolored, or other visibly affected soils. The presence of liquids, debris, UXO, and other related items shall be noted.

3.11.3 A baseline environmental characterization of the site was conducted during 1997-1998. In addition, prior to closure of the OB/OD Unit, sampling will be needed to delineate the extent of contamination and to determine the extent of any remediation needed at closure. For practical purposes, the results of the baseline investigation and routine monitoring sampling results shall be used for evaluating closure sampling activities. Many of the sampling strategies may to be incorporated into a pre-closure sampling plan.

3.12 Procedures/Methods to Perform Decontamination

3.12.1 Any contaminated residue/soil at the OB/OD Unit exceeding background or risk-based levels shall be treated on site or shall be removed using backhoes or other excavation equipment. Soil shall be removed in layers up to 2 feet in thickness. After a layer of contaminated soil is removed confirmation sampling/analysis shall be conducted to determine if clean-up goals have been attained. If goals are not attained, additional layers of soil shall be removed until closure

goals are attained. If closure goals cannot be attained, the unit shall be closed in accordance with the Contingent Closure Plan as described in Section 6.0. At present, removal by excavation is proposed. Treatment technologies for contaminated soils cannot be determined at this time. Potential treatment technologies may include incineration, soil washing, open burning in pans, bioremediation, etc. The decision whether treatment is appropriate shall be determined in the future. This decision will depend on the contaminants present, the nature and extent of contamination, and the status of available technology at the time of closure.

3.12.2 If treatment, either on-site or off-site, is considered to be an appropriate alternative to off-site disposal, the Closure Plan shall be amended in accordance with Utah Admin. Code R315-264-112 and submitted to the Director for approval. The residue or soil shall then be managed in accordance with the amended plan.

3.12.3 The staging location for closure activities shall be the area near the entrance by the water tank and trailer outside the perimeter of the OB/OD Unit. Contaminated materials shall be removed from the OB/OD Unit and brought to the staging area. The staging area shall consist of a graded, compacted earthen foundation surrounded by earthen berms or temporary concrete berms to prevent run-on and runoff from the staging area. The foundation and berms shall be overlain by a 30-mil thickness (minimum) liner of sufficient durability to withstand all activities to be conducted in this area (e.g., sorting, storage). Plywood or a similar material shall be laid on top of the liner to prevent tearing. The staging area shall be covered in a manner that prevents accumulation of precipitation while allowing work to continue. Full drums of contaminated material shall be temporarily stored at the staging area away from sorting activities to prevent contamination by loose material.

3.12.4 Materials shall be sorted, if necessary, at the staging area as they arrive. Sorting is done to divide wastes into similar categories for management and disposition. Materials shall be sorted into the following categories: UXO, contaminated materials/soils, contaminated liquids, and nonhazardous solid wastes. The method used for sorting will include, if necessary, the use of screens of varying mesh size, selection and removal of discrete items by hand, and other methods that protect workers while permitting the separation of wastes.

3.12.5 Hand tools shall be decontaminated first by brushing, scraping, and shaking, because all contaminated wastes/media are expected to be solids. Hand tools shall then be decontaminated in buckets or tubs using water and an appropriate cleanser.

3.12.6 Large equipment shall be decontaminated prior to leaving the remediation area and entering a clean area. Any contamination present is expected to be in the form of solids. These solids shall be mechanically removed from the equipment. After mechanical removal of the solids, high-pressure steam shall be used to complete decontamination of equipment.

3.12.7 All drilling equipment used for collection of soil samples shall be steam or pressure cleaned prior to beginning work, between soil boring locations, and prior to leaving the OB/OD Unit. All sampling equipment shall be decontaminated prior to sampling and between samples using the following decontamination steps:

1) Potable water rinse.
2) Alconox or liquinox detergent wash.
3) Potable water rinse.
4) Distilled/deionized water rinse.
5) 10% nitric acid rinse diluted with distilled and deionized water.
6) Distilled/deionized water rinse.
7) Isopropanol double rinse.
8) Distilled/deionized water rinse.
9) Air dry.
10) Wrap in aluminum foil.

3.12.8 All decontamination shall be conducted in an area near the entrance to the unit by the water tank and trailer inside the perimeter of the OD area. A decontamination pad shall be constructed in this area to prevent impact to the surrounding soils. The decontamination pad shall consist of a compacted earthen foundation surrounded by earthen berms to prevent any decontamination solutions from exiting the area. The foundation and berms shall be overlain by a 30-mil thickness (minimum) liner of sufficient durability to withstand decontamination activities.

3.12.9 Sand or similar material shall be placed on top of the liner to prevent tearing. Ramps shall be positioned at the entrance and exit of the decontamination pad to allow vehicles to pass over the berms. The pad shall be graded to slope toward a corner, where the liner forms a sump in a depression that has been dug in the ground, to allow collection of decontamination fluids.

3.12.10 Discolored and stained liquids (from equipment or tools decontamination) shall be collected using buckets or pumps. If only small quantities are present, an absorbent may be used to collect the liquid. If it is determined that unstable materials may be created by drying of liquids, absorbents shall not be used. The liquids shall be collected in 5-gallon (minimum) drums or other appropriate containers and transported to the staging area.

3.13 Procedures To Evaluate Effectiveness of Decontamination

3.13.1 During closure, excavation and sampling of the OB/OD Unit shall continue until all soil above background or risk-based levels has been removed. The effectiveness of decontamination shall be determined on the basis of the results of tests on soil samples. Decontamination shall be considered effective when concentrations of all samples are at or below background or risk-based levels (whichever is higher) and the distribution of contamination shows no pattern of increasing contaminant concentrations.

3.13.2 Hand tools, drilling equipment, and heavy equipment shall be sampled if there is significant potential for contamination with explosive or ordnance-related compounds. The preferred method is to collect samples from the final decontamination rinse. These samples shall be either the collected liquids from the final rinse or the cloths used for final wipe-down of the cleaned equipment. In addition, preferential samples shall be collected from areas where

contaminants may have collected.

3.13.3 Closure sampling activities shall be conducted in accordance with a SAP, which shall be submitted as a separate document. Surface soil, subsurface soil, and sediment sampling shall be conducted immediately prior to closure and at completion of closure to demonstrate that closure has been successfully accomplished.

3.13.4 As discussed previously, a baseline environmental characterization of the OB/OD Unit was conducted during 1997-1998. In addition, prior to closure of the OB/OD Unit, sampling will be needed to delineate the extent of contamination and to determine the extent of any remediation needed at closure. For practical purposes the results of the baseline investigation and the routine monitoring results shall be used for evaluating closure sampling activities. Many of the sampling strategies may be incorporated in a pre-closure sampling plan.

3.13.5 Any contaminated residue/soil at the OB/OD Unit exceeding background or risk-based levels, whichever is higher, shall be treated on site or shall be removed using backhoes or other excavation equipment. Excavated soils shall be placed in containers in the staging area where they shall be sampled to determine whether they need to be disposed of as a hazardous waste. Soil shall be removed in layers up to 2 feet in thickness. After a layer of contaminated soil is removed, sampling and analysis shall be conducted to determine if clean-up goals have been attained. If goals are not attained, additional layers of soil shall be removed until closure goals are attained or the unit is closed in accordance with the Contingent Closure Plan described in Section 6.0. At present, removal by excavation is proposed. Treatment technologies for contaminated soils cannot be determined at this time. Potential treatment technologies may include incineration, soil washing, open burning in pans, bioremediation, etc. The decision whether treatment is appropriate shall be determined in the future. This decision will depend on the contaminants present, the nature and extent of contamination, and the status of available technology at the time of closure.

4.0 Description of Additional Activities Performed During Closure

4.1 Groundwater and Surface Water Monitoring

4.1.1 Closure sampling activities shall be conducted in accordance with an approved SAP. Both groundwater and surface water samples shall be collected immediately prior to closure and at completion of closure to demonstrate that closure has been successfully accomplished. If the unit cannot be clean closed and routine groundwater monitoring is required, it shall be conducted in accordance with an approved SAP.

4.1.2 Groundwater and surface water sample locations and collection methods, analytical parameters, analytical methods, and quality assurance/quality control (QA/QC) procedures shall be discussed in an approved SAP.

4.2 Run-on and Runoff Control

4.2.1 All decontamination shall be conducted in an area near the entrance inside the perimeter of the OB/OD Unit. A decontamination pad shall be in accordance with paragraph 3.12.8 and 3.12.9.

5.0 Schedule for Closure

5.1 The time required to complete closure activities for any one of the HWMUs shall not exceed 90 days. The time for closure will be shorter if the OB/OD HWMU is used to treat some of the wastes in storage that comprise the inventories of Igloos A-101, C-514, C-815, C-816, K-401, K-402, K-403, K-404, K-801, K-802, K-803; Service Magazines 1368, 1369, 1370, and 1371; Above Ground Magazine 1205; and Building 1320. The time required to complete closure may be extended if requested approved by the Director in accordance with Utah Administrative Code R315-264-113.

5.2 The Permittee will notify the Director in writing at least 60 days prior to the date on which he expects to begin closure of a surface impoundment, waste pile, land treatment unit or landfill unit. The Permittee shall notify the Director in writing at least 45 days prior to the date on which he expects to begin closure of treatment or storage tanks, container storage areas or an incinerator. Closure of the OB/OD Unit will follow the schedule outlined in Table 2.

Table 2. Schedule for Closure of the OB/OD Unit*

Step	Description	Latest cumulative time (days)
1	Notify the Director of the Division of Waste Management and Radiation Control of intent to close	-60
2	Treatment of final wastes by OB/OD	0
3	Begin closure	0
4	Construction of decontamination pad and staging area	10
5	Cleanup of residues at the OB/OD Unit and store residue in on-site interim status storage facilities	30
6	Soil/groundwater/surface water/sediment sampling events	30
7	Digging of test pits to explore for and remove any explosive materials (if necessary)	40
8	OD of any explosive material found during test pit excavation (if necessary), decontaminate OB pans	40
9	Removal of contaminated soil in depths of 2 feet**	130
10	Perform confirmation soil sampling to determine if clean-up goals are met**	130
11	Dispose of any contaminated soil off site	140
12	Decontamination of equipment used during closure	140
13	Disposal of decontamination solutions and any solid waste off site	160
14	Regrading and seeding of OB/OD Unit following cleanup	160
15	U.S. Army certifies that closure is completed in accordance with plan	165
16	Independent registered professional engineer certifies closure completed in accordance with plan	180

*Note that should monitoring data available at the time of closure indicate that substantial remediation will need to be conducted, an extension of the 180-day timeframe for closure will be requested.

**Note that the steps of soil removal and confirmation sampling may be repeated several times as necessary to ensure clean closure.

6.0 OB/OD Unit Contingent Closure Plan

6.1 The Permittee plans to remediate the surface and subsurface soil at the OB/OD Unit to risk-based or background levels (whichever are higher) during the closure period. As part of this process, all UXO shall be removed or detonated in-place. If the soil cannot be remediated to risk-based or background levels the Permittee plans to implement the Contingent Closure Plan discussed in this section.

6.2 Under this Contingent Closure Plan, the OB/OD Unit shall be closed in a manner that will minimize or eliminate threats to human health and the environment, and the potential for escape of any possible hazardous waste, hazardous constituents, leachate, or waste decomposition products to groundwater, surface water, or the atmosphere upon cessation of operations. The unit shall not undergo partial closure; all closure activities shall take place following cessation of operations. The need for further maintenance after closure is addressed in the Contingent Post-Closure Plan in Section 9.0.

6.3 This Contingent Closure Plan shall be implemented only after it has been determined that the closure as described in Sections 3.8 through 3.13 is not feasible. Data describing the nature and extent of any contamination shall be evaluated in order to determine the extent to which the unit requires capping, run-on and run-off controls, and other closure actions. A final cover shall be placed over the unit if it is determined to contain hazardous waste or hazardous constituents above risk-based or background levels (whichever are higher).

6.4 For this Contingent Closure Plan, the Permittee proposes to install a final cover over the OB/OD Unit. It is currently proposed that this cover shall consist of a multilayer clay cap with a synthetic liner. The cover will be constructed with a permeability of less than or equal to 1×10^{-6} centimeter per second. The cap shall be installed following grading of the area. The synthetic liner shall be constructed of 50-mil high-density polyethylene (HDPE) and shall be placed over the unit after grading. The remainder of the cover shall consist of 12 inches of natural clay overlain by sufficient native topsoil to support growth of natural grasses. The area shall be reseeded with native grasses and contoured in an effort to promote drainage and minimize erosion. The entire cover, including the final topsoil cover material, shall be of sufficient thickness and elasticity to accommodate settling and subsidence. The cover design shall be provided and approved by the Director prior to being constructed.

6.5 The unit to be closed under this Contingent Closure Plan shall also have a run-on and runoff control system to divert run-on from entering the unit area and to keep runoff leaving the unit from adversely affecting adjacent areas. This system may consist of a dike that shall be a natural extension of the clay cover system, described above. The dike shall be designed to prevent runon from entering the unit area during peak discharge from at least a 24-hour, 25-year storm event.

6.6 The runoff management system shall be designed to divert at least the water volume resulting from a 24-hour, 25-year storm.

6.7 A groundwater monitoring well has been installed near the unit. This same groundwater monitoring well shall be used to monitor the groundwater down-gradient of the unit during the post-closure period.

6.8 Access to the unit shall be controlled through locked gates, and a warning sign shall be placed at the gate. All other aspects of closure under this Contingent Closure Plan are identical to closure as described in Sections 3.8 through 3.13.

7.0 Certification of Closure

7.1 Within 60 days of the completion of closure of each HWMU, the Permittee shall provide the Director, by registered mail, a certification by an independent, registered professional engineer that the unit has been closed in accordance with the specifications of the approved closure plan. The certification shall be signed by the Installation Commander and by an independent, registered professional engineer. Documentation supporting the engineer's certification shall be furnished upon request.

8.0 Post-Closure and Closure Cost Estimate

8.1 A post-closure plan will not be needed for the seven storage HWMUs and the deactivation furnace (incinerator) since all wastes shall have been removed and the HWMUs shall have been decontaminated.

8.2 Closure and post-closure cost estimates are not provided because TEAD is an entity of the federal government and therefore exempt from this requirement.

9.0 Contingent Post-Closure Plan for OB/OD Unit

9.0.1 The Permittee plans to remediate the surface and subsurface soil at the OB/OD Unit to below risk-based or background levels (whichever are higher) during the closure period. As part of this process, all UXO shall be removed and detonated in-place. If the soil cannot be remediated to risk-based or background levels (whichever are higher) at the OB/OD Unit, the Permittee plans to implement the Contingent Closure Plan described in Section 6.0 and the Contingent Post-Closure Plan described herein. The post-closure care period will span the required 30 years. The following activities shall be conducted during the 30-year period.

9.1. Inspection Plan

9.1.1 Inspections shall be conducted during the post-closure care period to mitigate the potential for migration of contaminants into soil, groundwater, surface water, and air, and to protect public health, safety, and the environment. Inspections shall be conducted semiannually at a minimum. Inspections shall also occur following all 25-year storm events. Items to be inspected are as follows:

9.1.1.1 Security: The OB/OD Unit shall have a locked gate on the access roads leading

onto the ground. The gate and warning sign shall be checked for damage.

9.1.1.2 Erosion: The cover shall be inspected for signs of erosion damage, such as might be due to washouts. Erosion damage shall be repaired.

9.1.1.3 Settlement: The cover shall be inspected for ponding and other indications of settlement, subsidence, or displacement.

9.1.1.4 Vegetative Cover: The condition of the vegetative cover shall be inspected for adequacy and bare spots.

9.1.1.5 Run-on and Runoff Controls: Drainage channels designed to divert and collect storm water shall be checked to assure good drainage. The overall integrity of the dike system shall be checked.

- 9.1.1.6 Monitoring Wells: The condition of the well casing, cap, and lock shall be checked as the well is sampled.

9.1.2 The various inspection findings and actions shall be documented in the facility post-closure inspection logbook.

9.2. Post-Closure Monitoring

9.2.1 Groundwater monitoring at the closed OB/OD unit shall be conducted once every five years. Measurements to be performed, tests to be performed, constituents to be analyzed, methods to be used, and QA/QC controls to be applied will be detailed in an approved SAP.

9.3. Post-Closure Maintenance

9.3.1 Security: Signs shall be replaced as they become illegible. The gate shall be repaired or replaced as necessary to maintain the unit security.

9.3.2 Erosion: Washouts shall be repaired when they are detected. If the cap integrity is in question, repair activities shall be initiated immediately. Restoration of the vegetative cover shall be performed as needed.

9.3.3 Cover Settlement: Differential settlement shall be repaired by replacing cover materials and reseeding.

- 9.3.4 Vegetative Cover: Maintenance of the vegetative cover shall include seeding, watering, and fertilizing, as needed. Tree or bush growth shall be controlled by mowing. Mowing shall be performed as necessary to control the growth of the vegetative cover and to maintain it at a reasonable height above the cover.

- 9.3.5 Run-on and Runoff Controls: Drains and ditches shall be cleaned and maintained

to allow free drainage so that retention of storm water does not occur. High rate runoff areas (if any) shall be protected by placing coarse stone, if needed, to ensure that erosion is minimal.

- 9.3.6 Monitoring Wells: Any damage to monitoring wells shall be repaired. If necessary, a damaged monitoring well shall be replaced.

9.4. Post-Closure Security

9.4.1 Access to the unit shall be controlled through a locked gate and a warning sign at the gate. All other aspects of post-closure security under this Contingent Post-Closure Plan are identical to closure as described in Sections 3.8 through 3.13.

9.5. Post-Closure Contact

9.5.1 The point of contact during post-closure care will be the TEAD Environmental Management Division.

9.5.2 A copy of the post-closure plan will be stored by the Environmental Management Division. The Environmental Management Division is responsible for updating the plan as necessary.

9.6. Notices Required for Disposal Facilities

9.6.1 The following post-closure notices shall be appropriately filed and submitted if clean closure cannot be demonstrated:

9.6.1.1 A record of the type, location, and quantity of hazardous wastes disposed of shall be submitted to the local zoning authority (or the authority with jurisdiction over local land use) and to the Director no later than 60 days after certification of closure.

9.6.1.2 A notation in the deed to the facility property shall be made that shall, in perpetuity, notify any potential purchasers of the property that (1) the land has been used to manage hazardous waste; (2) use of the land is restricted to activities that will not disturb integrity of the final cover system or monitoring system during post-closure care period; and (3) a survey plat and record of waste disposal have been submitted to the local zoning authority (or the authority with jurisdiction over local land use) and to the Director. The survey plat shall indicate the location and dimensions of the unit with respect to permanently surveyed benchmarks. The plat shall be prepared and certified by a professional land surveyor and shall contain a note, prominently displayed, which states the owner's/operator's obligation to restrict disturbance of the disposal unit in accordance with applicable Utah Admin. Code R315-264-116 regulations. This notation must be placed within 60 days after certification of closure.