

**TOOELE ARMY DEPOT – SOUTH AREA  
(TEAD-S)**

**MODULE VI  
ATTACHMENT 3**

**SOLID WASTE MANAGEMENT UNIT (SWMU) 33  
POST CLOSURE PLAN**

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

CFR	Code of Federal Regulations
CMS	Corrective Measures Study
DWMRC	Division of Waste Management and Radiation Control
EO	Environmental Office
HWMU	Hazardous Waste Management Unit
PCP	Post Closure Plan
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SWMU	Solid Waste Management Unit
TEAD	Tooele Army Depot
UAC	Code Administrative Utah
XRF	X-ray fluorescence

## 1.0 INTRODUCTION

The three objectives of this Post-Closure Plan (PCP) are: 1) ensure that Tooele Army Depot South Area (TEAD-S) complies with the Permit; 2) outline the requirements needed to prevent exposure or contact with contamination left in place at this Solid Waste Management Unit (SWMU); and 3) to ensure industrial use only. To meet these objectives, this PCP provides detailed information regarding the location, regulatory criteria, and post-closure inspections at SWMU 33. Post-closure requirements shall continue for a minimum of 30 years. The post-closure care period may be extended or shortened, as deemed necessary by the Director.

In accordance with Code Administrative Utah (UAC) R315-270-28, the PCP shall include specific information for a closed facility. As applicable to SWMU 33, the information requirements include:

- General description of the facility,
- Description of security procedures,
- General inspection schedule,
- Preparedness and Prevention Plan,
- Facility location information (including seismic and flood plain considerations),
- Closure Plan or Closure Proposal,
- Certificate of Closure,
- Topographic map, with specific scale,
- Summary of groundwater monitoring data, and
- Identification of uppermost aquifer and interconnected aquifers.

The following table lists the regulatory citation, description of the regulatory requirement and where to find this information in the permit and within this PCP.

**Table 1: Summary of SWMU 33 Post-Closure Information Requirements Under UAC R315-270-14**

<b>Regulation Citation</b>	<b>Requirement Description</b>	<b>Requirement Location</b>
UAC R315-270-14(b)(1)	General Description of the Facility	Section 2 and Permit Attachment 1
UAC R315-270-14(b)(4)	Description of Security Procedures	Section 2.8 and Module VI (VI.I)
UAC R315-270-14(b)(5)	General Inspection Schedule	Section 3.2 and Module VI Form A
UAC R315-270-14(b)(12)	Training Requirements	Module VI (VI.K)
UAC R315-270-14(b)(6)	Preparedness and Prevention	Permit Attachment 10
UAC R315-270-14(b)(11)(i-ii, v)	Facility Location Information Applicable seismic standard	Permit Attachment 6 (Section 14.4)
UAC R315-270-14(b)(11)(iii-v)	Facility Location Information - 100-year floodplain	Permit Attachment 6 (Section 14.5)

<b>Regulation Citation</b>	<b>Requirement Description</b>	<b>Requirement Location</b>
UAC R315-270-14(b)(14)	Closure Certification and Notification	Section 2.7
UAC R315-270-14(b)(16)	Post-Closure Cost Estimate	Federal Facilities are exempt from this requirement
UAC R315-270-14(b)(18)	Proof of Financial Coverage	Federal Facilities are exempt from this requirement
UAC R315-270-14(b)(19)(i)	Topographic Map - Map Scale and Date	Permit Attachment 6 (Section 9.0)
UAC R315-270-14(b)(19)(ii)	Topographic Map - 100-year floodplain area	Permit Attachment 6 (Section 14.5)
UAC R315-270-14(b)(19)(iii)	Topographic Map - Surface waters including intermittent streams	Permit Attachment 6 (Section 10.0)
UAC R315-270-14(b)(19)(iv)	Topographic Map - Surrounding land uses	Permit Attachment 6 (Section 11.0)
UAC R315-270-14(b)(19)(v)	Topographic Map - A wind rose (i.e., prevailing windspeed and direction)	Permit Attachment 6 (Section 12.0)
UAC R315-270-14(b)(19)(vi)	Topographic Map - Orientation of map, North arrow	Permit Attachment 6 (Section 9.0)
UAC R315-270-14 (b)(19)(vii)	Topographic Map - Legal boundaries of the hazardous waste management facility.	Permit Attachment 6 (Section 9.0)
UAC R315-270-14(b)(19)(viii)	Topographic Map - Access control, fence, gates	Permit Attachment 6 (Section 9.0)
UAC R315-270-14(b)(19)(ix)	Topographic Map - Injection and withdrawal wells	Permit Attachment 6 (Section 11.1)
UAC R315-270-14(b)(19)(xi)	Topographic Map - Barriers for drainage or flood control	Permit Attachment 6 (Sections 9.0 and 14.0)
UAC R315-270-14(c)(1)	Groundwater Monitoring Information - Summary of groundwater data	Not required.
UAC R315-270-14(c)(2)	Groundwater Monitoring Information - Identification of uppermost aquifer	Not required.
UAC R315-270-14(c)(3)	Groundwater Monitoring Information - Delineation of the waste management area	Not required.
UAC R315-270-14(c)(4)	Groundwater Monitoring Information - Extent of plume	Not required.
UAC R315-270-14(c)(5)	Groundwater Monitoring Information - Detailed plans/engineering report for proposed groundwater program	Not required.

<b>Regulation Citation</b>	<b>Requirement Description</b>	<b>Requirement Location</b>
UAC R315-270-14(c)(6)(i)	Groundwater Monitoring Information - Proposed list of parameters	Not required.
UAC R315-270-14(c)(6)(ii)	Groundwater Monitoring Information - Proposed groundwater monitoring system	Not required.
UAC R315-270-14(c)(6)(iii)	Groundwater Monitoring Information - Background values	Not required.
UAC R315-270-14(c)(6)(iv)	Groundwater Monitoring Information - A description of the proposed sampling	Not required.

## **2.0 FACILITY DESCRIPTION**

The following provides a general description of SWMU 33, as required by UAC R315-270-14(b)(1).

### **2.1 SWMU 33 LOCATION AND HISTORY**

SWMU 33 is associated with Building 536 and is located in the north-central part of the Facility. Building 536 was the old CAMDS salt storage building. This building has been investigated as a Hazardous Waste Management Unit (HWMU) and closure documentation will be provided separately. The land outside of Building 536 is associated with the SWMU.

SWMU 33 was investigated under a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) with results provided in the Interim Final RFI report (SAIC, 2001). Under the RFI, the outside areas consisted of SWMU 33B and SWMU 33C. Area B is considered all of the soil surrounding Building 536 and extending north/northeast to Blume Street. Area C was identified as a drainage swale to the southeast of Building 536. The RFI risk assessment concluded that SWMUs 33B and 33C met industrial risk and could be closed with controls.

### **2.2 PAST OPERATIONS**

The Building 536 exterior site is characterized by unpaved soil covered with sparse vegetation, including grasses, weeds, and rabbit brush. It is relatively flat, but slopes very gradually from the northeast to the southwest. According to the Phase II RFI Report (SAIC, 2001), no materials are stored at the Building 536 Exterior Site.

### 2.3 PREVIOUS INVESTIGATIONS DOCUMENTATION

<b>Phase II RFI</b>	<b>Phase IIA RFI</b>	<b>Phase IIB RFI</b>	<b>CMS</b>	<b>Decision Document</b>	<b>Corrective Measure Implementation (CMI)</b>
SAIC 1994 to 1995 (SAIC, 2001)	SAIC 1998 to 1999 (SAIC, 2001)	SAIC 2000 (SAIC, 2001)	URS, 2002	URS, 2002	DCD, 2013

### 2.4 CLOSURE ACTIVITIES

The 2002 URS CMS established the following controls:

1. The Form D TEAD-S Excavation Permit process shall be enforced.
2. Land use restriction (deed restriction) – restrictions to prevent shallow groundwater use and future development has not been implemented.

### 2.5 HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

A re-evaluation of SWMU 33B and C was conducted in 2013 in conjunction with the State of Utah. Metals were evaluated using a handheld X-ray fluorescence (XRF) detector. The results of the XRF survey confirmed that both areas meet criteria for industrial closure as originally presented in the Phase II RFI.

However, the soil pile outside the building is an isolated hot spot. In order to ensure overall protection of future workers at this area, the Permittee recommends that when contracting and funding become available, this soil pile be removed and disposed of at an appropriate facility. As it is unclear when this action may occur, closure of SWMU 33 is restricted to industrial use with special control for the soil pile.

### 2.6 SURFACE WATER AND GROUNDWATER

Groundwater monitoring data was not collected at SWMU 33. The RFI included a chemical transport model to determine if the contaminants identified in the SWMU 33 soil could potentially reach the groundwater table. The model did not find any contaminants that could affect groundwater and did not include a quantitative risk assessment for groundwater at SWMU 33 as a consequence.

### 2.7 CLOSURE NOTIFICATIONS

Federal facilities are exempt from submitting notifications to the local zoning authority in accordance with UAC R315-264-110 through 120.

### 2.8 SECURITY REQUIREMENTS

Based on the results from the Human Health Risk Assessment, only management measures are required at SWMU 33.

### 3.0 POST-CLOSURE OPERATIONS AND INSPECTIONS

#### 3.1 INTRODUCTION

SWMU 33 post closure care shall be in accordance with Module VI. To ensure that the area is not reused or developed for residential purposes, periodic site inspections and a biennial post-closure report shall be required. Removal and reuse of soil from this site shall not be allowed unless approved by both the TEAD-S Environmental Office (EO) in accordance with Condition VI.H.3. and the Director; removal and reuse of the soil associated with the soil pile removal is prohibited unless part of the remediation process.

#### 3.2 ROUTINE SITE INSPECTIONS

During the Post-Closure period, general inspections of the SWMU 33 site shall be conducted as required by Module VI annually by November 1st to ensure the site remains under industrial use. Any modifications to the frequency of inspections shall be in accordance with Condition I.D.3.

Site inspections shall consist of a complete walkthrough and visual inspection of the areas. A general site inspection checklist for industrial sites is included in Module VI as Form A. Completed inspection forms shall be filed with the TEAD-S EO as part of the Facility Operating Record.

At a minimum, the site inspector shall have a radio or phone and a First Aid kit available during inspections.

#### 3.3 INSPECTION FOLLOW-UP

The EO shall notify the appropriate personnel to implement corrective action as needed. Corrective action shall be initiated as soon as practical after identifying a problem or as directed by the Permittee. If corrective action is required a technical plan shall be prepared to summarize the problem, the potential impacts, the proposed plan for action and the time-frame in which corrective action shall be implemented as required by Module V and Module VI. This plan requires Director approval prior to implementing corrective action.

#### 3.4 NON-COMPLIANCE REPORTING

Notifications of any type of non-compliance with any condition of this Permit shall be submitted as required by Condition V.L.4.

#### 3.5 BIENNIAL POST-CLOSURE REPORT

The Permittee shall submit in accordance with UAC R315-270-30(1)(9), a Biennial Post-Closure Report for all SWMUs undergoing post-closure care by March 1, of the reporting year. The SWMU 33, the Biennial Post-Closure Report shall include, at a minimum, the following:

- General site description and conditions, and
- Inspection records.



### 3.6 REQUIRED SUBMITTALS

Biennial Post-Closure Reports shall be submitted to the Director no later than March, of the year the report is due. Reporting years are even numbered years beginning with March 2012, for the duration of the Post-Closure Monitoring Period.

#### 3.6.1 *Non-Compliance Reporting:*

- The Permittee shall notify the Director orally within 24-hour concerning the noncompliance that may endanger public drinking water supplies or human health or the environment.
- The Permittee shall notify the Director in writing within five days of any non-compliance which may endanger public drinking water supplies or human health or the environment including evidence of groundwater contamination, significant data quality issues. The Permittee shall notify the Director in writing within 15-days of any noncompliance which does not endanger public drinking water supplies or human health or the environment.

### 4.0 POST-CLOSURE CERTIFICATION

No later than 60 days after post-closure activities are completed and approved by the Director, the Permittee shall submit a certification to the Director, signed by the Permittee and an independent professional engineer registered in the State of Utah, stating why post-closure care is no longer needed.

### 5.0 REFERENCES

Division of Waste Management and Radiation Control (DWMRC), 2019. *Administrative Rules for Cleanup Action and Risk-Based Closure Standards*. Utah Department of Environmental Quality. R315-101, Utah Administrative Code.

Ebasco, 1993. *RCRA Facility Investigation – Phase I Suspected Release Units, Revised Final*. Deseret Chemical Depot, Stockton, Utah. July.

Parsons, 2013. *Final Hydrogeological Assessment and Recommendations Report*. July.

SAIC, 2001. *Final Phase II RCRA RFI Report, Group 3 Suspected Releases SWMUs, Volume 1*. August.

URS, 2002. *Final Corrective Measures Study SWMU 19 – Building 533 Foundations (Empty Drum Storage Area) group 3 Suspected Release SWMUs*. July.

Deseret Chemical Depot, 2013. *Final Evaluation of Solid Waste Management Unit 33 to Support Closure, Tooele Army Depot South Area*. July 2013