

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

**MODULE VI
ATTACHMENT 5**

**SOLID WASTE MANAGEMENT UNIT (SWMU) 39
POST CLOSURE PLAN**

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LIST OF ACRONYMS AND ABBREVIATIONS

AOC	Area of Concern
CFR	Code of Federal Regulations
CMI	Corrective Measures Implementation
CMS	Corrective Measures Study
COPC	Constituent of Potential Concern
DWMRC	Division of Waste Management and Radiation Control
EO	Environmental Office
ft bgs	feet below ground surface
PAH	Polycyclic Aromatic Hydrocarbon
PCP	Post Closure Plan
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SVOC	Semi-volatile Organic Compound
SWMU	Solid Waste Management Unit
TEAD-S	Tooele Army Depot South Area
UAC	Utah Administrative Code
VOC	Volatile Organic Compound

1.0 INTRODUCTION

The two objectives of this Post-Closure Plan (PCP) are: 1) ensure that Tooele Army Depot- South Area (TEAD-S) complies with the Permit; and 2) outline the requirements needed to prevent exposure or contact with contamination left in place at this Solid Waste Management Unit (SWMU); and to ensure that future land use is industrial use only. To meet these objectives, this PCP provides detailed information regarding the location, regulatory criteria, and post-closure inspections at SWMU 39. Post-closure requirements will continue for a minimum of 30 years. The post-closure care period may be extended or shortened, as deemed necessary.

In accordance with Utah Administrative Code (UAC) R315-270-28, the PCP is required to include specific information for a closed facility. As applicable to SWMU 39, 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 39 Post-Closure Information Requirements under UAC R315-270-14

Regulation Citation	Requirement Description	Requirement Location
UAC R315-270-14(b)(1)	General Description of the Facility	Section 2 and Permit Attachment 6
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)

Regulation Citation	Requirement Description	Requirement Location
UAC R315-270-14(b)(11)(iii-v)	Facility Location Information - 100-year floodplain	Permit Attachment 6 (Section 14.5)
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.

Regulation Citation	Requirement Description	Requirement Location
UAC R315-270-14(c)(5)	Groundwater Monitoring Information - Detailed plans/engineering report for proposed groundwater program	Not required.
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 39, as required by UAC R315-270-14(b)(1).

2.1 SWMU 39 Location and History

SWMU 39 is a dry well that occupies less than 0.1 acres and is located in the northwestern quadrant of TEAD-S outside and along the east side of Building 1873, also known as Building 2005. The Buildings and SWMU are located within Area 10. Based on historical drawings dating back to 1951, the dry well was approximately four feet by four feet by four feet. The base of the well was located at a depth of six feet below ground surface (ft bgs) with two feet of earth fill on top of the well, rendering the ground surface slightly above the well level. The dry well was connected via a cast iron pipe to two paint booths inside of Building 1873. Geophysical surveys were conducted as part of the Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) to define the feature. The site was identified as Area of Concern (AOC) 27 in the RFI process. However, as industrial closure and land use controls were recommended, the AOC was named a SWMU for inclusion in the post closure permit.

2.2 Past Operations

Historically, the paint booths were used for sand blasting and painting containers. Based on the review of historical drawings and understanding the operations of pain booths, the chemical agent containers were likely sandblasted within an enclosed room or “booth” and then remotely spray painted in either the same booth or a different one. Solid particulate matter and waste fluids would have been captured within the paint booths. It is unclear whether liquid waste (treated or untreated) from the pain booths drained to the dry well.

Building 1873 has undergone renovations since its initial construction. The paint booths first appear on a historical drawing dated 1951, and no longer appear on plans dated after 1975. Because activities conducted in the building included painting of chemical agent containers, all activities were monitored for chemical agent. There is no history of agent detections during active operations (Parsons 2019). Consistent with painting operations, the potential for contamination would be a release of the rinse down fluids from painting operations.

2.3 Previous Investigations Documentation

Table 2: Summary of Previous Investigations

Pre-RFI	Phase I RFI	Phase II RFI	CMS	Decision Document	CMI
TEAD-S, 2013	Parsons, 2017	Parsons, 2019	NA	NA	NA
CMI – Corrective Measure Implementation CMS – Corrective Measures Study NA – Not Applicable					

2.4 Closure Activities

The 2019 Phase II RFI (Parsons, 2019) established the following controls:

1. The TEAD-S Excavation Permit process will be enforced.
2. Land use restriction (post closure) – activities limited to industrial use only.

2.5 Human Health and Ecological Risk Assessment

A screening level human health and ecological risk assessment were performed using data from the soil samples collected as part of the RFI process. Several metals, volatile organic compounds (VOCs), polycyclic aromatic compounds (PAHs), and semi-volatile organic compounds (SVOCs) were selected as contaminants of potential concern (COPCs).

The results of the human health risk assessment indicated that residential risk levels are met for lead and total site risk and hazard to all other COPCs are below industrial target risk levels of 1×10^{-6} (cancer) and 1.0 (noncancer).

There is no significant ecological risk at SWMU 39.

2.6 Surface Water and Groundwater

There are no defined surface water features within or near SWMU 39. The general direction of surface water drainage in the area surrounding this unit is southerly toward the low portion of Rush Valley.

Groundwater quality at SWMU 39 is primarily defined as Class II, drinking water quality. Depth to groundwater ranges from 8 to 28 ft bgs (Parsons, 2019). Groundwater flow is to the west, southwest.

Groundwater in the vicinity is not currently used for drinking water, irrigation, or other purposes. The nearest potable groundwater wells (2) are located approximately 3.5 miles northeast (upgradient) of SWMU 39, inside the TEAD-S boundary.

Groundwater monitoring is not required for SWMU 39 (Parsons, 2019).

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

No specific security features are needed throughout the post-closure care period with the exception of tracking the location of the SWMU in the TEAD Land Use Management Plan and ensure industrial land use.

3.0 POST-CLOSURE OPERATIONS AND INSPECTIONS

3.1 Introduction

SWMU 39 post closure care is in accordance with the TEAD-S RCRA part B Permit. 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 will not be allowed unless under an excavation permit approved by the TEAD-S Environmental Office (EO). Soil disturbance at this site must be coordinated through the TEAD-S EO.

3.2 Routine Site Inspections

During the Post-Closure period, general inspections of the SWMU 39 site shall be conducted annually by November 1st to ensure the site remains under industrial use and to ensure that the TEAD-S Excavation Permit process has been followed. Any modifications to the frequency of inspections will be in accordance with amendments submitted in the form of proposed permit modifications.

Site inspections will consist of a complete walkthrough and visual inspection of the area. 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. At a minimum the site shall be visually inspected to ensure the following conditions are maintained at the site:

1. There is no evidence of land use other than for industrial purposes within the former site boundary; and
2. There is no evidence of soil disturbance.

3.3 Inspection Follow-Up

Copies of completed site inspection checklists (Module VI, Form A) shall be forwarded to the TEAD-S EO. 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 TEAD-S. If the corrective action requires substantial effort, 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 will be implemented as required under this Permit. This plan shall be approved by the Director 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

In accordance with UAC R315-270-30(1)(9), a Biennial Post-Closure Report shall be prepared for all SWMUs undergoing post-closure care by March 1 of the reporting year. The SWMU 39 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 Report 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 2020, for the duration of the Post-Closure Monitoring Period.

3.6.1 *Non-Compliance Reporting:*

- The Permittee shall notify the Director orally within 24-hours of any 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.

3.6.2 *Anticipated Non-Compliance:*

- 30 days' advance notice of any change which may result in noncompliance

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

Analytical Quality Solutions (AQS), 2017. *Final Risk Assumptions Document, Revision 5*, Deseret Chemical Depot, March.

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.

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

Parsons, 2017. *Final Phase I RCRA Facility Investigation Report of Select Areas of Concern*, Tooele Army Depot South Area, November.

Parsons, 2019. *Final Phase II RCRA Facility Investigation Report of Select Areas of Concern*, Tooele

Army Depot South Area, February.

Tooele Army Depot South Area (TEAD-S), 2013. *Final Report for Identification of Sites of Potential Concern (SPC)*, Tooele Army Depot South Area, November.