



VA Salt Lake City Health Care System  
500 Foothill Drive  
Salt Lake City, UT 84148

## **ACTION MEMORANDUM AMENDMENT**

**To:** Rebecca Gerhart – Remedial Project Manager, U.S. Environmental Protection Agency, Region 8

**To:** Maureen Petit – Remedial Project Manager, Utah Department of Environmental Quality

**From:** Shannon Smith – CERCLA Program Manager, Department of Veterans Affairs

**Date:** April 16, 2021

**Re:** Request for Change in Scope of Work for Action Memorandum for Residence 0040-H, 700 South 1600 East PCE Plume Site, Salt Lake City, Utah

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### **1. Purpose**

The purpose of this Action Memorandum (AM) amendment is to document a change in scope to the proposed action for the time-critical removal action (TCRA) for Residence 0040-H within the 700 South 1600 East PCE Plume Site in Salt Lake City, Utah. Site conditions that warrant the TCRA at Residence 0040-H were described in the Action Memorandum dated October 20, 2016 (“October 2016 AM”), prepared by the Department of Veterans Affairs (VA) and have not changed (VA 2016). The October 2016 AM is provided as an attachment to the AM amendment.

The TCRA addresses mitigation of vapor intrusion into Residence 0040-H from PCE-impacted groundwater and springs at the property. The change in scope outlined in the amendment allows for implementation of several alternative actions as necessary to mitigate vapor intrusion, including installing subslab depressurization (SSD) systems, sealing openings in floors and foundation walls, and sealing bare earth crawl spaces. These actions may also be implemented at other structures at the site if indoor air concentrations exceed the removal action levels (RALs) for site-related constituents as presented in Table 2 of the October 2016 AM. The site-related constituents with RALs are PCE, trichloroethene, vinyl chloride, 1,4-dioxane, and 1,1-dichloroethane.

## **2. Site Conditions and Background**

Superfund Site Name: 700 South 1600 East PCE Plume Site

Operable Unit (OU): OU 1

CERCLIS Number: UTD981548985

Site Location: Salt Lake City, Utah

Potentially Responsible Party: Department of Veterans Affairs

NPL Status: Final

### **2.1 Site Background**

The October 2016 AM details the background and history of the site. The information is briefly summarized below.

Tetrachloroethane (PCE) contamination was first identified in groundwater in the area in 1990 at the nearby Mt. Olivet Cemetery irrigation well during routine monitoring by the Salt Lake City Department of Public Utilities. This led to U.S. Environmental Protection Agency (EPA) and Utah Department of Environmental Quality (UDEQ) involvement and the preliminary determination that the source of PCE in groundwater was the historic dry-cleaning facility located at the VA Medical Center (VAMC).

A part-time dry-cleaning facility using PCE was operated at the VAMC over a 6-year period in the late 1970s and early 1980s. During this period, dry cleaning residuals were disposed of in the sanitary sewer. The PCE groundwater plume is present beneath the VAMC and in areas hydraulically downgradient, extending to the East Side Springs (ESS) neighborhood.

The change in scope discussed in this amendment is requested to allow for installation of both active and passive systems to mitigate vapor intrusion which require less ongoing operation and maintenance when compared to the current whole-house air filter units. Additionally, the requested changes in scope will allow installation of systems to mitigate vapor intrusion that are less likely to be modified by homeowners, which could reduce the effectiveness of the action.

## **2.2 Other Actions to Date**

### **2.2.1 Previous Actions**

In 2013, VA began the RI process for the 700 South 1600 East PCE Plume. Because the ESS area had the highest potential for exposure to PCE due to seeps and springs, the investigation of this area was accelerated and groundwater containing PCE within 50 feet (ft) of the ground surface within the ESS area was designated Accelerated Operable Unit 1 (AOU-1). An RI report for AOU-1 was completed in February 2019 (EA Engineering, Science, and Technology, Inc. [EA] 2019). Residence 0040-H was the only structure identified in the ESS area with site-related constituents above the RALs, warranting vapor intrusion mitigation. Investigation of AOU-1 determined a vapor intrusion risk to the public was not pervasive.

The VA has implemented the action proposed in the October 2016 AM, consisting of a whole-house air filter unit ducted to the suction side of the furnace at 0040-H. The air filter was installed in November 2016; however, the unit has not remained operational because of noise complaints from the homeowner. Portable air purifying units are in the residence to reduce indoor air PCE concentrations in lieu of the whole-house air filter system.

### **2.2.2 Current Activities**

The remedial investigation is ongoing to define the nature and extent of PCE in the subsurface at the site. The sampling of indoor air in structures above the known extent of PCE groundwater contamination also continues. Requests to participate in indoor air sampling were sent to 150 residents and 23 agreed to sampling during the Winter 2019/2020 event. No structures were identified with site-related contaminants above the RALs.

## **3. Threats to Public Health, Welfare, or the Environment and Statutory and Regulatory Authorities**

The results of the evaluation of the 8 criteria for determining if a removal action under 40 CFR 300.415(b)(2) of the National Contingency Plan have not changed from the October 2016 AM. The following factors for determining the appropriateness of the removal action include:

- Actual or potential exposure to nearby human populations, animals or the food chain from hazardous substances or pollutants or contaminants [300.415(b)(2)(i)]
- Actual or potential contamination of drinking water supplies or sensitive ecosystems [300.415(b)(2)(ii)]
- Availability of other appropriate federal or state response mechanisms to respond to the release [300.415(b)(2)(vii)]

#### **4. Endangerment Determination**

The endangerment determination from the October 2016 AM has not changed for Residence 0040-H or potentially other residences where exceedances of the Tier 1 RALs for the site-related constituents may present an imminent and substantial endangerment to public health, or welfare or the environment. Specifically, the potential ongoing migration of PCE and TCE vapors into residence 0040-H or other structures with RALs exceedances presents a substantial endangerment to the inhabitants.

#### **5. Exemption from Statutory Limits**

No request for exemption from the statutory limits is being sought at this time, as the actions will be installed within 12 months of approval of this AM amendment and within the \$2 million statutory budget limit.

#### **6. Proposed Actions and Estimated Costs**

##### **6.1 Proposed Actions**

###### 6.1.1 Proposed Action Description

The proposed additional options for actions to mitigate vapor intrusion at residences include:

- Install SSD systems to remove contaminated soil vapor from beneath structures present above the plume. SSD systems generally consist of a pipe penetration through the floor slab in the lowest level of the structure, which is connected to a fan to extract soil gas from beneath the floor slab prior to entry into the structure. If shallow groundwater is present beneath the floor slab, a sump pit with a pump may be necessary to remove water to allow for operation of an SSD system.
- Seal openings in the floor slab and basement walls (cracks, drains, and other penetrations through the wall or slab) to reduce the potential for soil vapor to enter a structure.
- Seal bare earth crawlspaces or basements using a plastic or flexible membrane barrier to reduce the potential for soil vapor to enter a structure.

While the October 2016 AM was prepared for Residence 0040-H, these additional proposed actions may be implemented at any structure where indoor air samples contain site-related constituents exceeding their respective RALs.

Removal action work plans will be developed for other structures where vapor intrusion mitigation will occur. The work plan will describe the proposed action(s) to be implemented and will describe the required sampling or data collection necessary to evaluate the effectiveness of the action, including the frequency of required sampling.

The work plan will also describe any required operation and maintenance and/or inspections necessary to ensure the mitigation system operates properly.

The requested change in scope of the removal action is not expected to impact vulnerable or sensitive populations, habitats, or natural resources, nor add uncertainties which affect system implementation or add institutional controls or require additional waste disposal. These items are unchanged from the October 2016 AM.

### 6.1.2 Contribution to Remedial Performance

The actions described in this AM amendment will not impede any future remedial actions at the site; rather the actions described in this memorandum will mitigate risks to human health and the environment in the short term. Long-term remedial action for the PCE groundwater plume is expected to take place in the future. The remedial action for the plume will be determined following completion of the remedial investigation/feasibility study for the site, which is currently underway.

### 6.1.3 Engineering Evaluation/Cost Analysis

The engineering evaluation and cost analysis section applies to non-time-critical removal actions only. The removal actions described in the October 2016 AM and this memorandum are considered time-critical and therefore this section is not applicable.

### 6.1.4 Applicable or Relevant and Appropriate Requirements

The list of ARARs included as Appendix A in the October 2016 AM does not change with the development of this amendment.

### 6.1.5 Project Schedule

A specific schedule will be developed for each structure where mitigation of vapor intrusion is required and presented in the work plan. For each structure where mitigation will occur, implementation of the removal action will commence within 6 months of receipt of data that determine an exceedance of an RAL has occurred.

## **6.2 Estimated Costs**

The costs associated with implementation of these vapor intrusion mitigation measures will vary depending on the structure and the specific mitigation measures implemented. An estimate of the costs for a typical structure are presented below:

<u>Item</u>	<u>Total</u>
Work Planning	\$10,000

SSD System	\$15,000
Sealing of Openings and Crawlspace	\$6,000
Performance Monitoring (one year)	\$20,000
Operation and Maintenance	\$2,000
Reporting	\$12,000
<u>Contingency (20%)</u>	<u>\$13,000</u>
<b>Total</b>	<b>\$78,000</b>

Based on these estimates, in addition to the \$178,000 budget presented in the October 2016 AM, up to 23 additional structures could have mitigation activities initiated prior to exceeding the \$2 million statutory limit.

### **7. Expected Change in the Situation Should Action Be Delayed**

A delay in action or no action at any structure at the site that exceeds an RAL would result in continued exposure of the occupants to concentrations of site-related constituents at potentially unacceptable levels.

### **8. Outstanding Policy Issues**

The change in scope described in the amendment does not change the determination from the October 2016 AM that there are no outstanding policy issues for the installation of the vapor mitigation systems based on the nature of the contamination at the site and the proposed removal action activities.

### **9. Enforcement**

VA is performing this removal action voluntarily in support of OU1 under their delegated authority to do so, as part of the larger response for the 700 South 1600 East PCE Plume Site. No enforcement actions have been initiated against VA concerning vapor intrusion at the site.

### **10. Recommendation**

This decision document represents the selected removal action for structures at the site impacted by vapor intrusion exceeding the RALs at the 700 South 1600 East PCE Plume Site in Salt Lake City, Utah, developed in accordance with CERCLA, as amended, and is consistent with the National Oil and Hazardous Substances Pollution Contingency Plan. This decision is based on the administrative record for the site.

Conditions at structures at the site that exceed RALs for indoor air meet the National Oil and Hazardous Substances Pollution Contingency Plan section 300.415(b) criteria for removal. The total project ceiling is expected to be increased by \$78,000 per structure. Based on the \$178,000 project ceiling presented in the October 2016 AM and this estimate per structure, up to 23 structures could have actions implemented to address vapor intrusion prior to reaching the \$2 million statutory limit. This removal action is fully funded by VA.

## **References**

Department of Veterans Affairs. 2016. *Action Memorandum for Residence 0040-H within Accelerated Operable Unit 1: East Side Springs, 700 South 1600 East PCE Plume, Salt Lake City, Utah*. October 20.

EA Engineering, Science, and Technology, Inc. 2019, *700 South 1600 East PCE Plume AOU-1: East Side Springs Remedial Investigation Report*. Prepared for the U.S. Department of Veterans Affairs.

Attachment:

Action Memorandum for Residence 0040-H within Accelerated Operable Unit 1: East Side Springs, 700 South 1600 East PCE Plume, Salt Lake City, Utah. October 20.