



CAG Meeting

February 27th, 2019

July 27, 2018

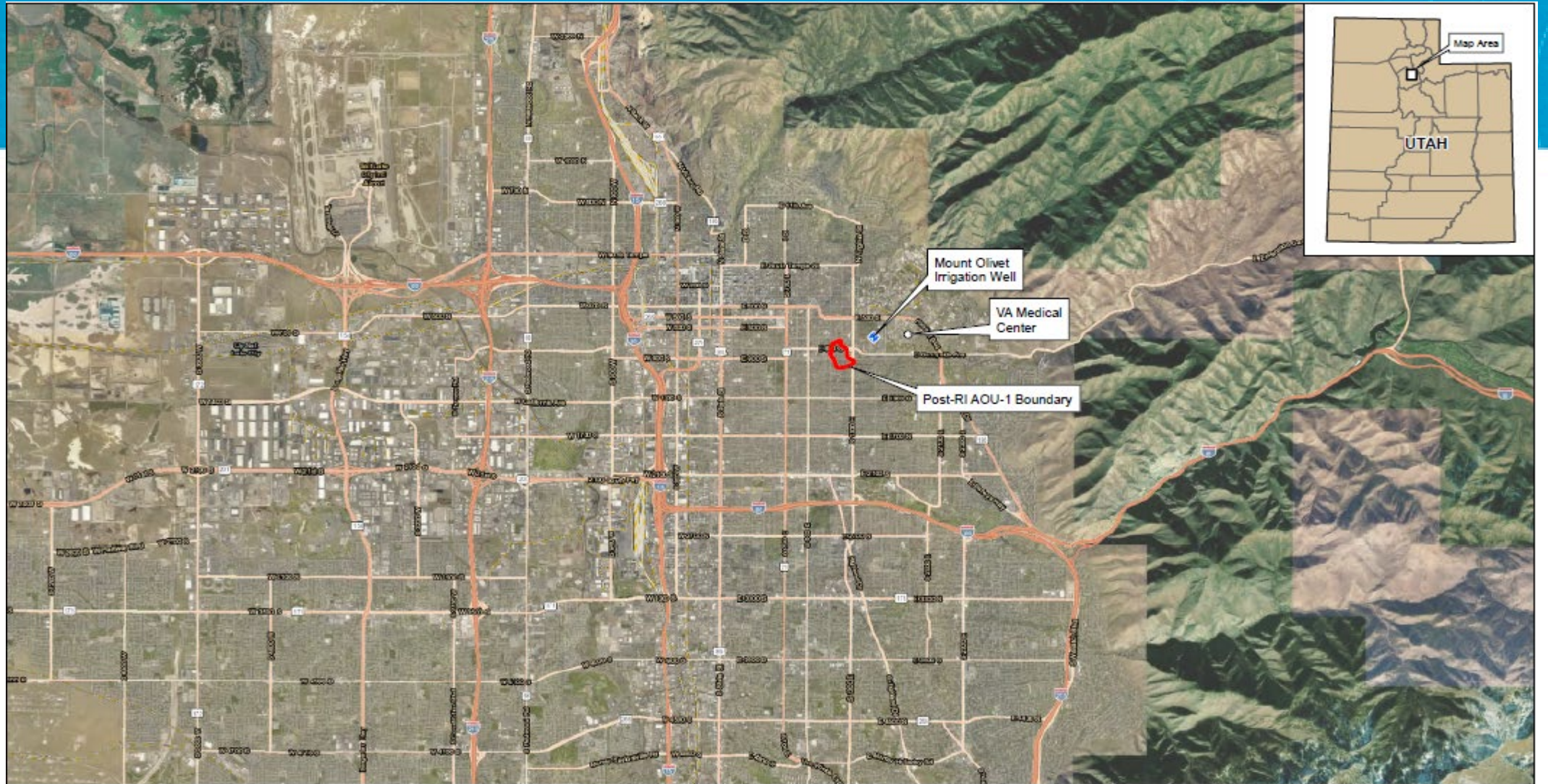


VA
HEALTH CARE | Defining
EXCELLENCE
in the 21st Century

Since the last CAG Meeting...

- The AOU-1 RI Report is final and will be publicly available on the website very soon.
 - The boundary lines for AOU-1 have been redrawn
 - Minimal risk was found in tested structures
- **We will host a Public Meeting sometime around May to discuss the Final RI Report and Draft Final Focused Feasibility Study**
 - We will need help spreading the word about the Public Meeting
- OU-2 Update
 - General information tonight
- Sampling on SLC VHA Campus showed elevated levels of PCE in the soil-gas near Building 6 and Building 7.
 - The following week, we tested for Vapor Intrusion in Building 6, Building 7, The Valor House and Daycare Facility.
 - Some detections found in Building 6.
 - No detections in The Valor House of Daycare facility. (VA tested these two facilities out of an abundance of caution)

For reference:



Legend

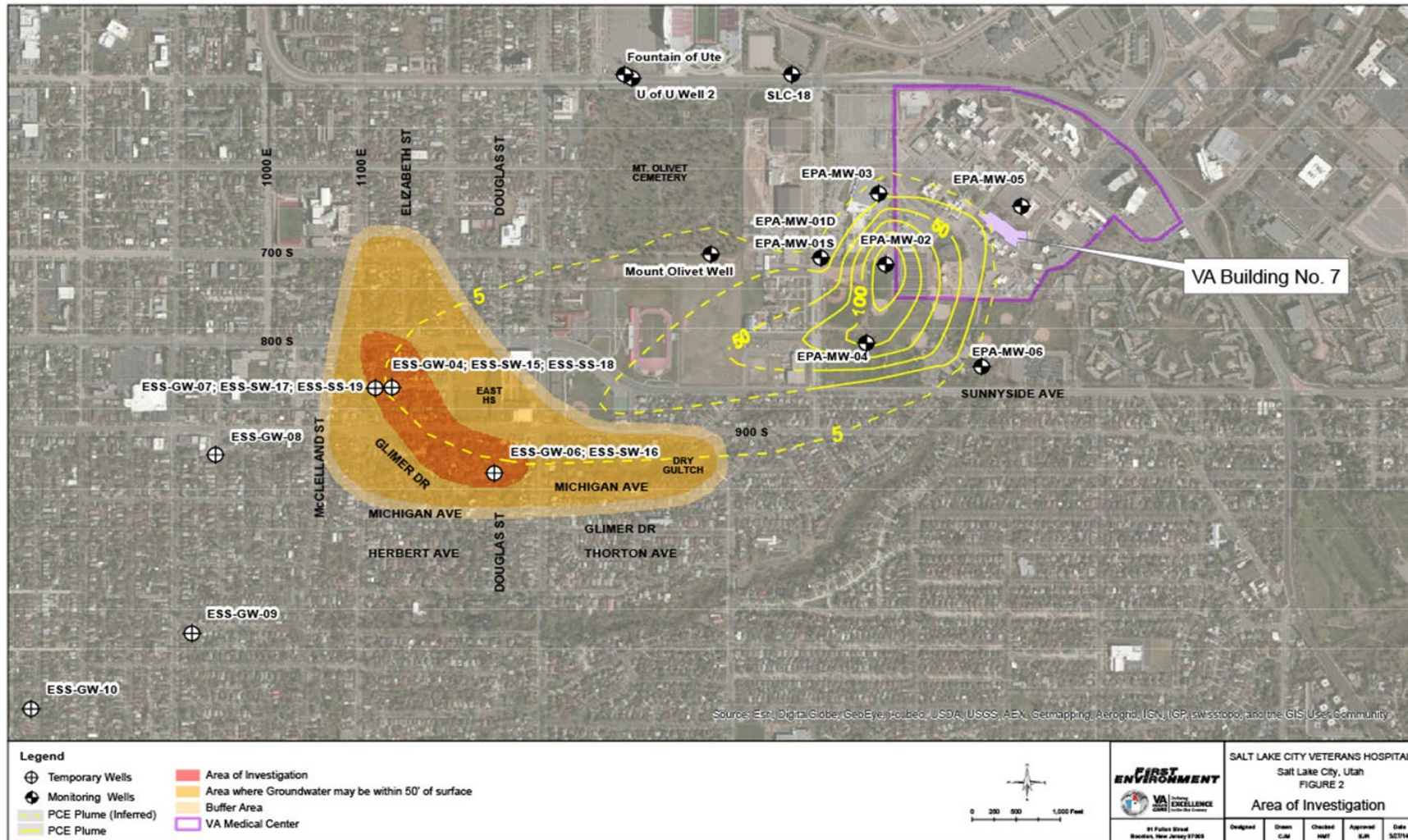
- VA Medical Center
- ⊕ Mount Olivet Irrigation Well
- ▭ Post-RI AOU-1 Boundary

Acronyms(s) and Abbreviation(s)
AOU = Accelerated Operable Unit
RI = Remedial Investigation
VA = Veterans Affairs

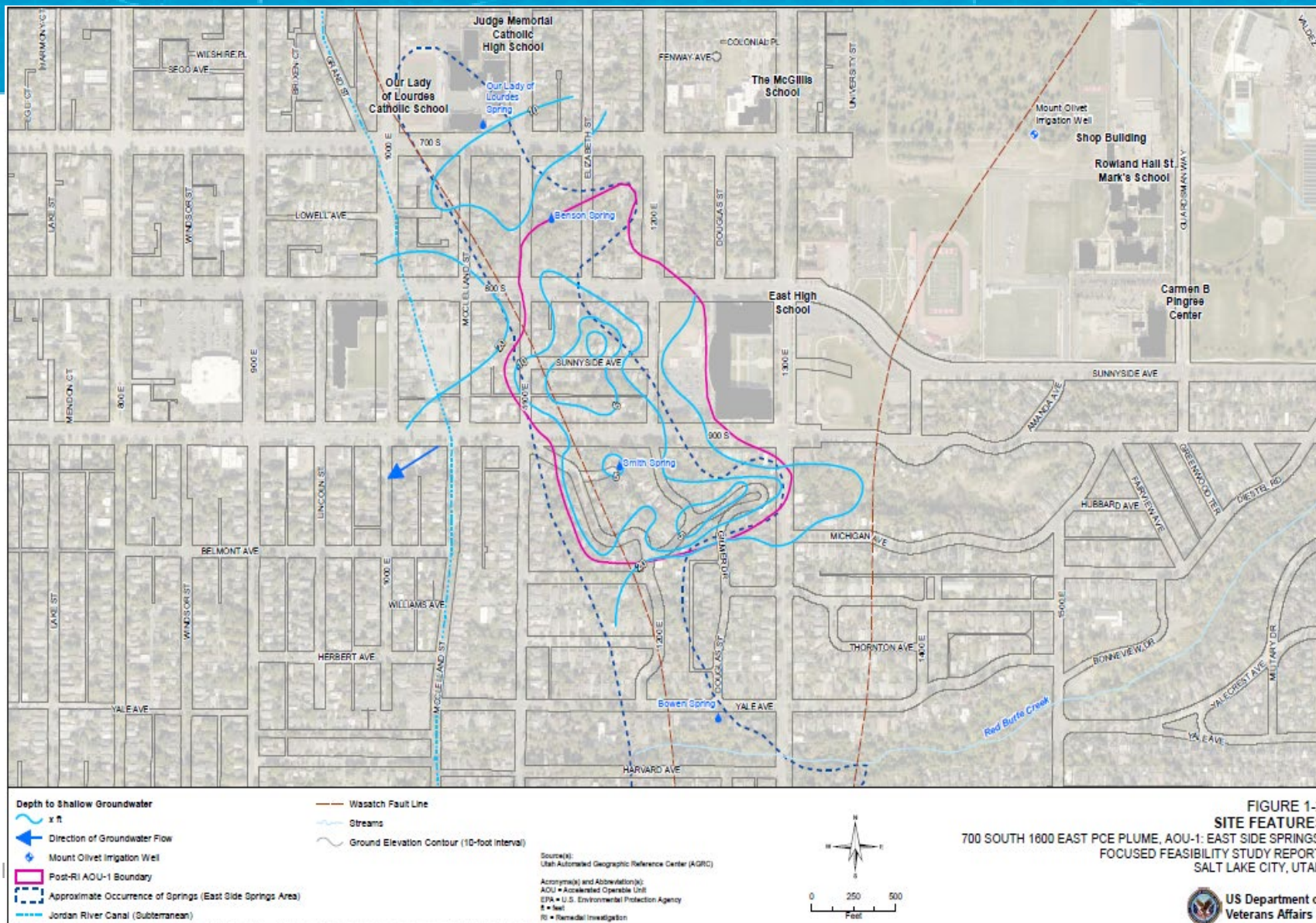


FIGURE 1-1
SITE LOCATION
700 SOUTH 1600 EAST PCE PLUME, AOU-1: EAST SIDE SPRINGS
FOCUSED FEASIBILITY STUDY REPORT
SALT LAKE CITY, UTAH

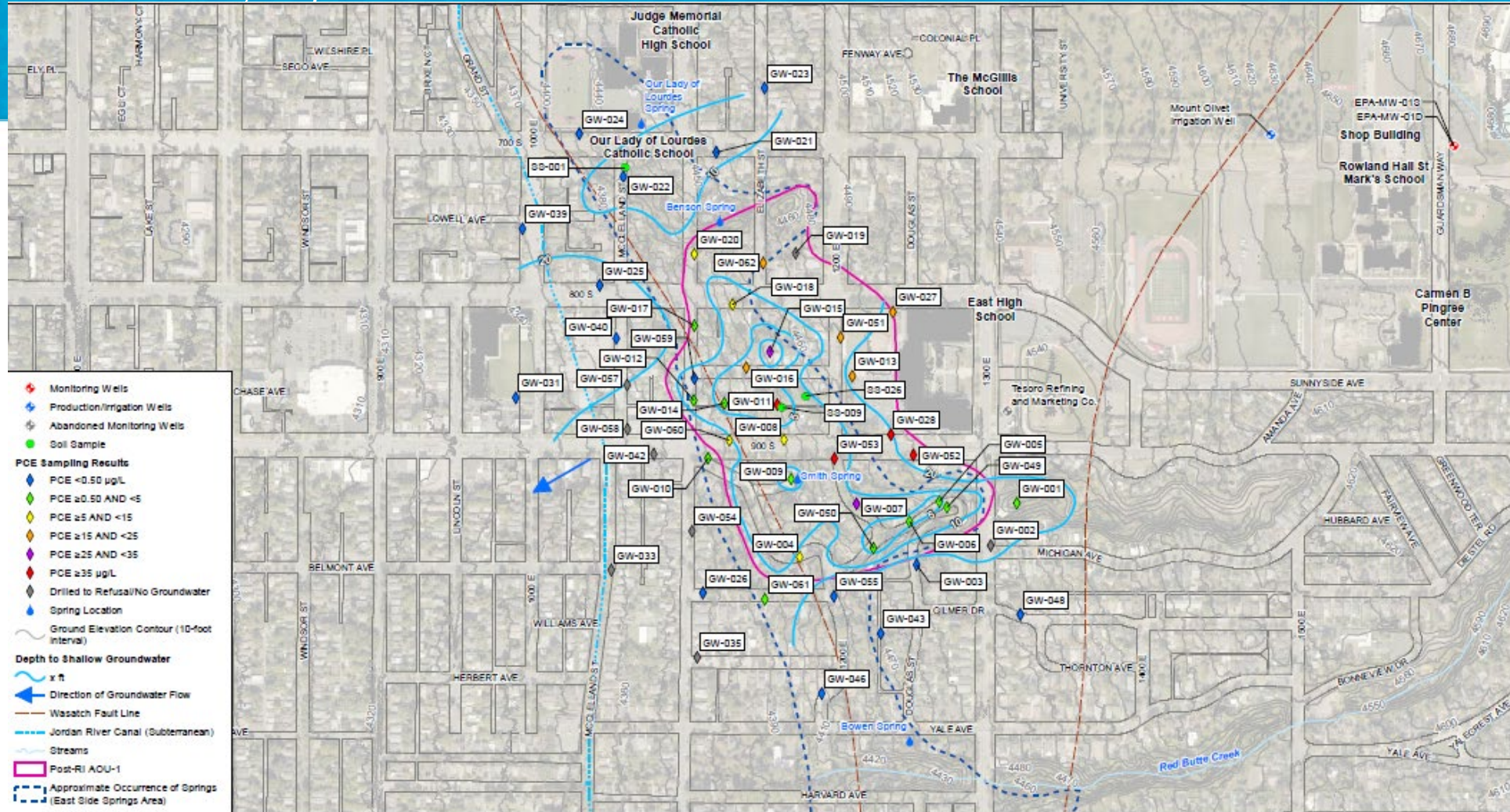
700 South 1600 East PCE Plume Former Boundary



700 South 1600 East PCE Plume Updated Boundary



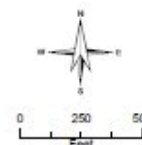
700 South 1600 East PCE Plume Updated Boundary w/ Results



Note(s):
 1. If multiple samples were collected from one monitoring point, then the sample result with the highest concentration is shown.
 2. The residential groundwater to indoor air RBSL for PCE = 15 µg/L.

Source(s):
 Utah Automated Geographic Reference Center (AGRC)

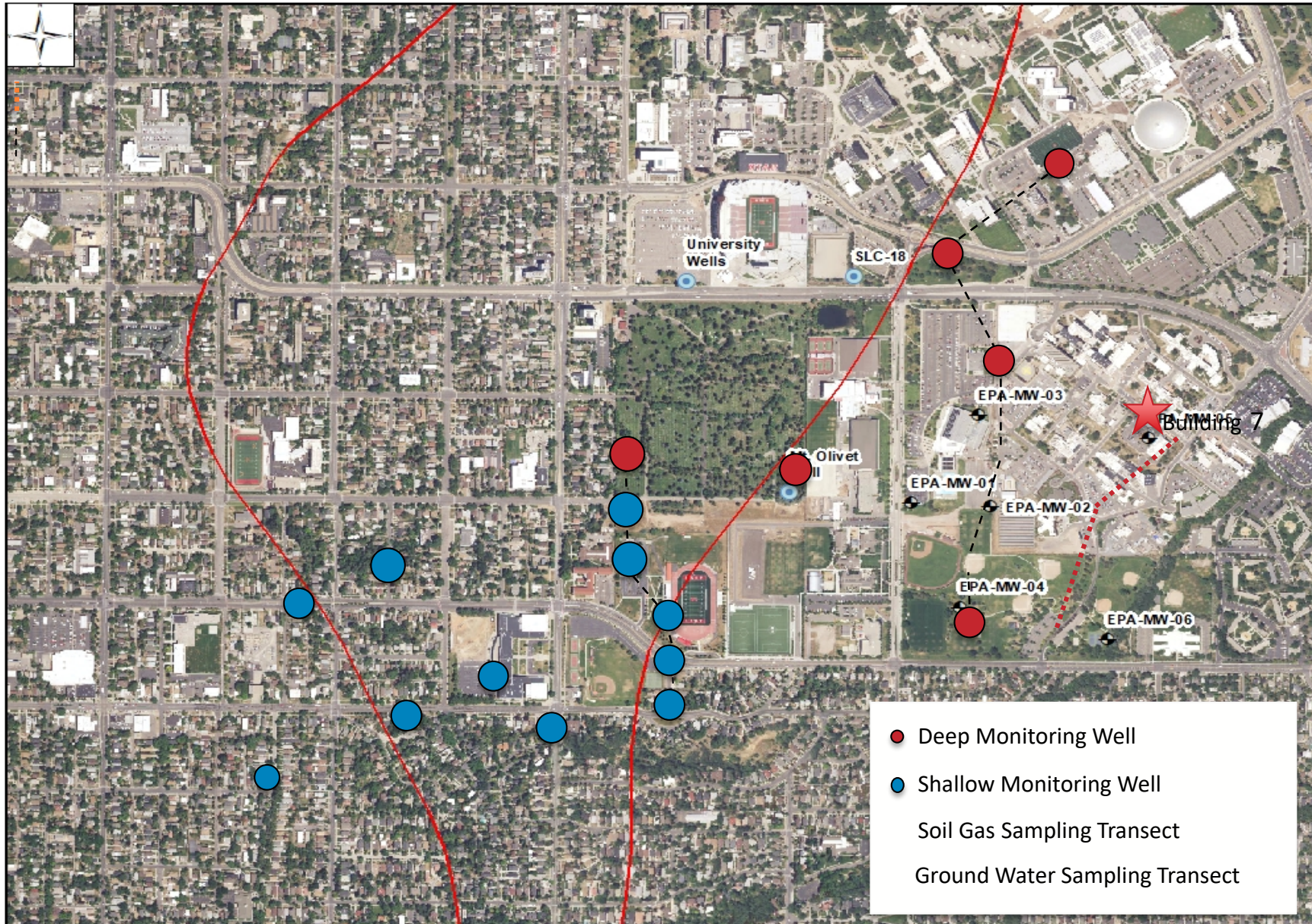
Acronym(s) and Abbreviation(s):
 µg/L = micrograms per liter
 ACU = Accelerated Operable Unit
 EPA = U.S. Environmental Protection Agency
 ft = feet
 MW = Monitoring Well
 PCE = tetrachloroethene
 SS = Soil Sample
 RBSL = Risk Based Screening Level
 RI = Remedial Investigation



**FIGURE 2-1
 GROUNDWATER RESULTS AND
 DEPTH TO SHALLOW GROUNDWATER
 700 SOUTH 1600 EAST PCE PLUME, AOU-1: EAST SIDE SPRINGS
 FOCUSED FEASIBILITY STUDY REPORT
 SALT LAKE CITY, UTAH**

US Department of
 Veterans Affairs

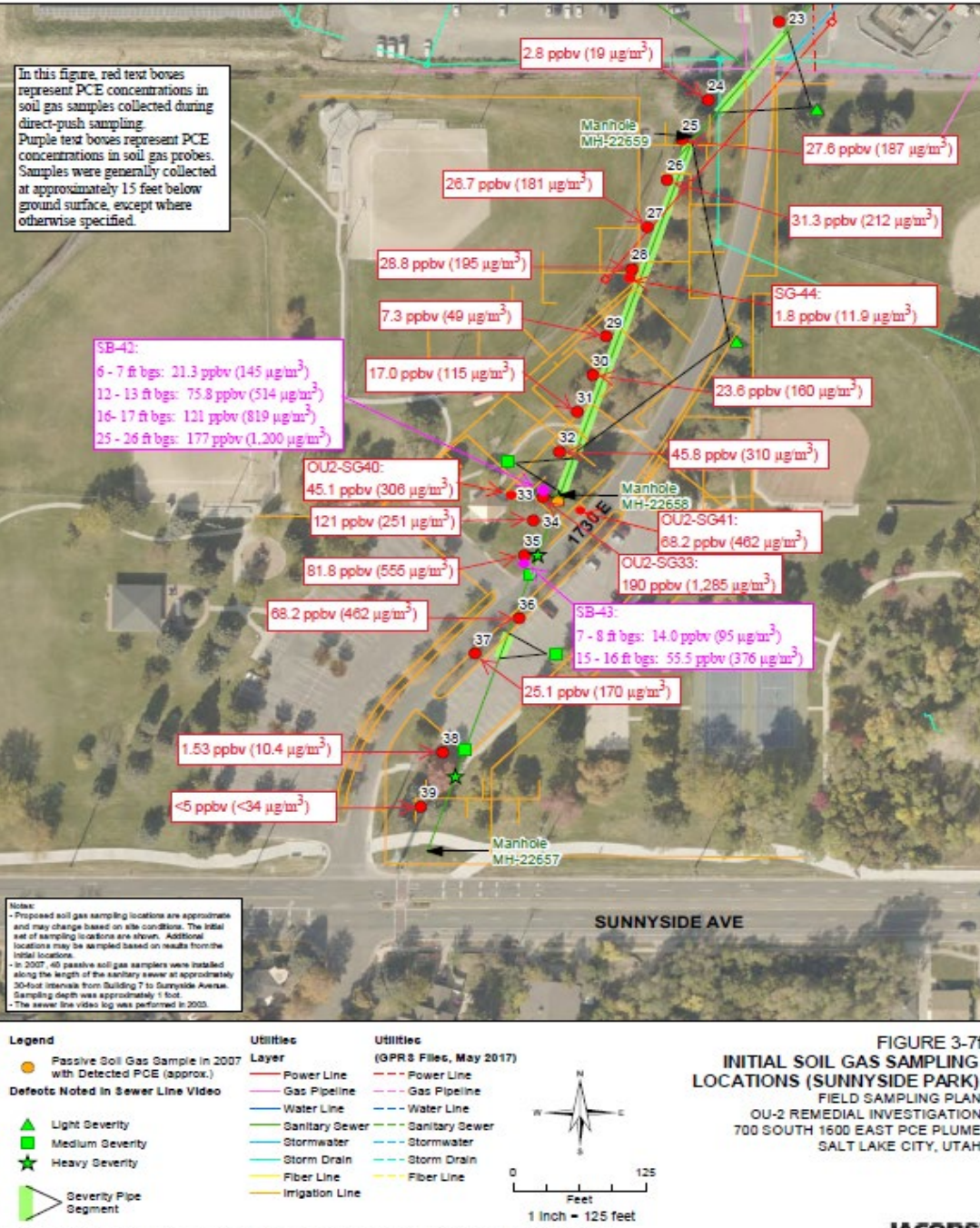
OU-2 Update: The 2018 Field Season

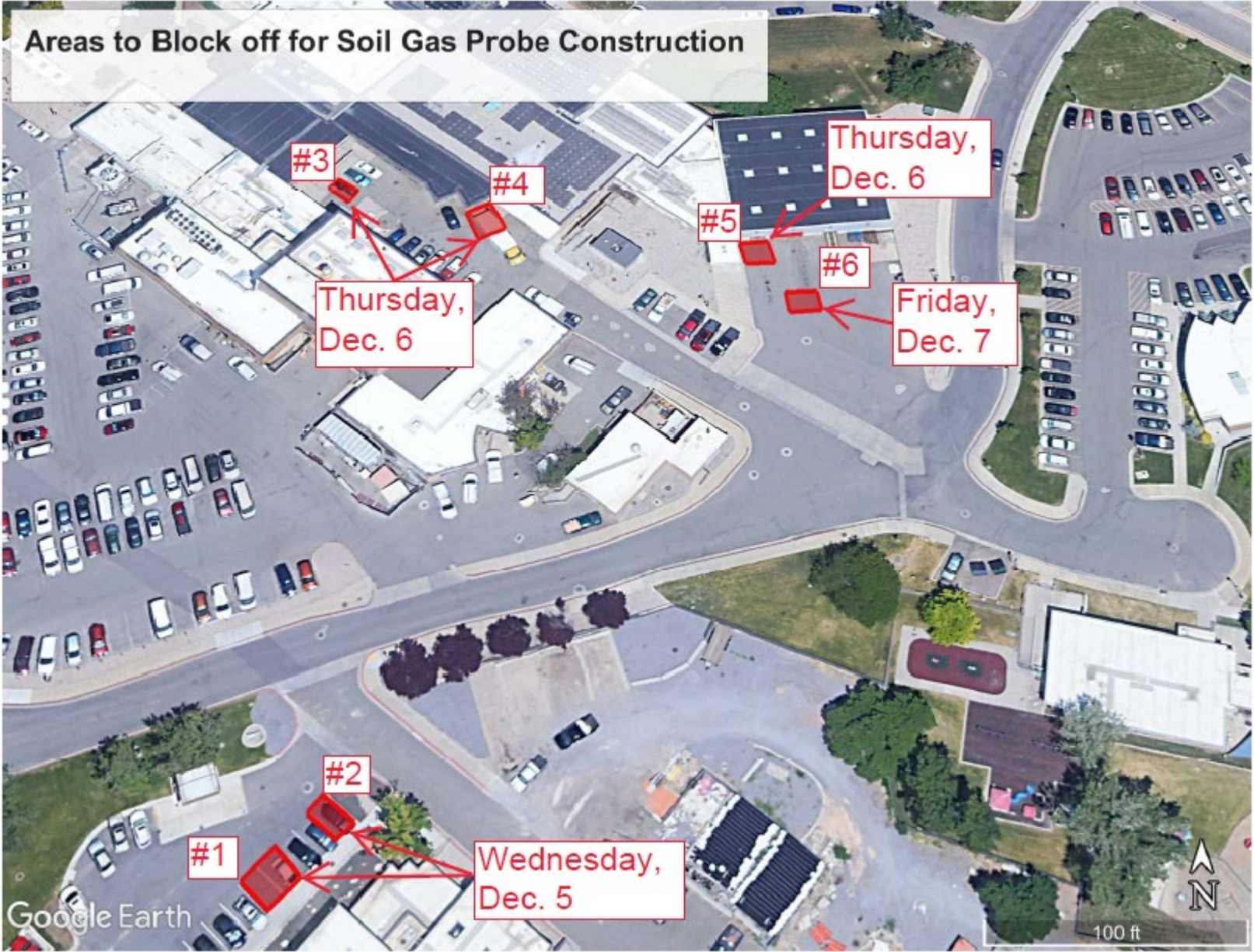


**THE FOLLOWING SLIDES DISPLAY
PRELIMINARY DATA. VALIDATION OF
DATA IS CURRENTLY UNDERWAY.**

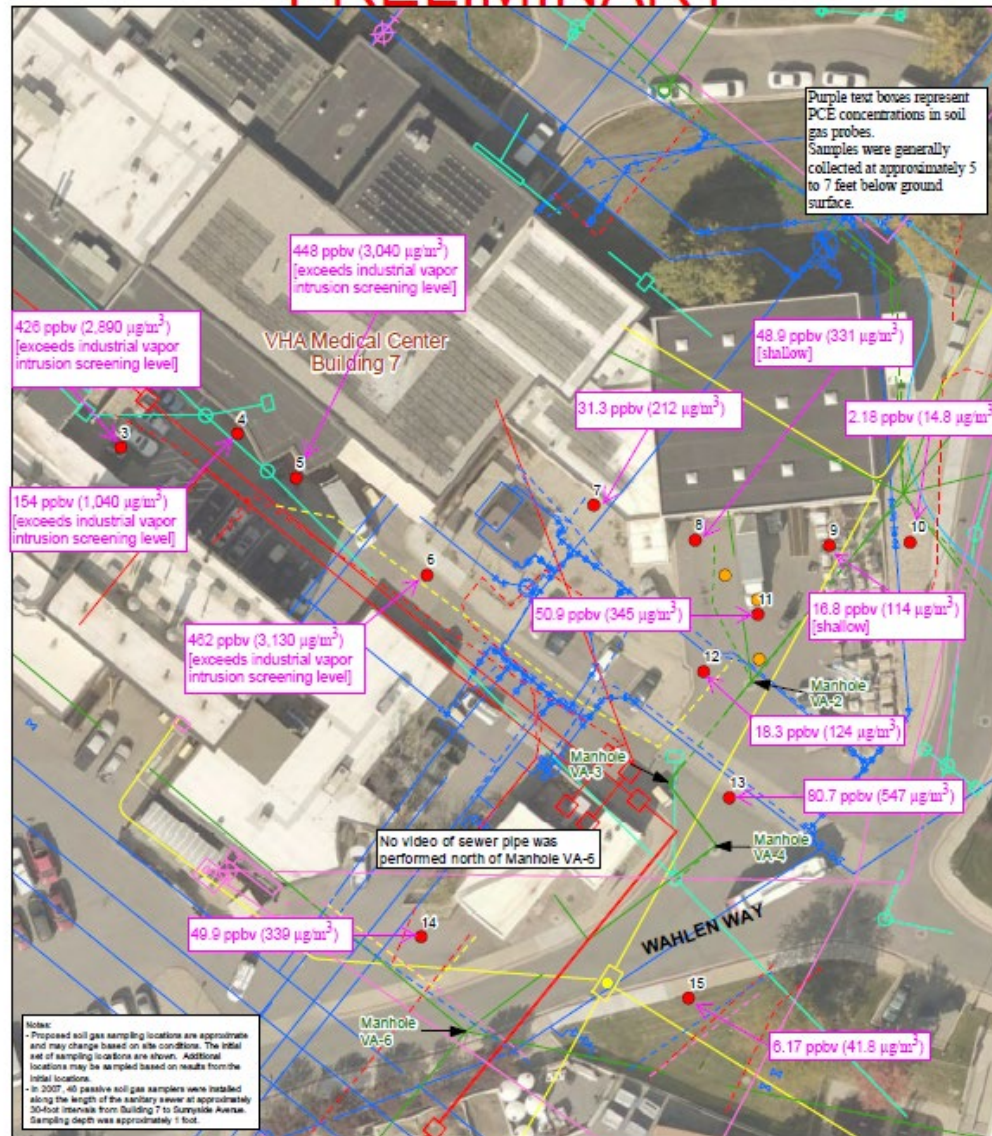
VHA Campus Sampling

PRELIMINARY





PRELIMINARY



Notes:

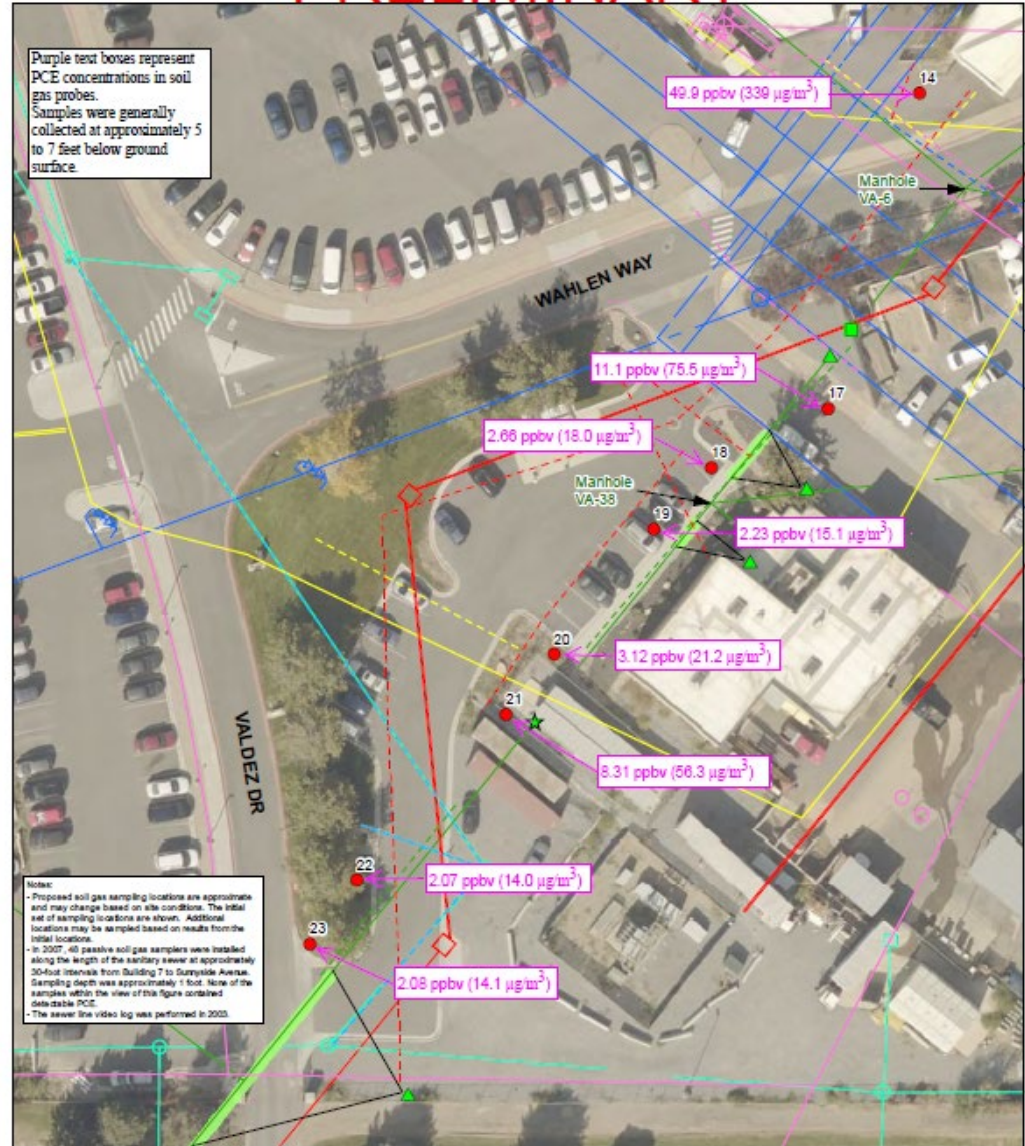
- Proposed soil gas sampling locations are approximate and may change based on site conditions. The initial set of sampling locations are shown. Additional locations may be sampled based on results from the initial locations.
- In 2007, 40 passive soil gas samplers were installed along the length of the sanitary sewer at approximately 30-foot intervals from Building 7 to Quarryside Avenue. Sampling depth was approximately 1 foot.

<p>Legend</p> <ul style="list-style-type: none"> ● Initial Soil Gas Sampling Location ● Passive Soil Gas Sample in 2007 with Detected PCE (approx.) 	<p>Utilities Layer</p> <ul style="list-style-type: none"> — Power Line — Gas Pipeline — Water Line — Sanitary Sewer — Stormwater — Storm Drain — Fiber Line 	<p>Utilities (GPR 3 Files, May 2017)</p> <ul style="list-style-type: none"> - - Power Line - - Gas Pipeline - - Water Line - - Sanitary Sewer - - Stormwater - - Storm Drain - - Fiber Line
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0 50
Feet
1 inch = 50 feet

FIGURE 3-7c
INITIAL SOIL GAS SAMPLING LOCATIONS (BUILDING 7 AREA)
FIELD SAMPLING PLAN
OU-2 REMEDIAL INVESTIGATION
700 SOUTH 1600 EAST PCE PLUME
SALT LAKE CITY, UTAH

PRELIMINARY



Notes:

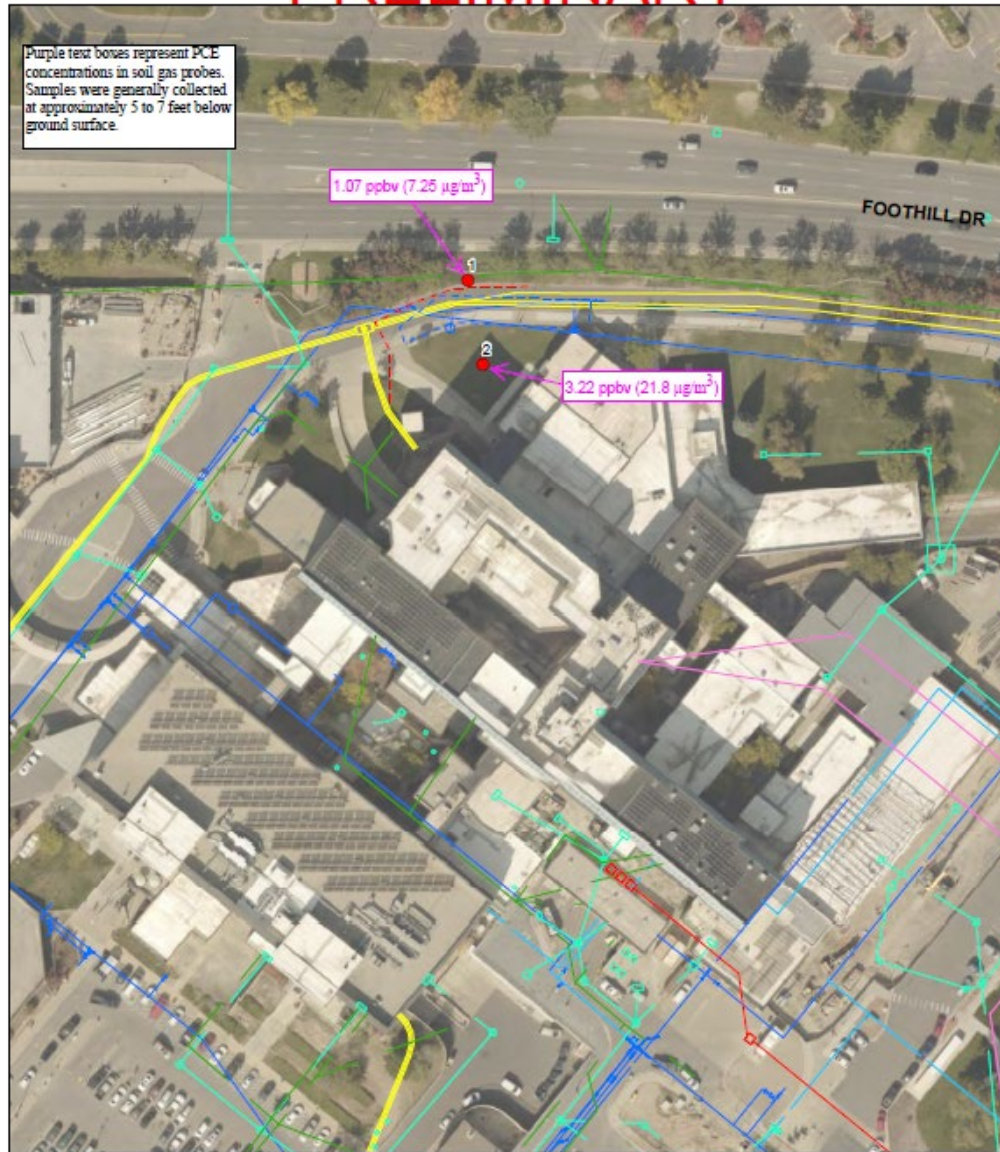
- Proposed soil gas sampling locations are approximate and may change based on site conditions. The initial set of sampling locations are shown. Additional locations may be sampled based on results from the initial locations.
- In 2007, 40 passive soil gas samplers were installed along the length of the sanitary sewer at approximately 30-foot intervals from Building 7 to Sunnyside Avenue. Sampling depth was approximately 1 foot. None of the samples within the view of this figure contained detectable PCE.
- The sewer line video log was performed in 2003.

Legend	Utilities Layer	Utilities (GPR Files, May 2017)
● Initial Soil Gas Sampling Location	— Power Line	--- Power Line
Defects Noted in Sewer Line Video	— Gas Pipeline	--- Gas Pipeline
▲ Light Severity	— Water Line	--- Water Line
■ Medium Severity	— Sanitary Sewer	--- Sanitary Sewer
★ Heavy Severity	— Stormwater	--- Stormwater
◀ Severity Pipe Segment	— Storm Drain	--- Storm Drain
	— Fiber Line	--- Fiber Line

0 50
Feet
1 inch = 50 feet

FIGURE 3-7d
INITIAL SOIL GAS SAMPLING
LOCATIONS (VA SEWER LINE AREA)
 FIELD SAMPLING PLAN
 OU-2 REMEDIAL INVESTIGATION
 700 SOUTH 1600 EAST PCE PLUME
 SALT LAKE CITY, UTAH

PRELIMINARY



Purple text boxes represent PCE concentrations in soil gas probes. Samples were generally collected at approximately 5 to 7 feet below ground surface.

1.07 ppbv (7.25 µg/m³)

3.22 ppbv (21.8 µg/m³)

FOOTHILL DR

- | | | |
|---|---|---|
| Legend
Initial Soil Gas Sampling Location | Utilities Layer
Power Line
Gas Pipeline
Water Line
Sanitary Sewer
Stormwater
Storm Drain
Fiber Line | Utilities (GPR 8 Files, May 2017)
Power Line
Gas Pipeline
Water Line
Sanitary Sewer
Stormwater
Storm Drain
Fiber Line |
| | <p>Note:
 - Proposed soil gas sampling locations are approximate and may change based on site conditions. The initial set of sampling locations are shown. Additional locations may be sampled based on results from the initial locations.</p> | |

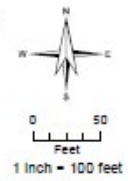


FIGURE 3-7e
INITIAL SOIL GAS SAMPLING LOCATIONS (VA NORTH AREA)
 FIELD SAMPLING PLAN
 OU-2 REMEDIAL INVESTIGATION
 700 SOUTH 1600 EAST PCE PLUME
 SALT LAKE CITY, UTAH

Publicly Available Information: The Administrative Record

A hard copy of the AR currently resides in the Anderson-Foothill Library...

Challenge:

According to manager of the Anderson-Foothill Library, there is no more space available for our growing administrative record

Solution:

The AR also resides in our website at: <http://pceplume-700s1600e.net/>



Community Engagement in 2018 & 2019

- 2018 Salt Lake City Watershed Symposium
- 2018 Red Butte Creek Watershed Symposium
- 2019 Jordan River Counsel Water Board

A National Priorities List Superfund Site In Our Own Backyard.

The 700 S. 1600 E. PCE Plume.

<http://pceplume-700s1600e.net/>
dlynn.welsh@va.gov



Introduction

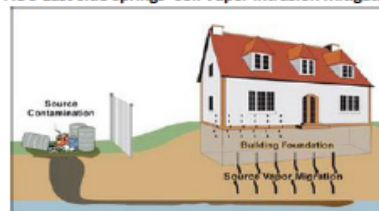
Tetrachloroethylene (PCE) groundwater contamination was first detected at the Mount Olivet Irrigation well in the early 1990s during routine sampling of their irrigation well. The U.S. Environmental Protection Agency (EPA) and Utah Department of Environmental Quality (UDEQ) conducted several assessments but did not determine the exact source location. VA's Building 7 was identified as the likely source and then in 2013, the site was put on the National Priorities List, aka "Superfund" list naming the Veteran's Health Administration (SLC VHA) as the Potentially Responsible Party. The investigative process the SLC VHA implemented is rarely utilized by other Superfund Sites. By starting at know locations of PCE, VA defined the area of East Side Springs as an Accelerated Operable Unit to allow local homes, schools and businesses to be immediately tested for vapor intrusion then focus on source delineation. The ongoing investigation of the PCE Plume gives important insight to the Red Butte Creek Watershed and the complicated geology contributing to the hydrologic knowledge this watershed.

Investigation Process



Mitigation Methods

AOU East Side Springs- Soil Vapor Intrusion Mitigation



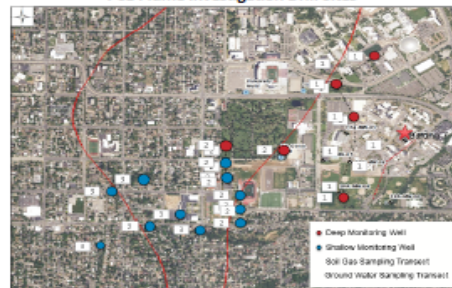
❖ AOU East Side Springs Investigation

- Field work conducted over 3 years, 2015 thru 2017
- Sampled a total of 52 structures in East Side Springs
- Sampled a total of 100 groundwater and surface water locations
- Kept 10 temporary monitoring wells in place
- Installed 12 permanent monitoring wells
- Ecological screening
- Risk assessment
- Finalizing remedial investigation report
- Developing focused feasibility study

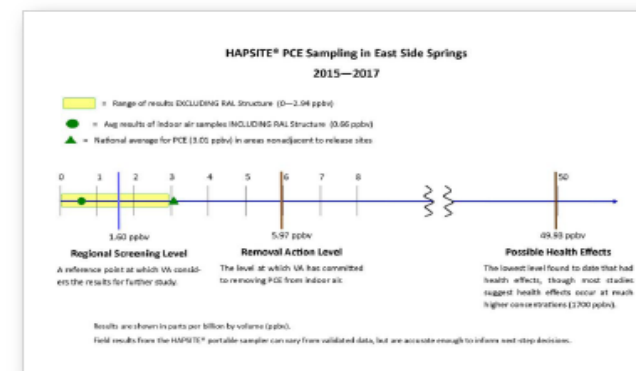
❖ PCE Plume Investigation

- Detailed stratigraphic profiles of East Bench area
- Deep Monitoring Well cross section by the VA
- Shallow Monitoring Well cross section by East High School
- Model of pre/post 2004 GW and contaminant fate and transport
- Age dating and mixing Isotopic studies

PCE Plume Investigation Drill Sites



Preliminary Results



Resources & Acknowledgements

Thank you to US EPA, UDEQ, CH2M/Jacobs, SLC Corporation, Avalon BES, USACE, CAG, USGS, EA Engineering, Science and Technology, University of Utah.

Acknowledgements



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700 South 1600 East PCE Plume

Questions?