



Carlisle Village Cleaners – Removal Action Selection

Presenter:

Alejandro Lara Jr.

EPA On Scene Coordinator

Panel

U.S. EPA Region 6

- Alejandro Lara Jr – OSC
- Michelle Brown – SAM
- LaDonna Turner – SAM
- Dr. Jon Rauscher - Risk Assessor

NMED Ground Water Quality Bureau

- Loryn Harris – Project Manager
- Mark Garman – Program Manager

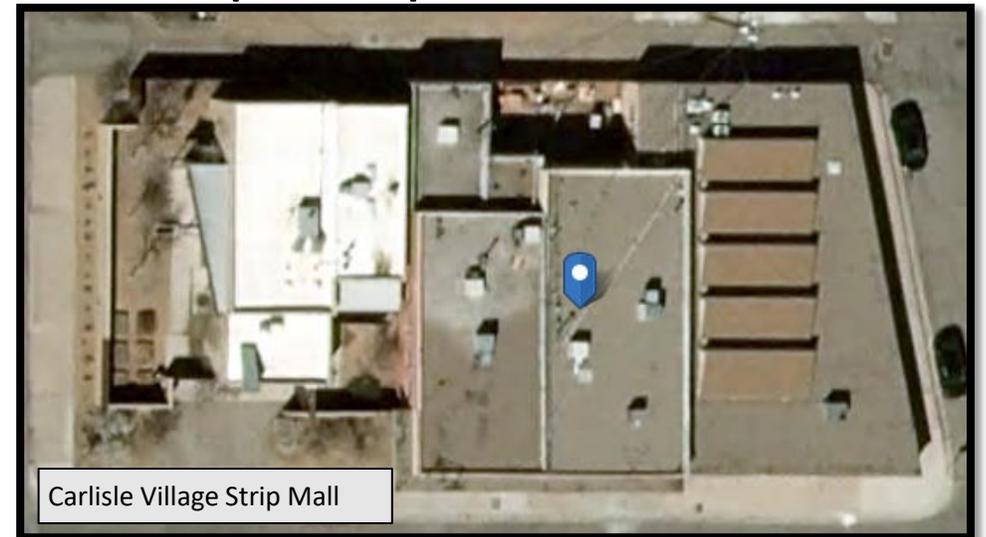
NM DOH APPLETREE Program

- Dr. Srikanth Paladugu – Bureau Chief



Site Background

- Source of contamination appears to be from historical operations performed at the former Carlisle Village Cleaners (1953-1975) and the L&M Cleaners (1969-2017) believed to be due to improper storage of chlorinated solvents and/or improper waste disposal practices.
- Removal and Site Assessment worked closely with NMED to conduct an Integrated Site Evaluation and the selection of removal actions.



Contaminants of Potential Concern

PCE - Tetrachloroethene

- Chemical historically used in dry-cleaning operations.
- Often a source of contamination due to improper storage and disposal.

TCE - Trichloroethene

- Chemical historically used in dry-cleaning operations.
- TCE is the breakdown product of PCE. It is also commonly found in paints, adhesives, aerosol degreasers, and other common household items.



Risk & Exposure

- Action levels are protective of chronic (long-term) exposures.
- RML – used to determine where an expedited action is required
- RSL – used to determine if additional sampling is required

Removal Management Levels (RMLs)	PCE	TCE
Residential	130 ug/m ³	6.3 ug/m ³
Commercial	530 ug/m ³	26 ug/m ³

Regional Screening Levels (RSLs)	PCE	TCE
Residential	11 ug/m ³	0.5 ug/m ³
Commercial	47 ug/m ³	3 ug/m ³



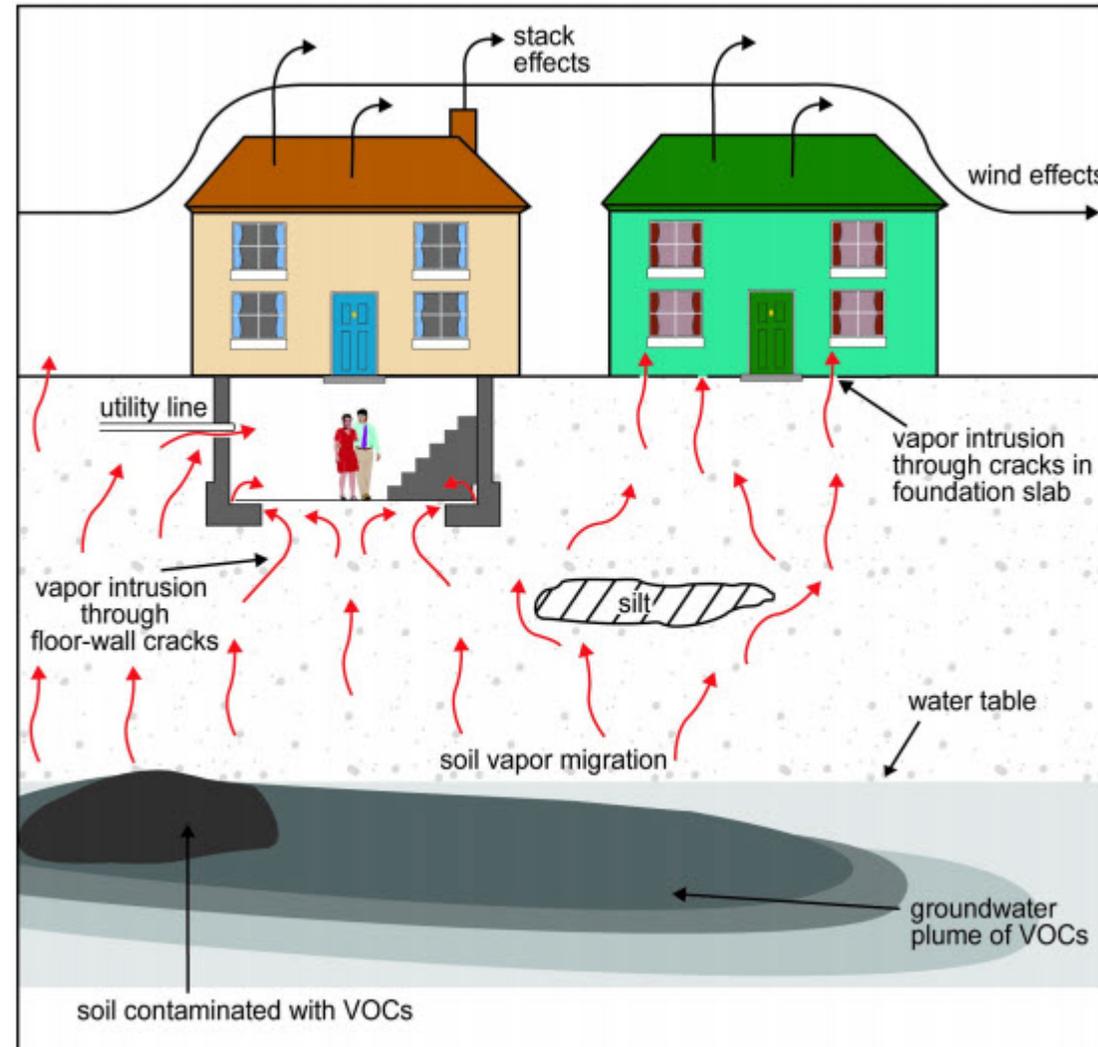


Potential Health Effects Associated with Exposure

- Acute exposures to PCE may lead to ocular and neurological dysfunction (impaired coordination, decreased reaction time).
- Studies suggest that exposure to PCE may lead to increased risk of bladder cancer, multiple myeloma, or non-Hodgkin's lymphoma.
- Short-term and long-term exposures to TCE can potentially affect a developing fetus.
 - **TCE has not been detected in any indoor air sampling at this site.**
- Infants and children may have additional modes of exposure.

Vapor Intrusion

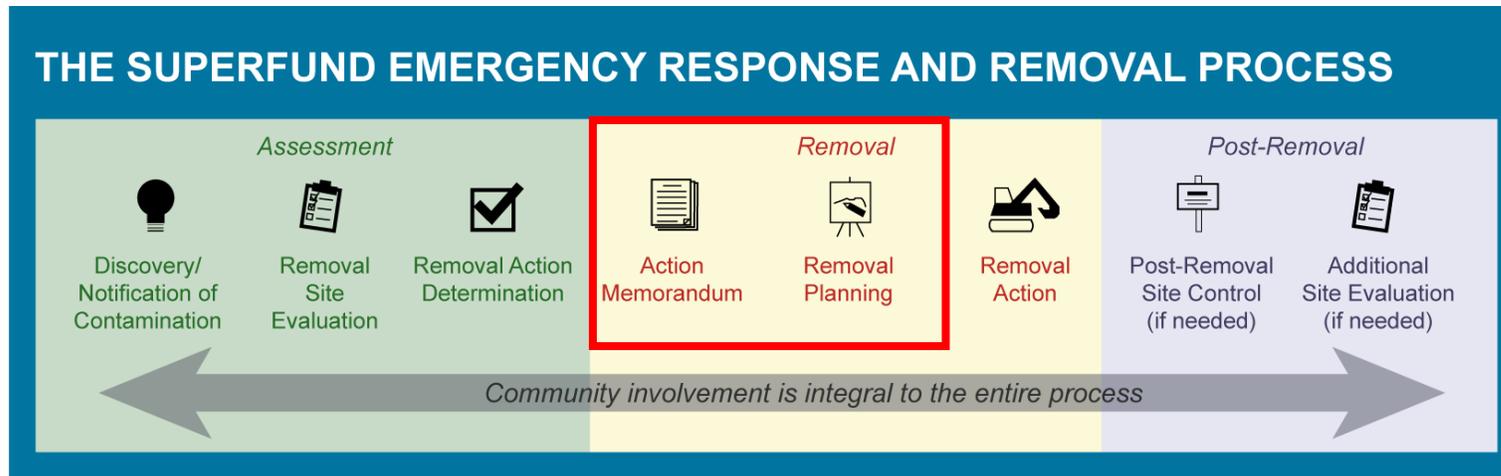
- Occurs when there is a migration of vapor-forming chemicals from any subsurface source into an overlying building.
- Soil gas concentrations in the subsurface need to be at a specific concentration for the vapors to migrate into a building.



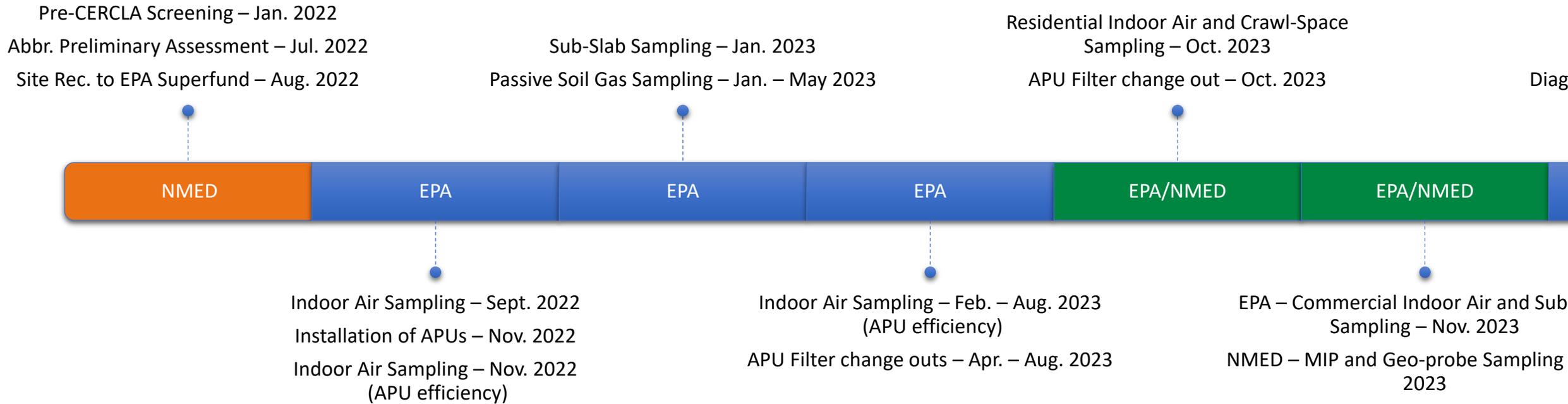
EPA and NMED Partnership

- NMED first discovered Carlisle Village Cleaners while investigating dry cleaners and found elevated chemical concentrations in subsurface soil gas. Once these elevated concentrations were found, NMED requested EPA assistance.
- Working with the EPA, NMED has completed a Preliminary Assessment and a Site Inspection of the site. These are the first steps in determining if the site is eligible for the National Priorities List (NPL).
- While NMED and EPA assessment branch work toward potential NPL listing of the site, the removal branch of the EPA is addressing any immediate concerns that may be identified.

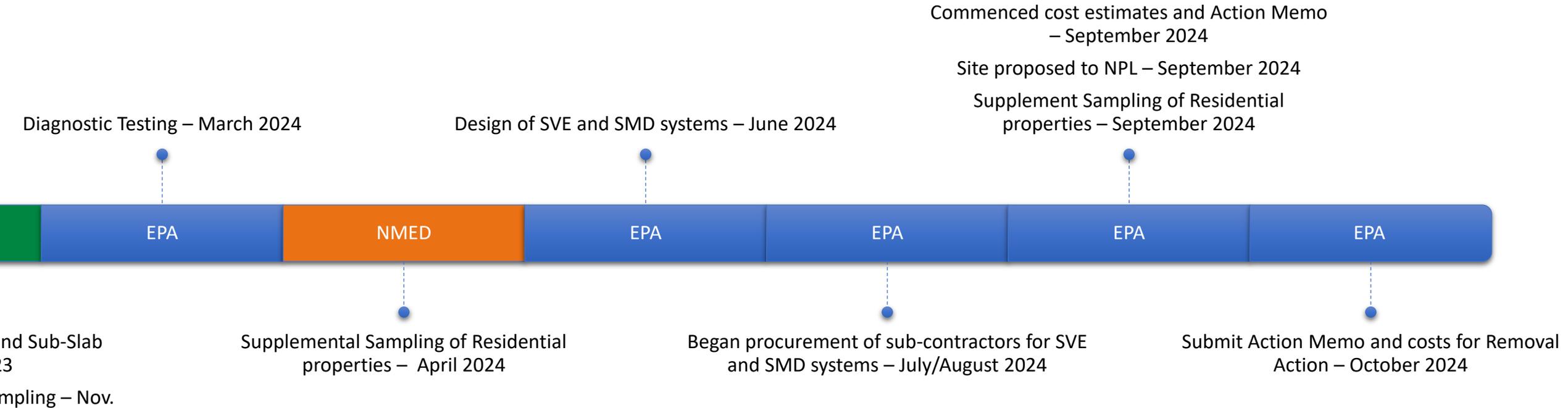
The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), authorizes two kinds of response actions: short-term removals and long-term remedial response.



Activities to Date

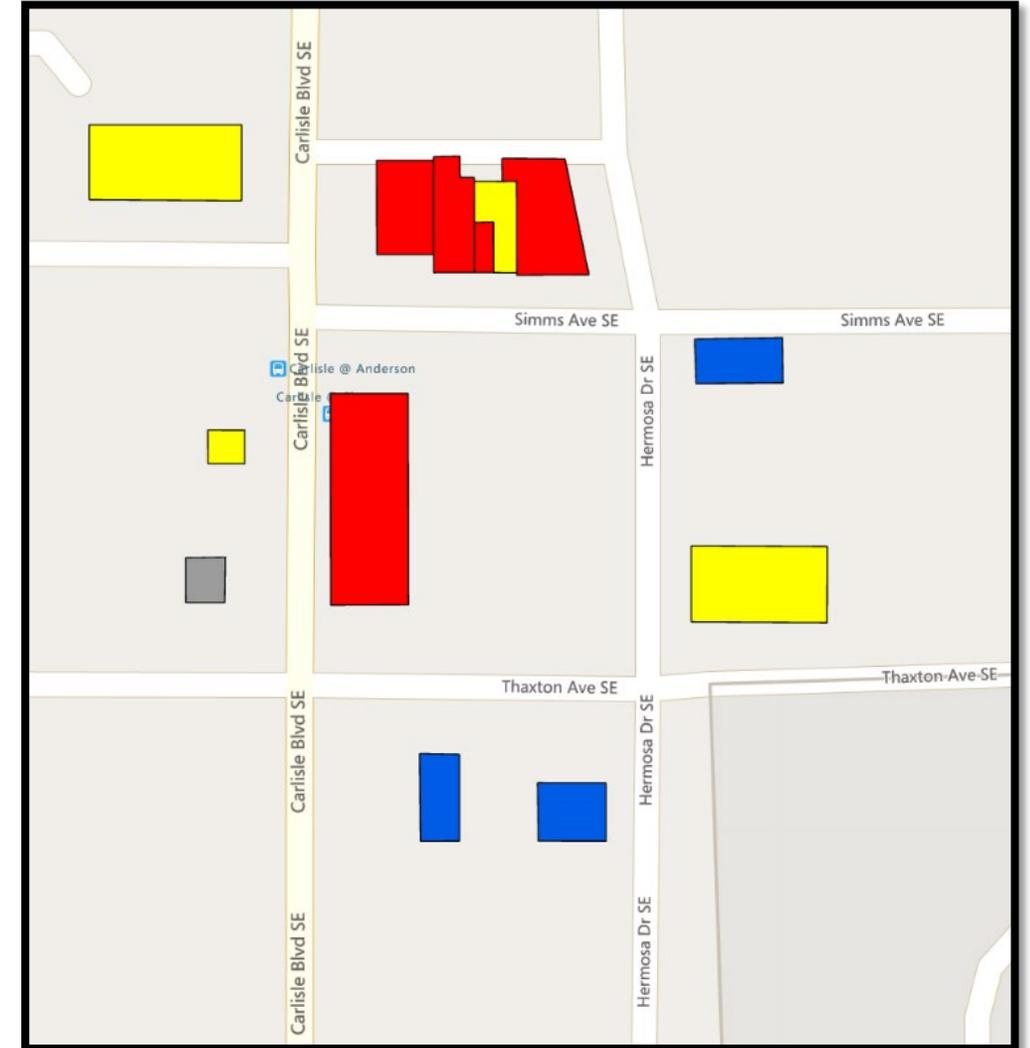


Activities to Date



Data Analysis

- Commercial Properties
 - **Red buildings – high indoor air and high soil gas/vapor concentrations**
 - **Yellow buildings – moderate indoor air and high soil gas/vapor concentrations**
 - **Blue buildings – low indoor air and high soil gas/vapor concentrations**
 - **Gray buildings – low indoor air and moderate soil gas/vapor concentrations**
- Residential Properties
 - Two residential properties that require removal actions.
 - 13 residential properties that do not require removal actions, but EPA will still install a vapor intrusion mitigation system (VIMS).





Vapor Intrusion Mitigation System (VIMS) Selection

Removal Action – Residential Properties

Sub-Membrane Depressurization System



Figure 1. Example of a vapor barrier with exhaust pipe.
Source: radonsolutions.com/crawlscaping

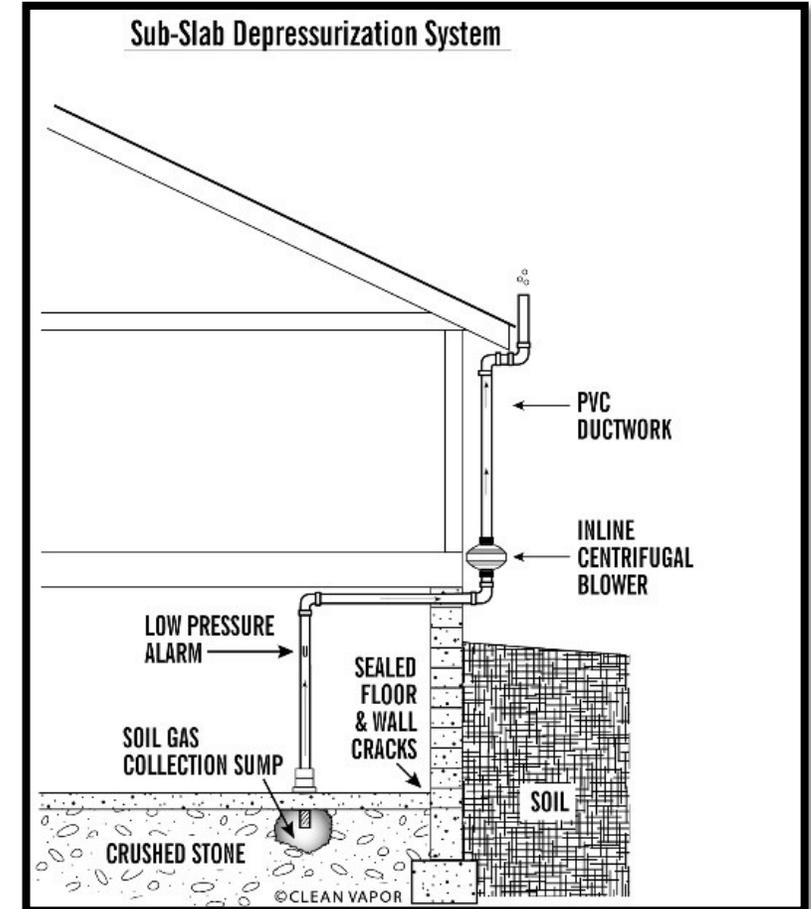


Figure 2. Example of SSD system (fan outside)
Source: Clean Vapor, LLC, adapted from EPA (1993)

Residential Properties – VIMS Components

- Sub-Membrane Depressurization and or Sub-Surface Depressurization systems.
- Solar Panel
 - VIMS system will be connected to the existing electrical service, and the solar panel will off-set the cost of the VIMS system.
- Telemetry system will notify the property owner if/when the VIMS system is not working.
- Warranty is included with the system.

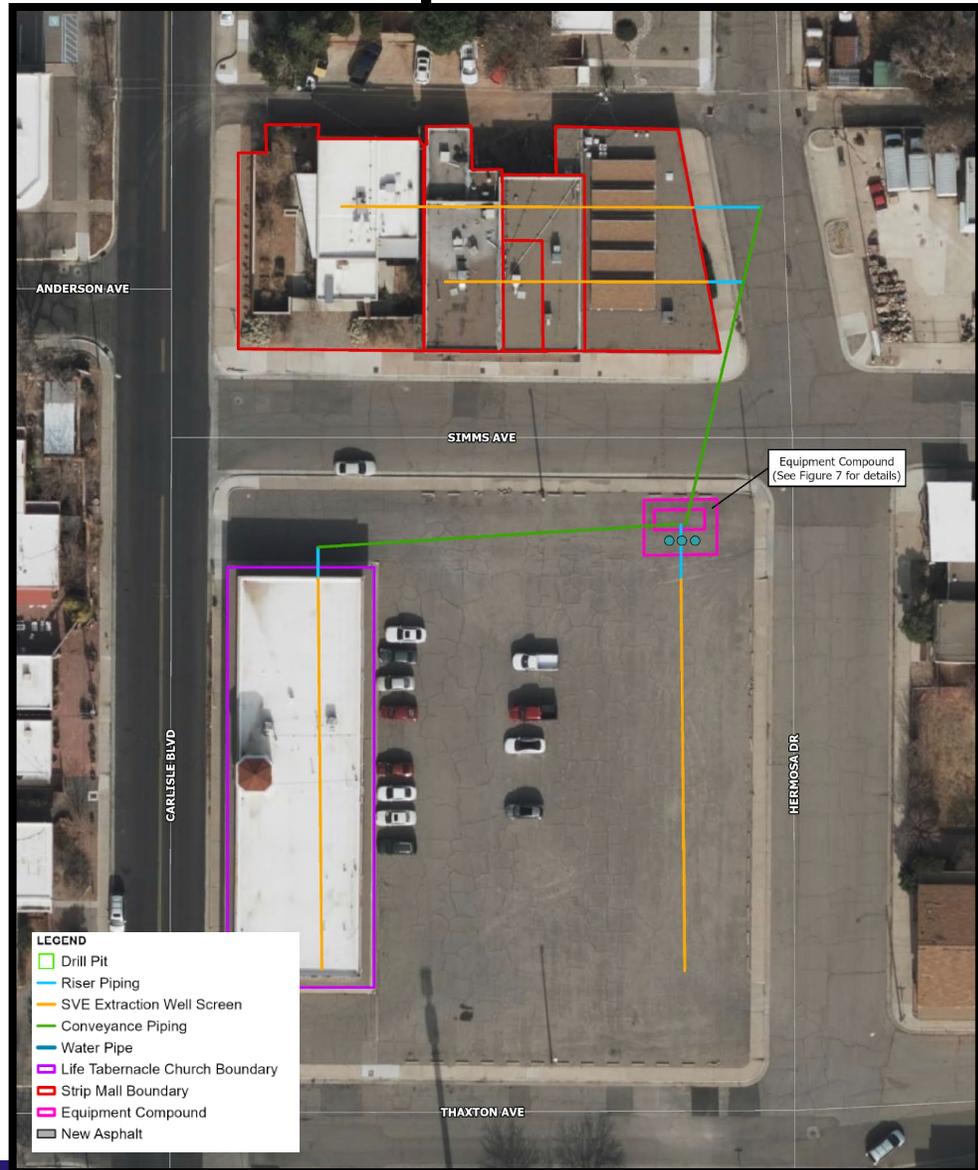
Removal Action Focus

- 1) Properties with high indoor air concentrations and high soil gas/vapor concentrations.
- 2) Properties with high indoor air concentrations and moderate soil gas/vapor concentrations.
- 3) Properties with moderate indoor air concentrations and high soil gas/vapor concentrations.
- 4) Properties with moderate indoor air concentrations and moderate soil gas/vapor concentrations.
- 5) Properties with low indoor air concentrations and high soil gas/vapor concentrations.
- 6) Properties low indoor air concentrations and moderate soil gas/vapor concentrations.



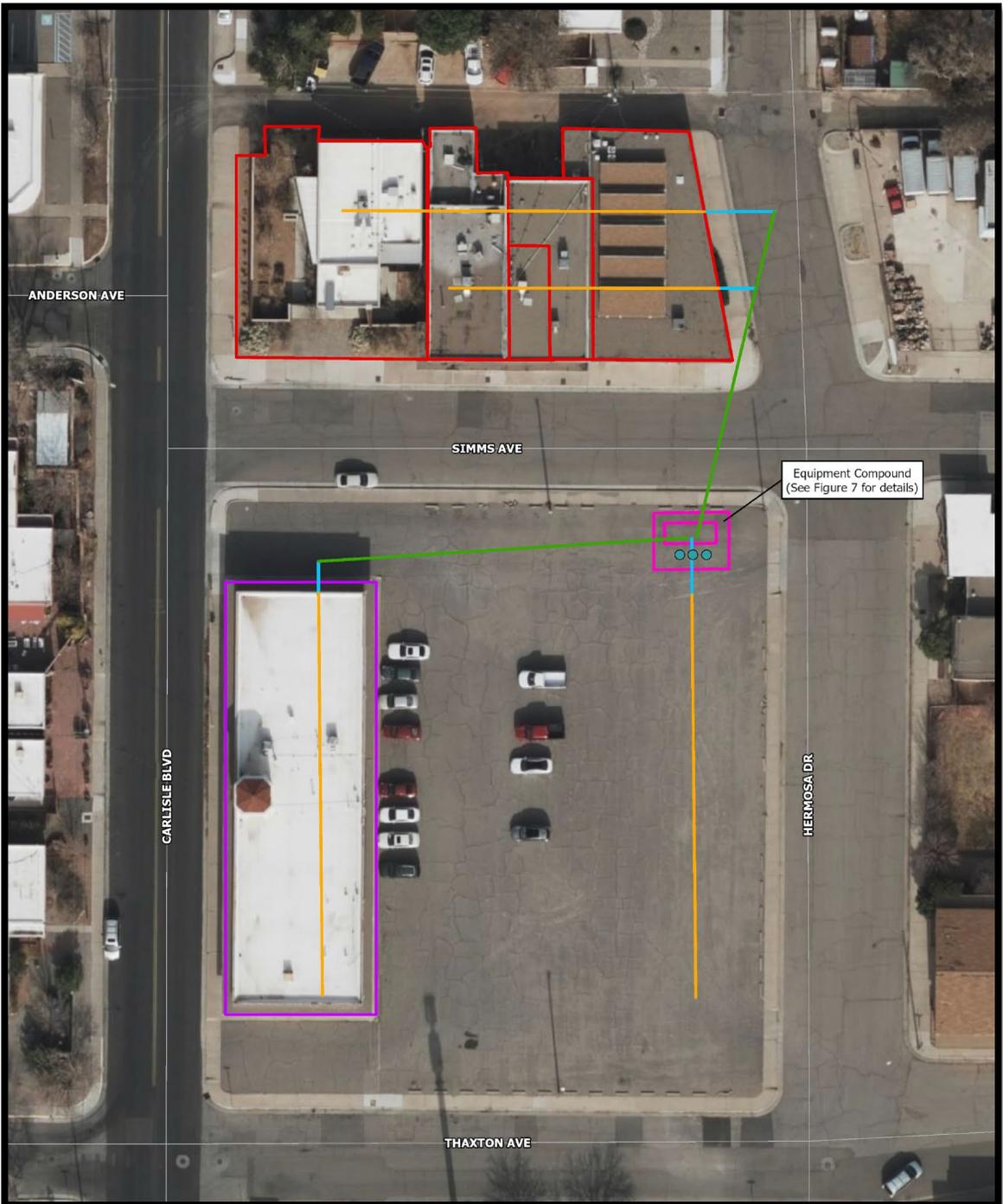
Removal Action - Commercial Properties

- Soil Vapor Extraction System (SVE)
- Horizontal drilling at 6ft below ground surface.
- Removal of underground vapors below commercial buildings
- Break the vapor intrusion pathway.
- Does not address the underground plume that has been detected at +80 ft below ground.



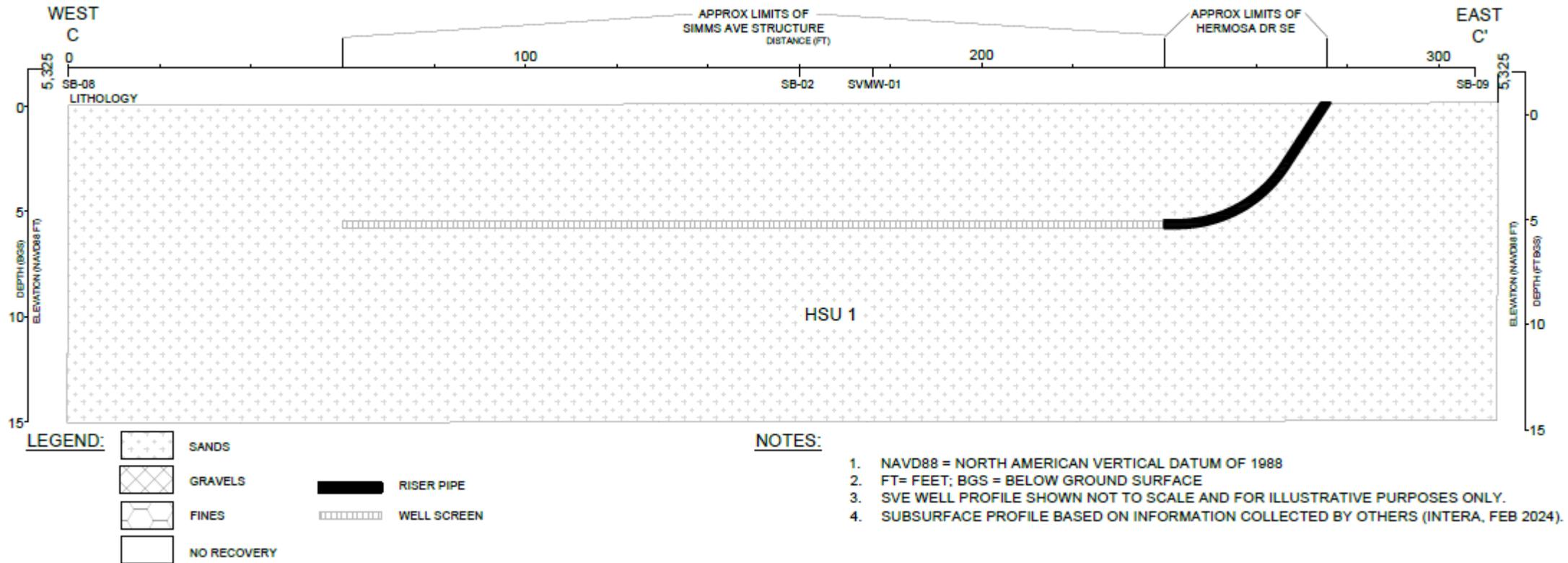
Removal Action - Commercial Properties

- LEGEND**
- Drill Pit
 - Riser Piping
 - SVE Extraction Well Screen
 - Conveyance Piping
 - Water Pipe
 - Life Tabernacle Church Boundary
 - Strip Mall Boundary
 - Equipment Compound
 - New Asphalt

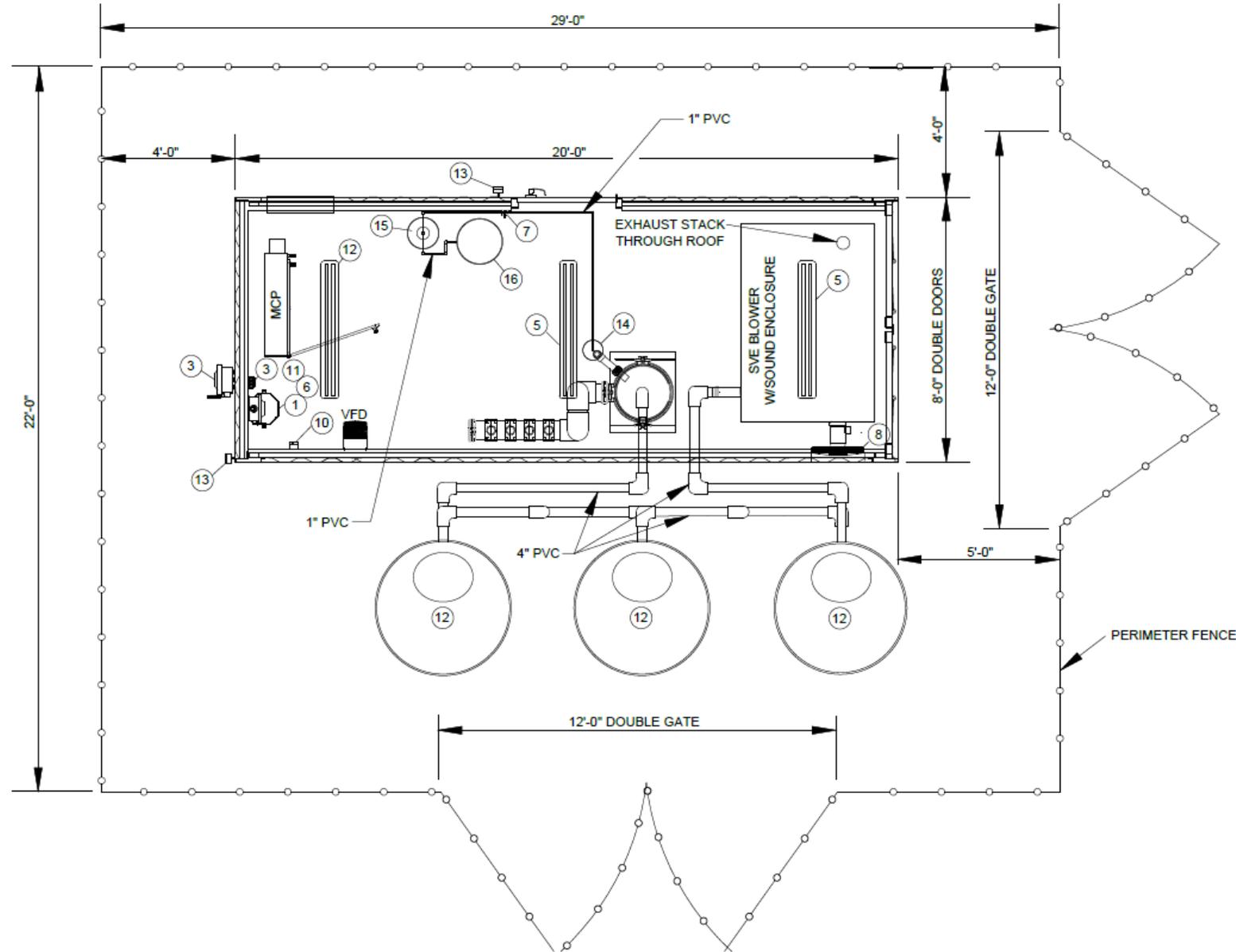
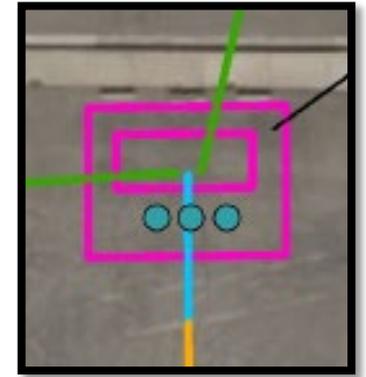


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Cross Section – Carlisle Village Strip Mall



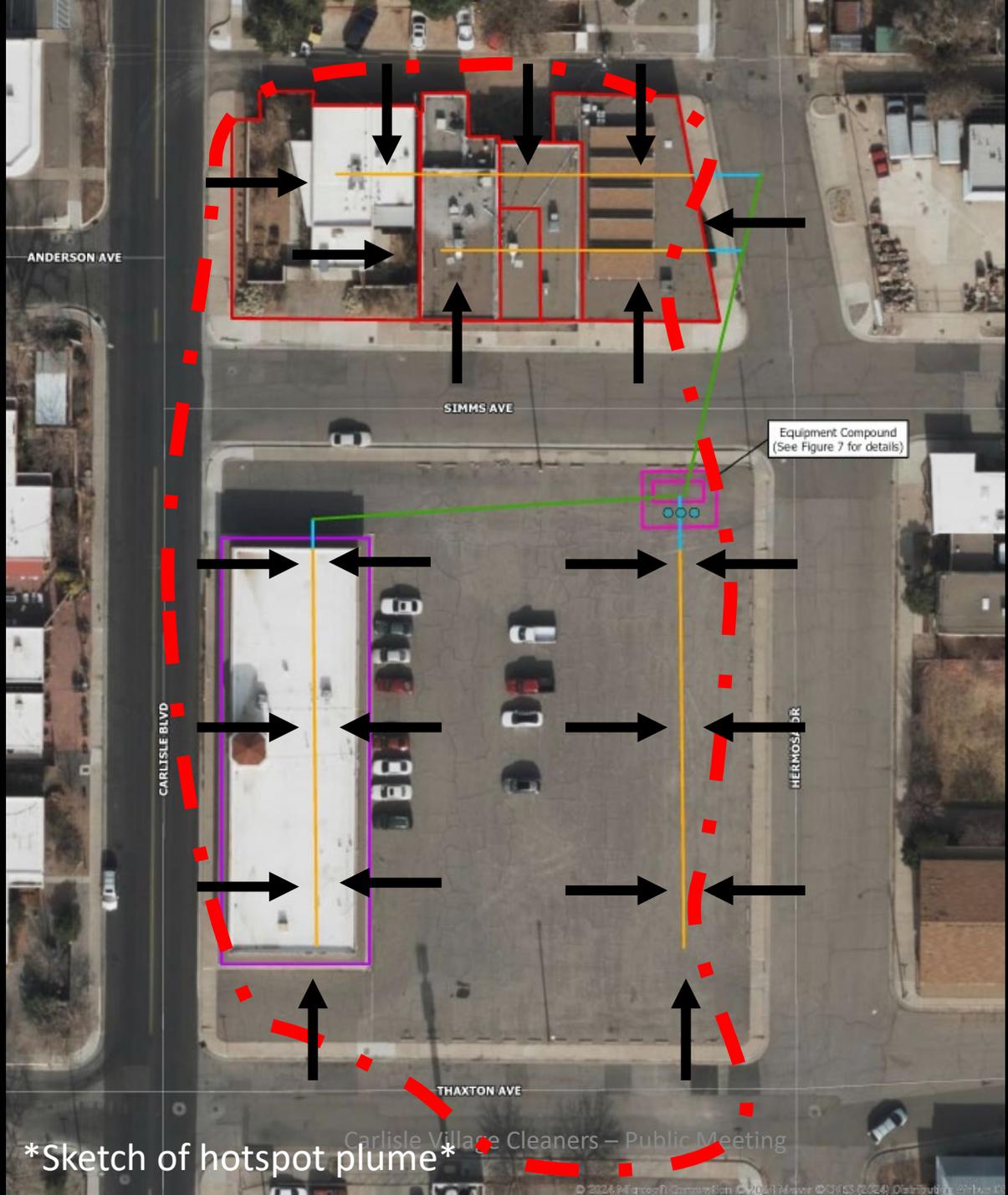
Equipment Compound – SVE System



MASTER BILL OF MATERIAL		
ITEM	QTY	Description
1	2	TRANSFORMER, 1PH, 60Hz 7.5 KVA, 240 /480 VAC PRIMARY, 120 /240 VAC SECONDARY, ACME, T2535153S
2	1	MAIN DISCONNECT SIEMENS HF363R, 100 AMP FUSED
3	2	20 AMP 120 VAC DUPLEX OUTLET
4	1	MAIN DISCONNECT, SIEMENS HF363R, 60 AMP FUSED
5	4	24 WATT, LED LIGHT FIXTURE 48" WET LOCATION, LITHONIA SIGHTING, CSV T L48 ALO3 MVOLT SWW3 80CR1
6	2	DISTRIBUTION PANEL, SQUARE D, HOM612L100SCP 6SPACE HOMELINE PANEL, 30 AMP MAIN
7	2	20 AMP 120 VAC LIGHT SWITCH
8	3	18" EXHAUST FAN, CANARM MODEL AX18-2, 3,040 CFM @ .125" SP, 1/3 HP, 115VAC, 4 FLA
9	2	3,000 CFM GREENHECK INTAKE LOUVER MODEL ESD435, 24" x 36" w/ WASHABLE FILTER SCREEN
10	2	THERMOSTAT, PECO TF115-001, 40F-110F, HEATING AND COOLING (CONTROLS VENTILATION FAN ONLY)
11	2	TRANSFORMER DISCONNECT, SIEMENS HF362, 20 AMP FUSED
12	3	2,000 LB VGAC
13	2	MINIMUM 5,000 LUMEN LED LIGHT WITH MOTION SENSOR
14	1	CONDENSATE TRANSFER PUMP
15	1	LGAC VESSEL
16	1	CONDENSATE HOLDING TANK



Conceptual Design Model

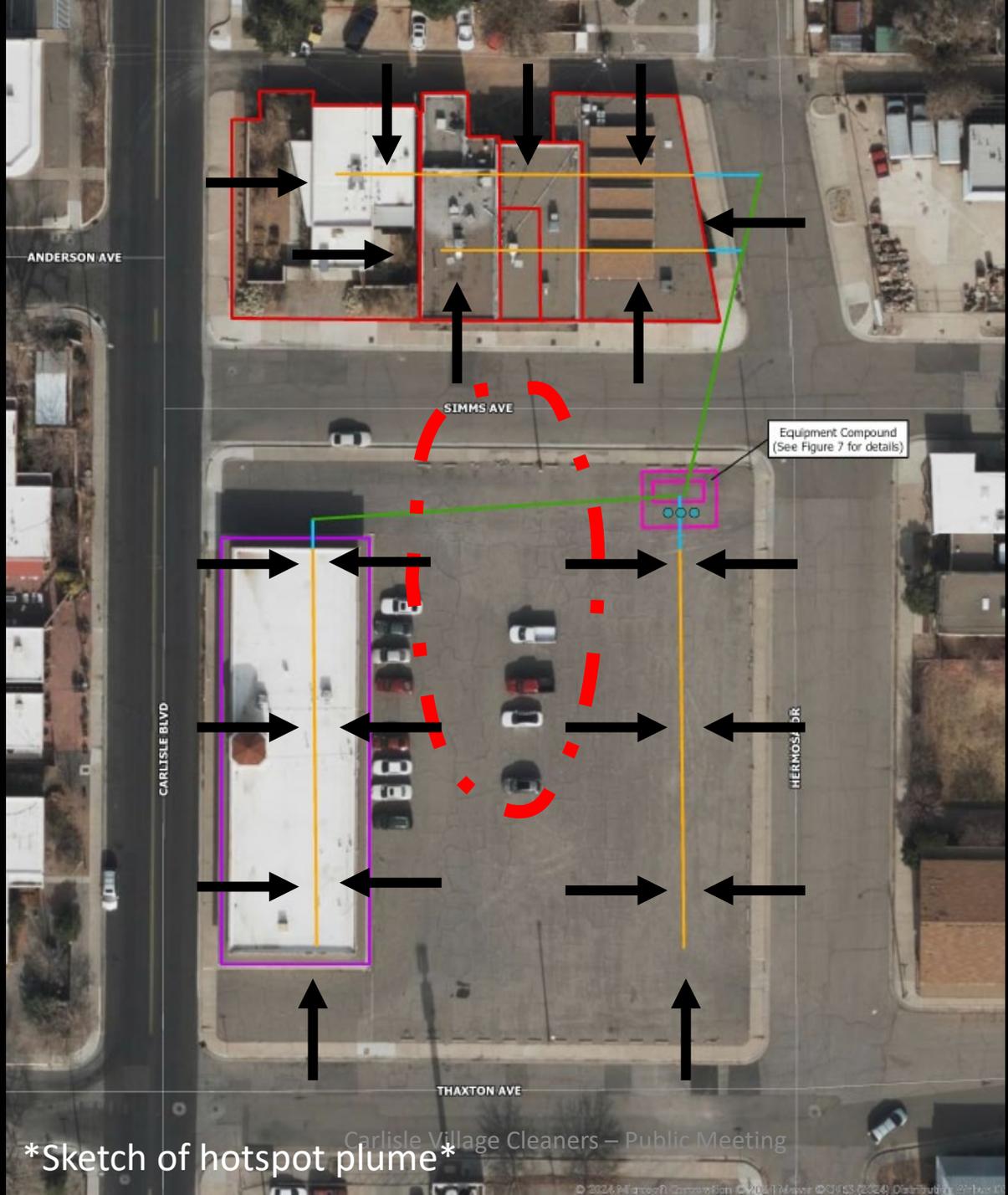


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Sketch of hotspot plume



Conceptual Design Model



Confirmation Sampling

- Samples will be collected after the installation of the SVE.
- Samples will be collected again 3 months after the installation.
- Based on the data collected, we can increase or reduce the vacuum of the blower within the equipment compound.
- If no change is observed, EPA will begin to plan the installation of additional Sub-Surface Depressurization and/or Sub-Membrane Depressurization, depending on the property.
- Resample.

Operations and Maintenance

- EPA will operate and maintain the Soil Vapor Extraction system for the first year.
- NMED has agreed to operate and maintain the Soil Vapor Extraction system after the first year of installation.

Proposed Schedule

- Installation of residential VIMS is proposed for November/December of 2024.
 - We anticipate taking about one week per property to install the VIMS.
- Installation of the commercial VIMS is proposed for early 2025.
 - The equipment compound will take about 3 months to build off site.

Proposal of Carlisle Village Cleaners to the National Priorities List (NPL)

- Community members are invited to comment on the proposal to place this site on the NPL. A 60-day public comment period began on September 5, 2024, through November 4, 2024.
- The proposal package for this site is available for review at the:

San Pedro Public Library

5600 Trumbull Ave SE

Albuquerque, NM 87108

Tel: 505.256.2067

Library Hours

Tuesday 10:00 a.m. – 6:00 p.m.

Wednesday thru Thursday 11:00 a.m. – 7:00 p.m.

Friday – Saturday 10:00 a.m. – 6:00 p.m.

Sunday – Monday Closed

Proposal of Carlisle Village Cleaners to the National Priorities List (NPL)

- **For more information** about the Carlisle Village Cleaners Superfund site, please contact Michelle Delgado-Brown/NPL Coordinator at 214.665.3154 or DelgadoBrown.Michelle@epa.gov or toll free: 1.800.533.3508.
- **Submit your comments**, identified by the appropriate docket number, EPA-HQ-OLEM-2024-0375, by one of the following methods:
- **Electronic:** Comments can be submitted to www.regulations.gov.



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Proposal of Carlisle Village Cleaners to the National Priorities List (NPL)

Mail: Mail comments (no facsimiles or tapes) to:

Docket Coordinator, Headquarters
U.S. Environmental Protection Agency
CERCLA Docket Office
(Mailcode 5305T)

EPA-HQ-OLEM-2024-0375

1200 Pennsylvania Avenue, NW
Washington, DC 20460

Hand Delivery or Express Mail: Send comments (no facsimiles or tapes) to:

Docket Coordinator, Headquarters
U.S. Environmental Protection Agency
CERCLA Docket Office

EPA-HQ-OLEM-2024-0375

1301 Constitution Avenue, NW
Washington, DC 20460

See this web page for further info: <https://www.epa.gov/superfund/public-comment-process>



Carlisle Story Map



<https://response.epa.gov/CarlisleVillageCleaners>

Link to the Story Map is at the bottom of the page.

What can you do to reduce your exposure?

Institutional Controls:

- Sealing of openings
- Passive venting
- Don't buy more chemicals than you need
- Store unused chemical in appropriate tightly sealed containers.

Some common products or known sources that contribute VOCs include:

- Paint
- Paint strippers or thinners
- Moth balls
- New carpeting and furniture
- Stored fuel
- Air fresheners
- Cleaning products
- Dry-cleaned clothing

Health Questions? NM Department of Health (NM DOH) and Agency for Toxic Substances and Disease Registry (ATSDR)

- NM DOH is available to answer health related questions
- NMDOH is ATSDR's "boots on the ground" in NM
- National Priorities Listing (NPL) requires ATSDR/DOH to conduct a Public Health Assessment (PHA)
- PHAs take approximately nine months to a year to complete
- PHAs are public documents

Dr. Srikanth Paladugu – Bureau Chief
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Thank you 30-minute QA

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