

Zoom Logistics

Welcome and thank you for participating in DEQ's Livingston Superfund Update . Please read the following tips about participating in this hybrid meeting:

- All Zoom participants have been automatically muted. Please remain so until called on to speak. You will need to be given permission to unmute. Once you have spoken, please re-mute yourself.
- On Zoom, use the “raise hand” feature in the app to indicate that you would like to speak. For those in the room, please also raise your hand.
- If you are called on to speak, please identify yourself by stating your first and last name.
- You may also use the chat box to type your questions.
- If you are joining by phone:
 - Press *6 to mute/unmute yourself.
 - Press *9 to raise your hand.
- Visit the following link for helpful tips about using Zoom software:
 - <https://support.zoom.us/hc/en-us/articles/201362193-Joining-a-meeting>

DEQ Mission

Our mission is to champion a healthy environment for a thriving Montana.

Introductions

Denise Martin, Site Response Section Supervisor

Patrick Hope, DEQ Legal,

Kevin Stone, Public Information Specialist

Andrew Nordberg, DEQ project officer for BN Livingston

Heather Foslund, DEQ project officer for Mission Wye

BN Livingston Shop Complex

Public meeting in Livingston, MT

June 8, 2023

Andrew Nordberg





BN Livingston Shop Complex Agenda

- CECRA Process
- Contamination sources
- ROD-selected remedies
- Facility data and status update

DEQ and CECRA

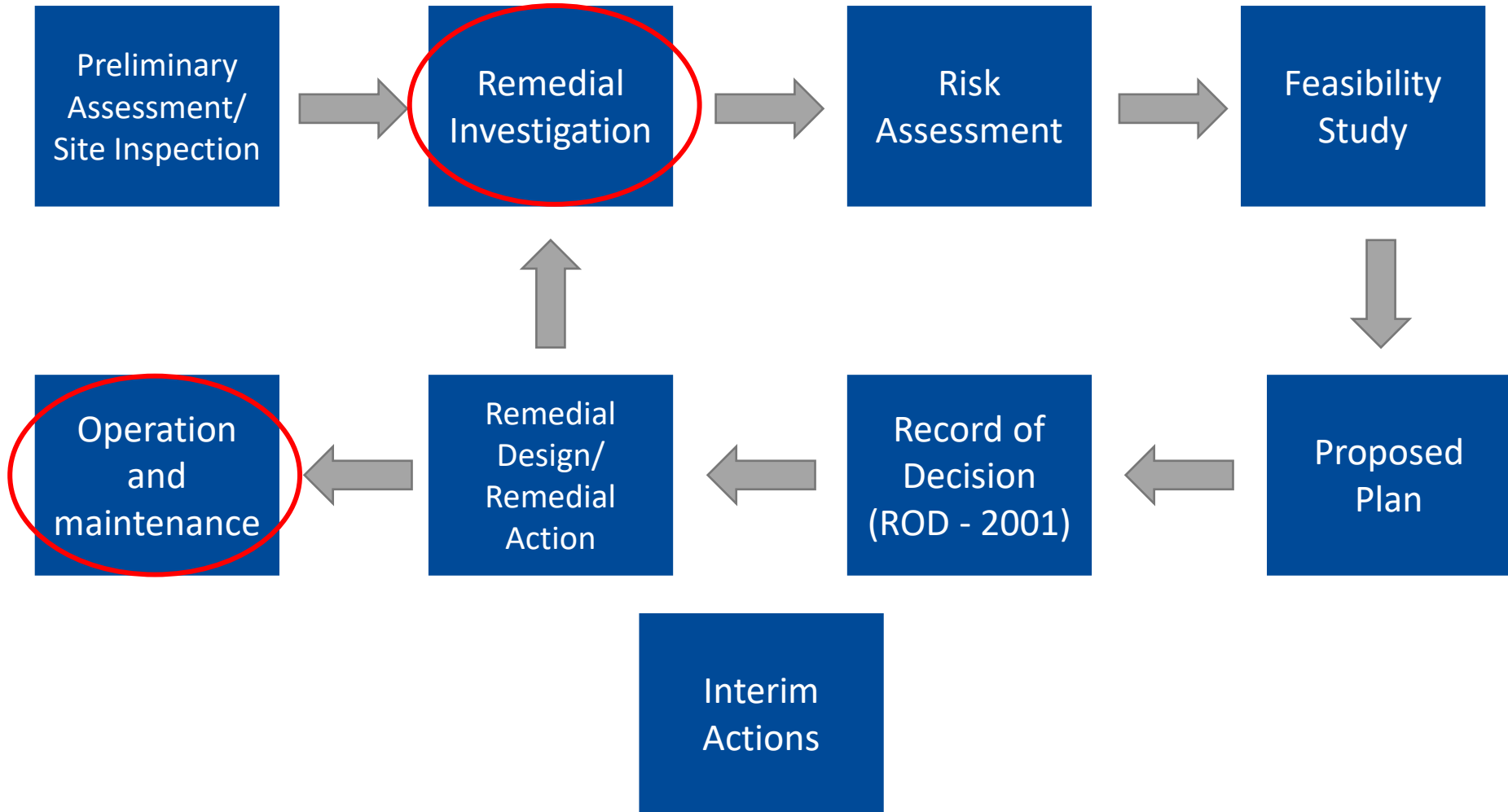
- Comprehensive Environmental Cleanup and Responsibility Act (CECRA)
- BN Livingston Shop Complex and BN Mission Wye are CECRA Facilities



Facility Boundary: BN Livingston



CECRA Process for BN Livingston



Contaminant Transport of Diesel and PCE

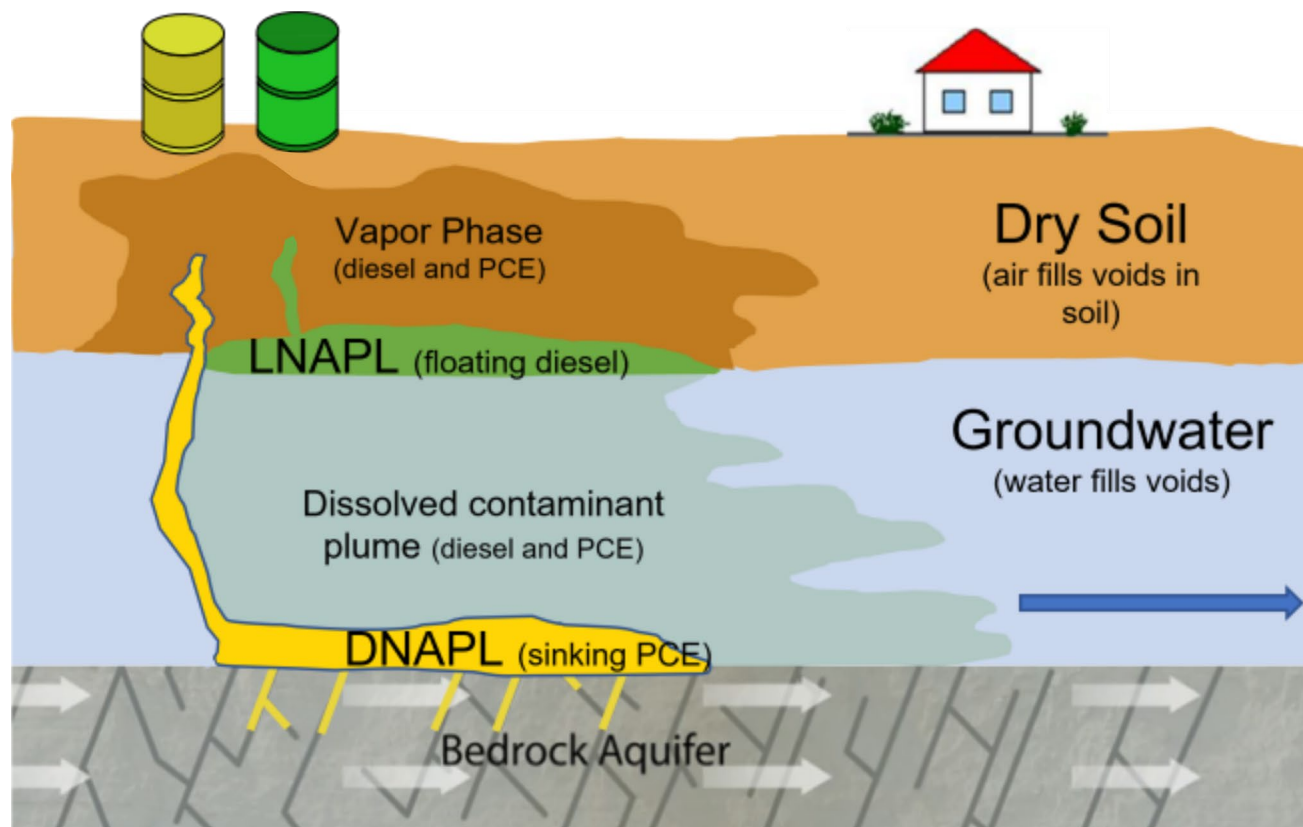
Diesel

All petroleum related chemicals, mostly diesel by volume

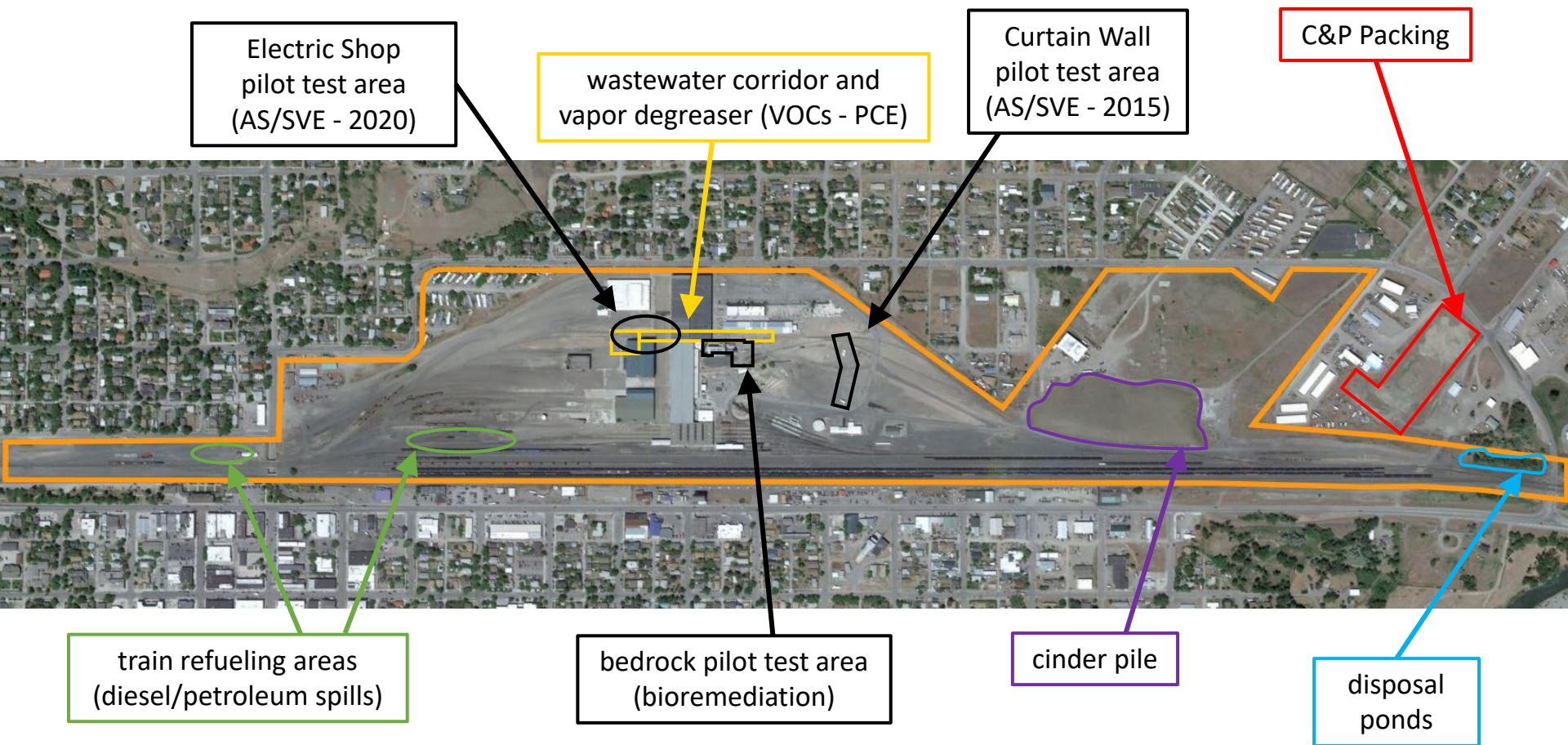
PCE

(Tetrachloroethene)

All volatile solvents, mostly PCE by volume



Contamination Source and Pilot Test Areas

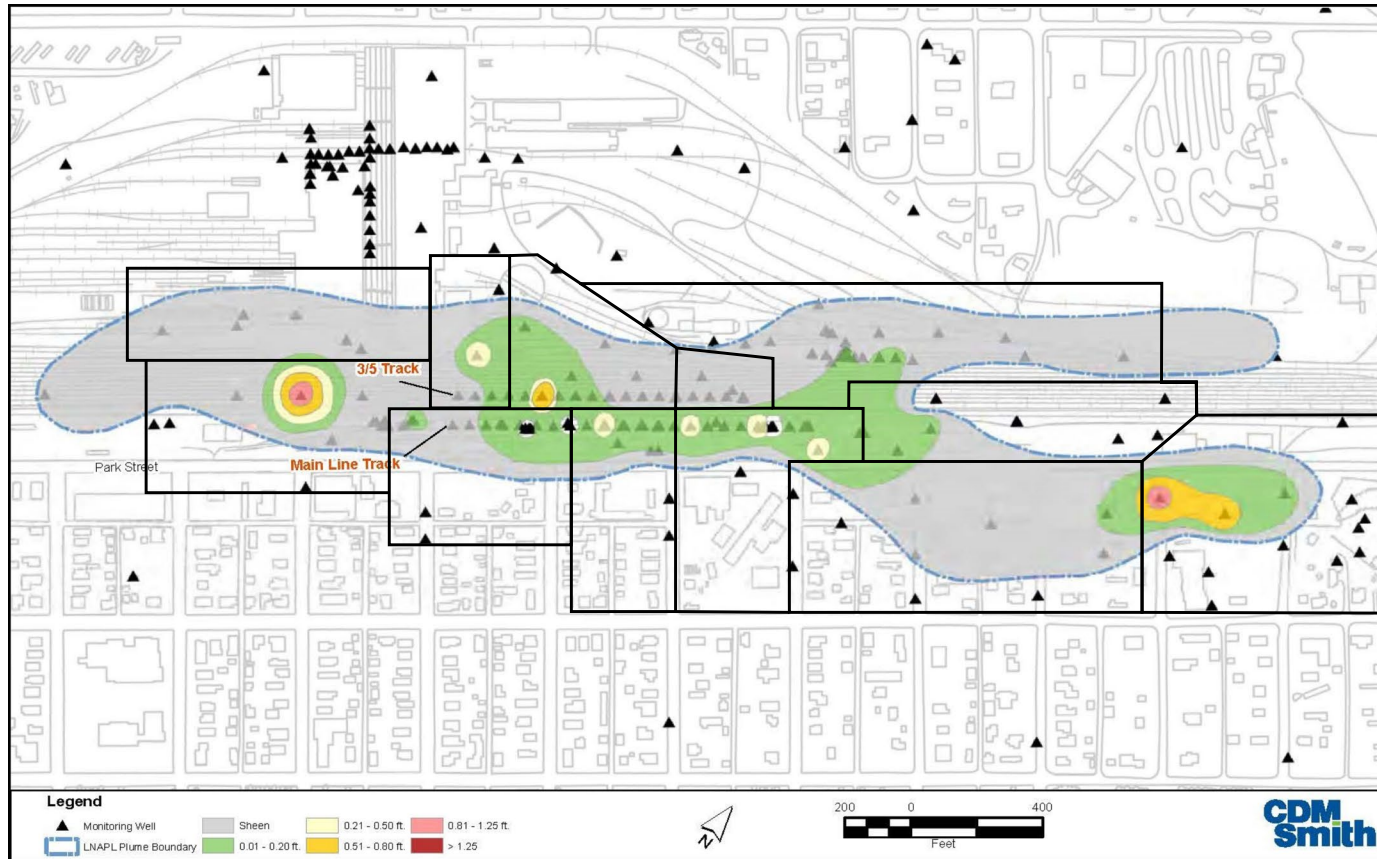


ROD Selected Remedy (2001)

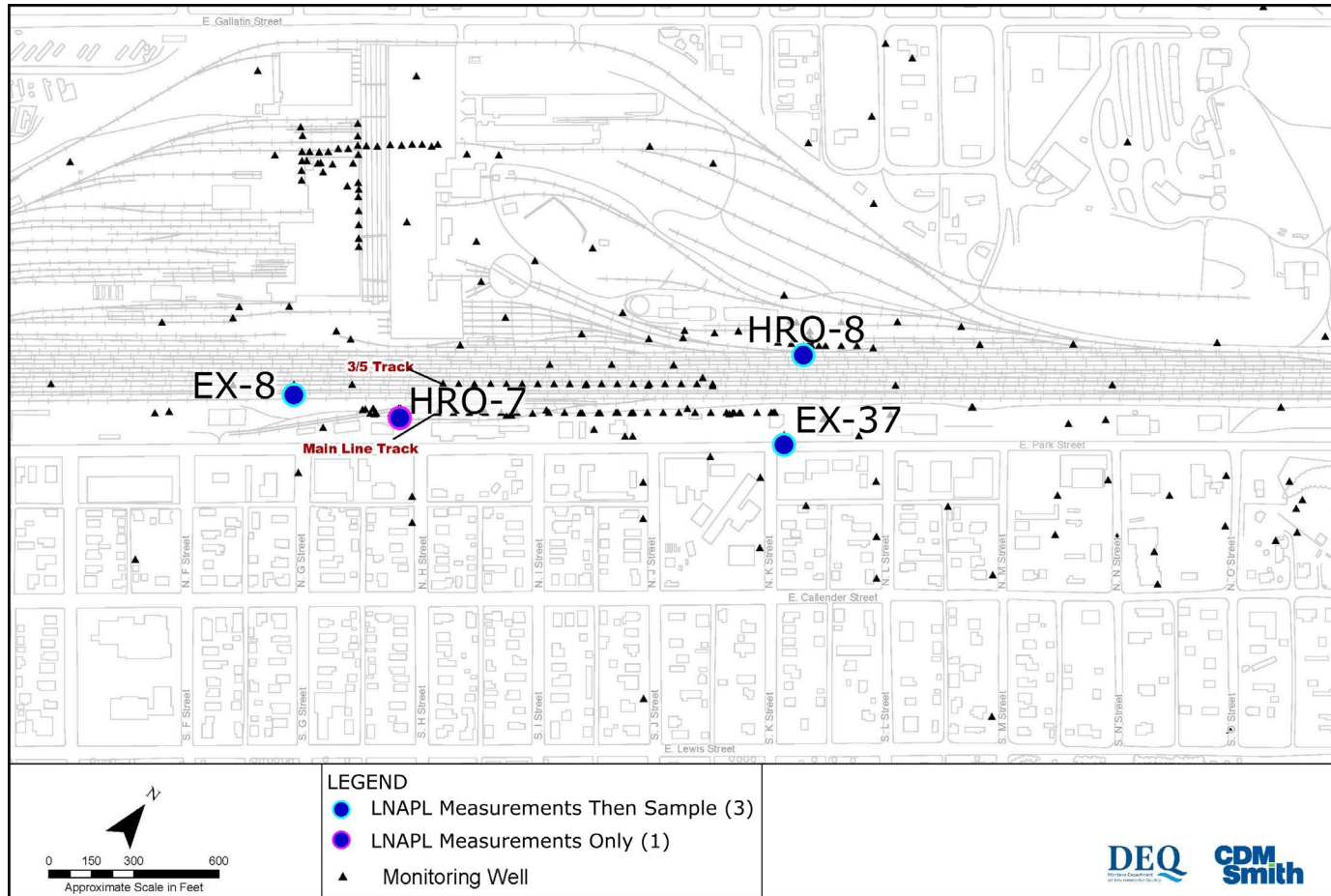
Diesel/Petroleum Hydrocarbons

- Source removal (floating diesel) to 1/8 inch
 - Dual level groundwater and diesel extraction
- Bioventing in soil

2009: Floating Diesel Plume



Current Indications of floating diesel (March 2023)



ROD-Selected Remedy (2001)

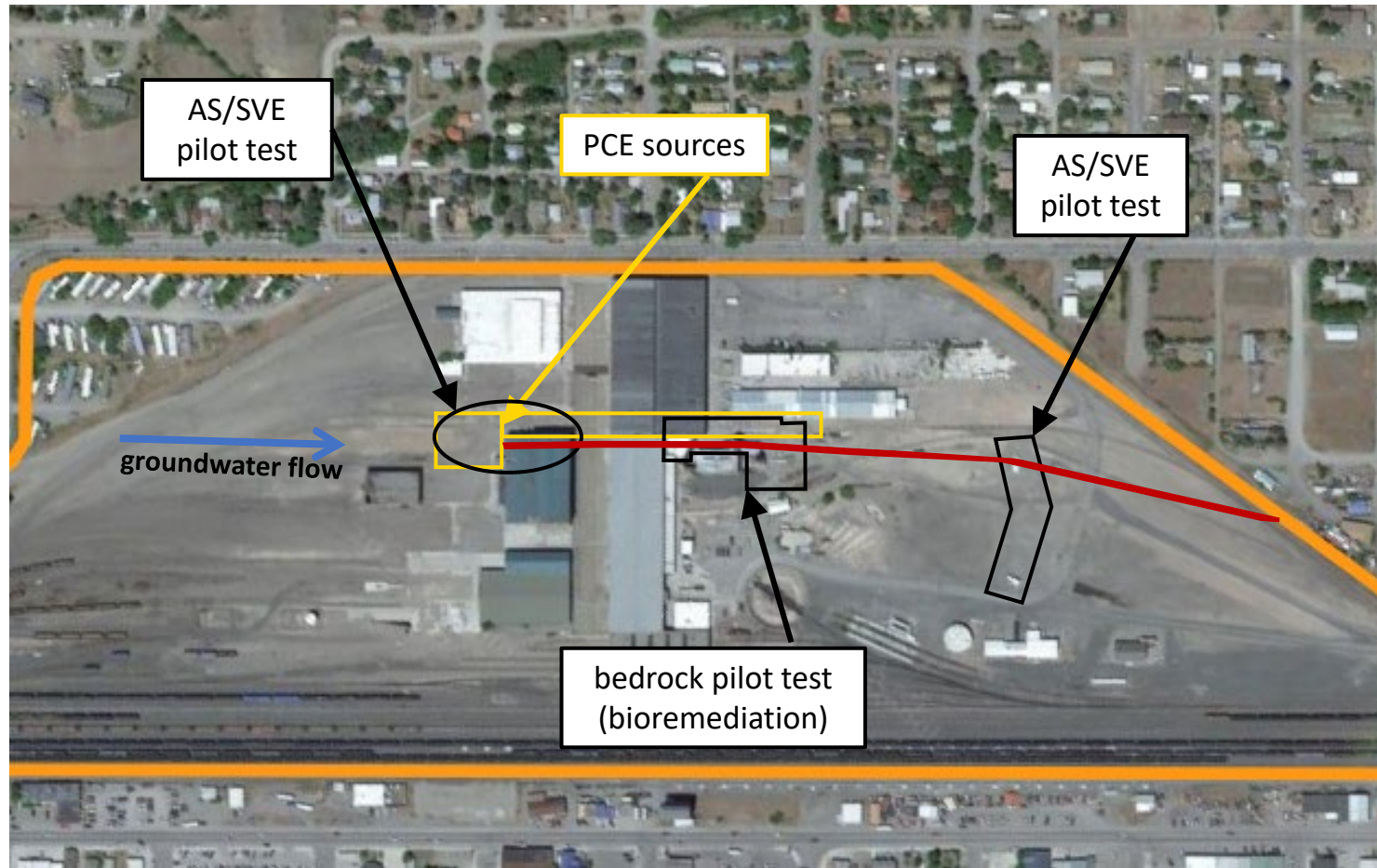
VOCs in GW (alluvial aquifer)

- Source removal
- Monitored Natural Attenuation (MNA) in reasonable timeframe
 - Cleanup in groundwater = 5 µg/L
- Contingent remedy: Pump & Treat
- Expand monitoring network to better define alluvial plume's extent
- Pilot test additional technologies and test whether they will aid MNA to reach cleanup →ongoing

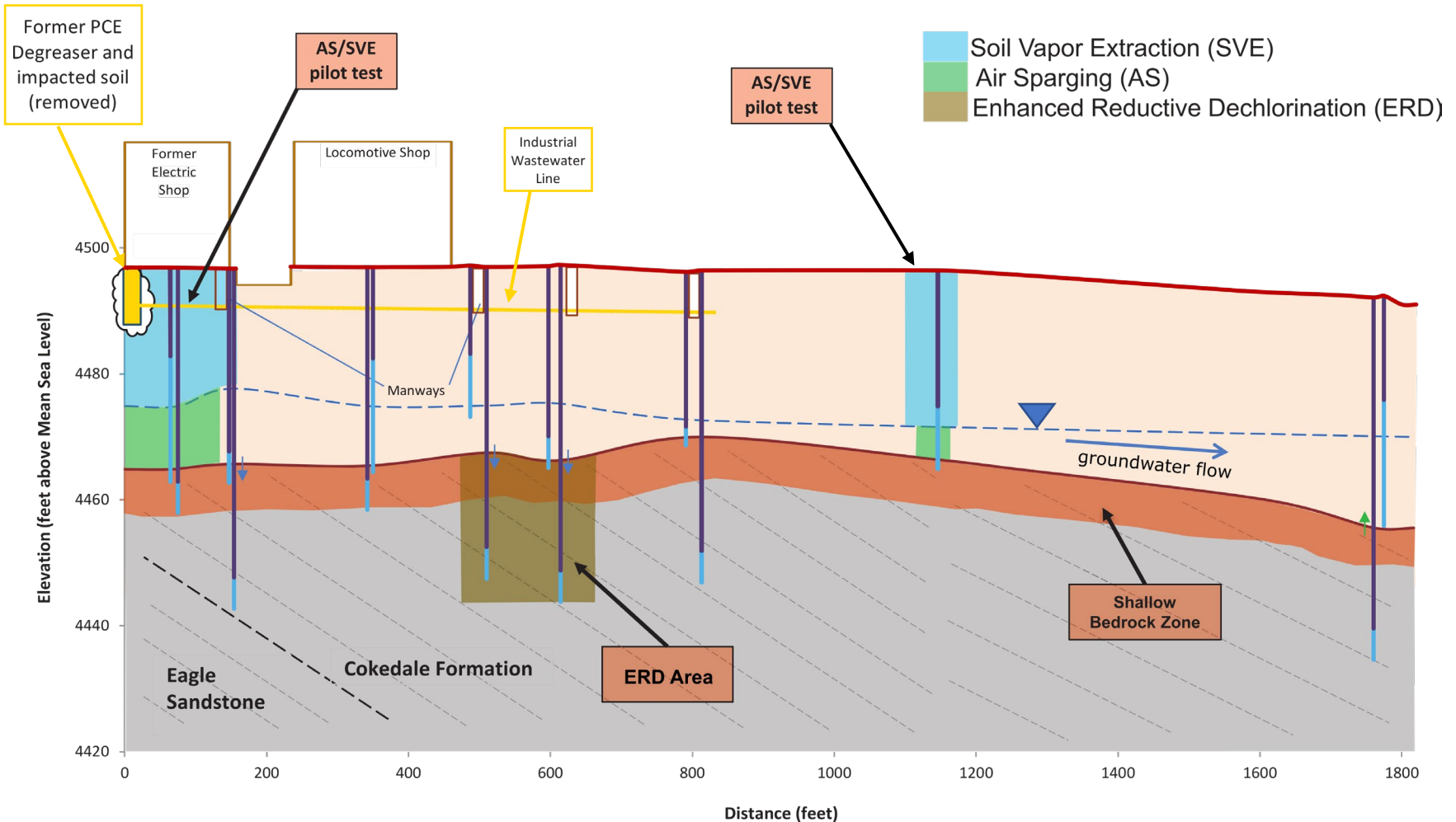
VOCs in GW (bedrock aquifer)

- Supplemental Investigation →ongoing
- Subsequent Pilot Testing →ongoing
- Feasibility Study →upcoming

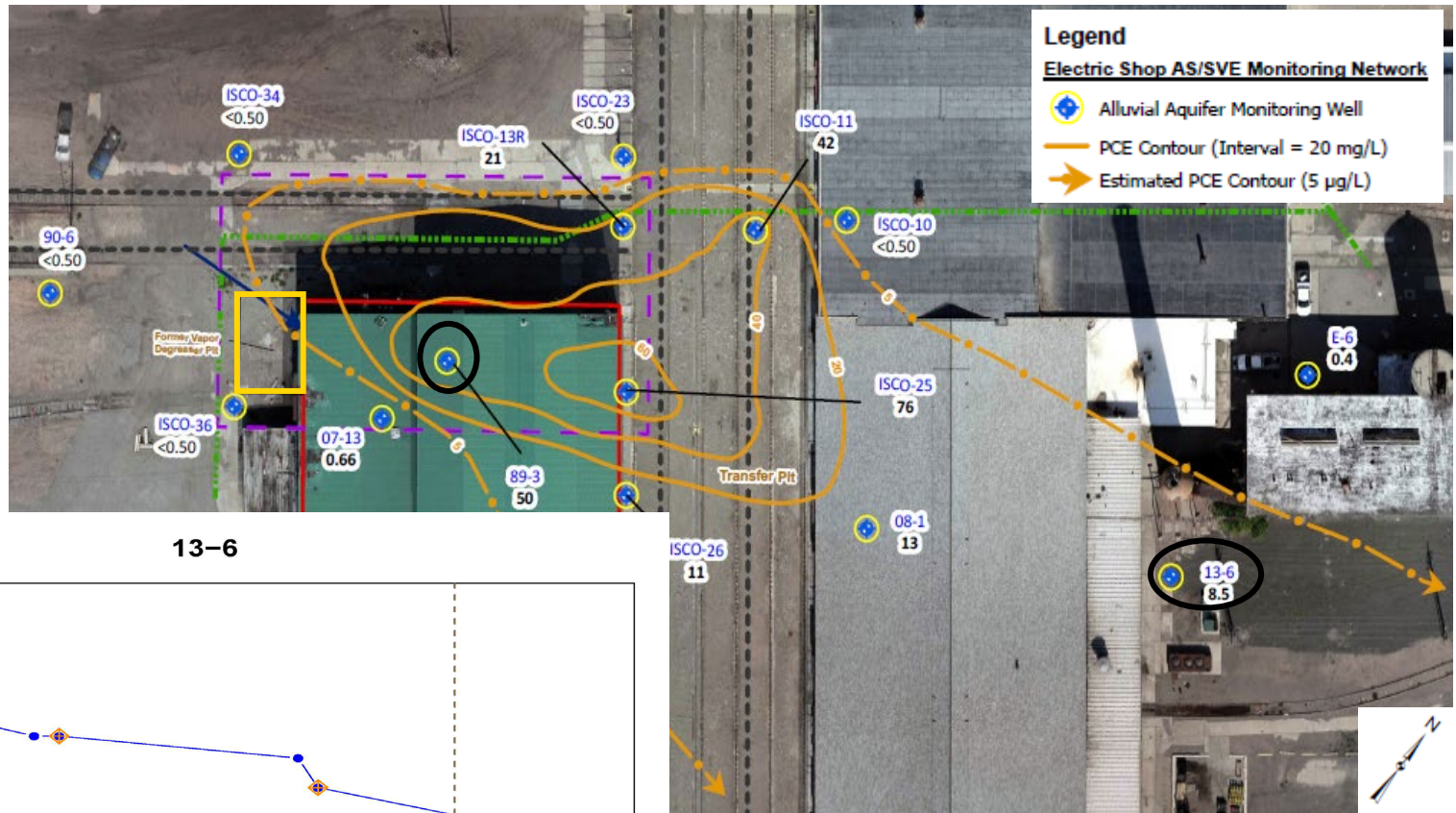
VOCs in Alluvial and Bedrock GW



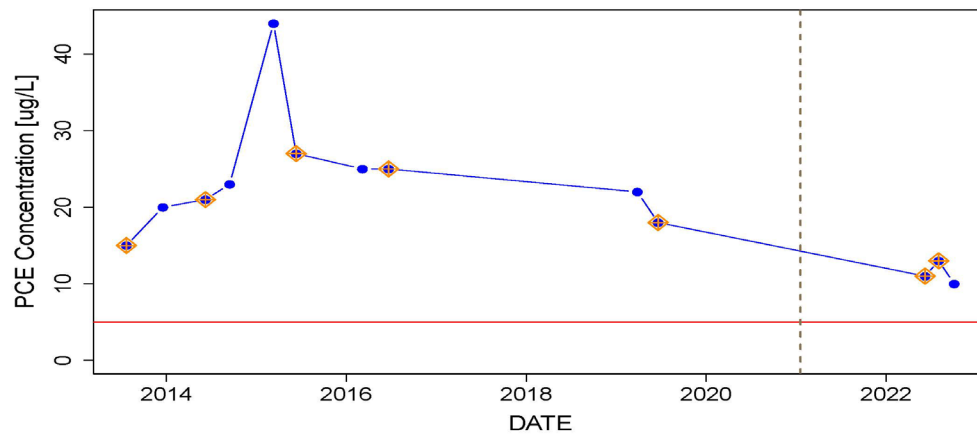
Conceptual Model of Active Pilot Test Zones for VOCs-in-GW



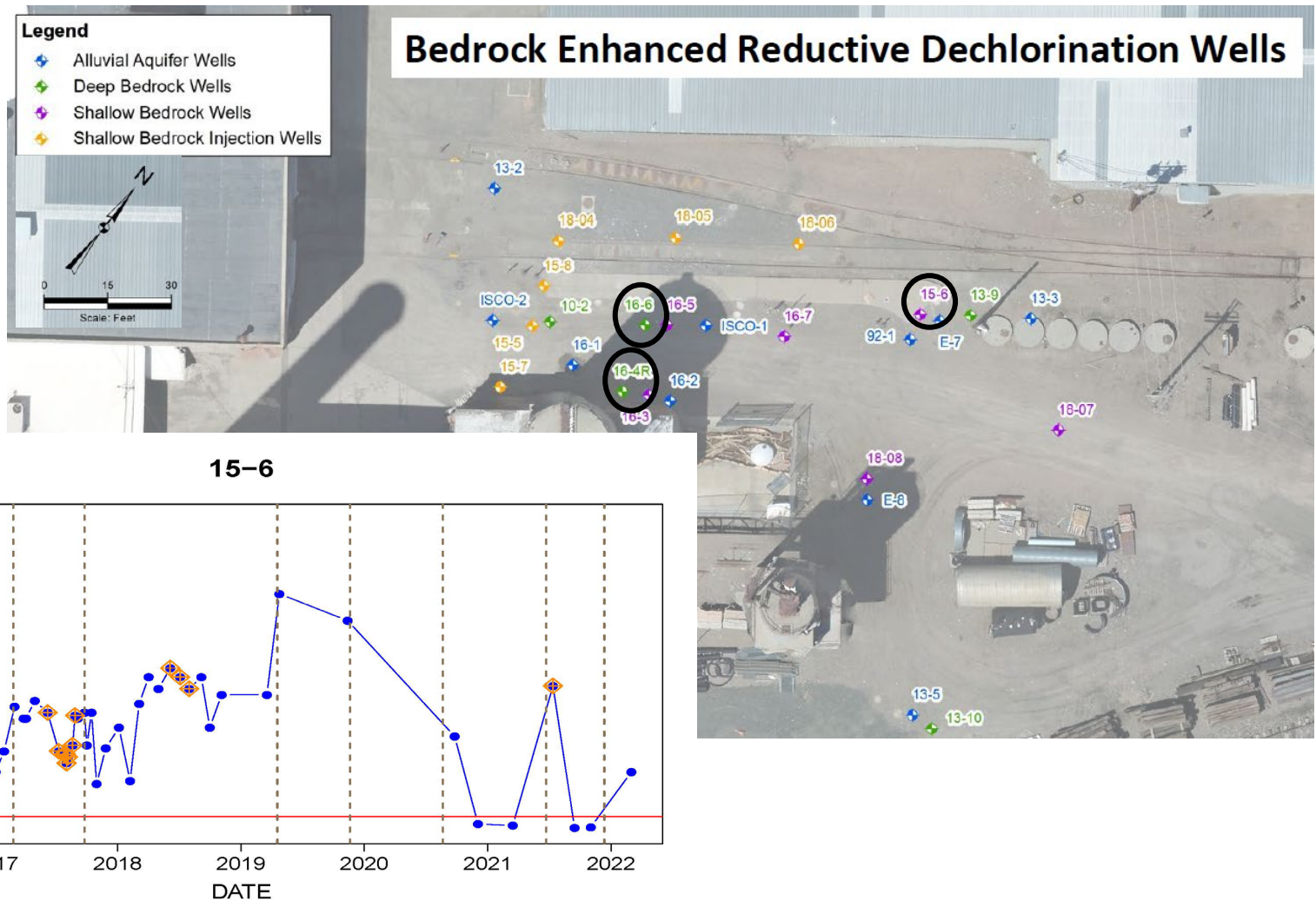
PCE Trends in Alluvial GW (Electric Shop)



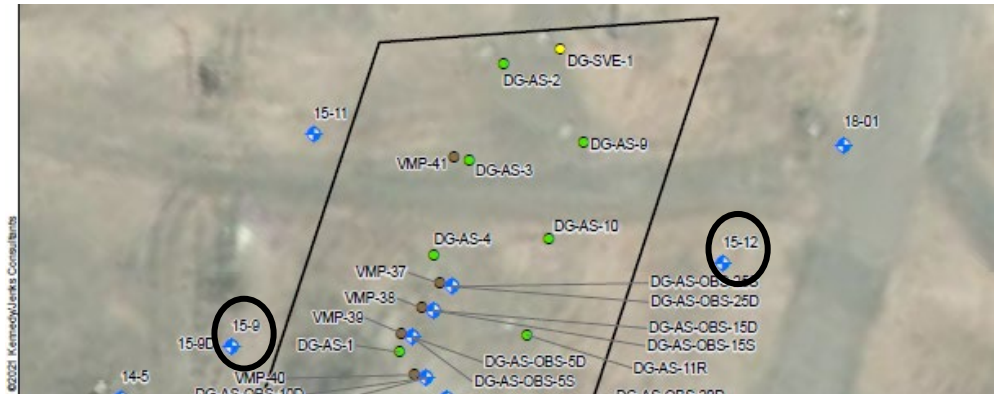
13-6



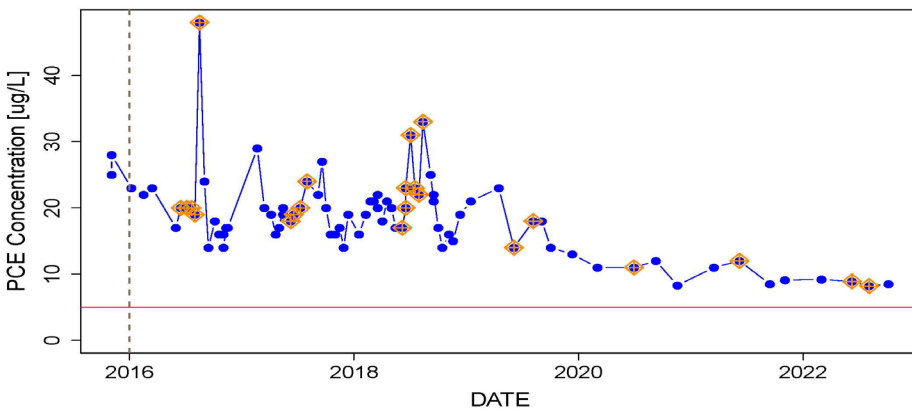
PCE Trends in Bedrock GW



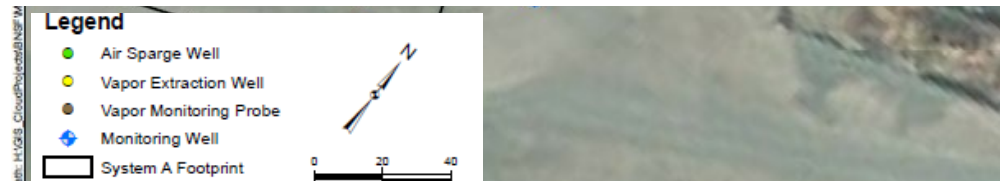
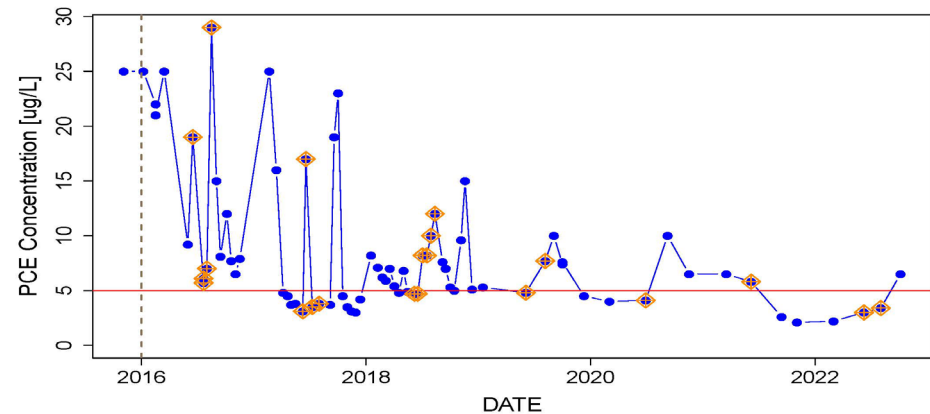
PCE Trends in Alluvial GW (Curtain Wall)



15-9



15-12



DEQ and BNSF Next Steps

VOCs in GW

- Update and Finalize Supplemental Investigation Report for VOCs in bedrock
- Feasibility Study for remedial technology for VOCs in bedrock
 - Must evaluate data and aquifer connection with alluvial aquifer.
- Proposed Plan will outline DEQ's preferred remedy for VOCs in bedrock groundwater and will solicit public comment.
- ROD Amendment will identify the final cleanup for the bedrock aquifer

Questions?

Connect with us!

- **Andrew Nordberg**
- *Environmental Project Officer*
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DEQ Mission

Our mission is to champion a healthy environment for a thriving Montana.

Mission Wye Facility

Public meeting in Livingston, MT

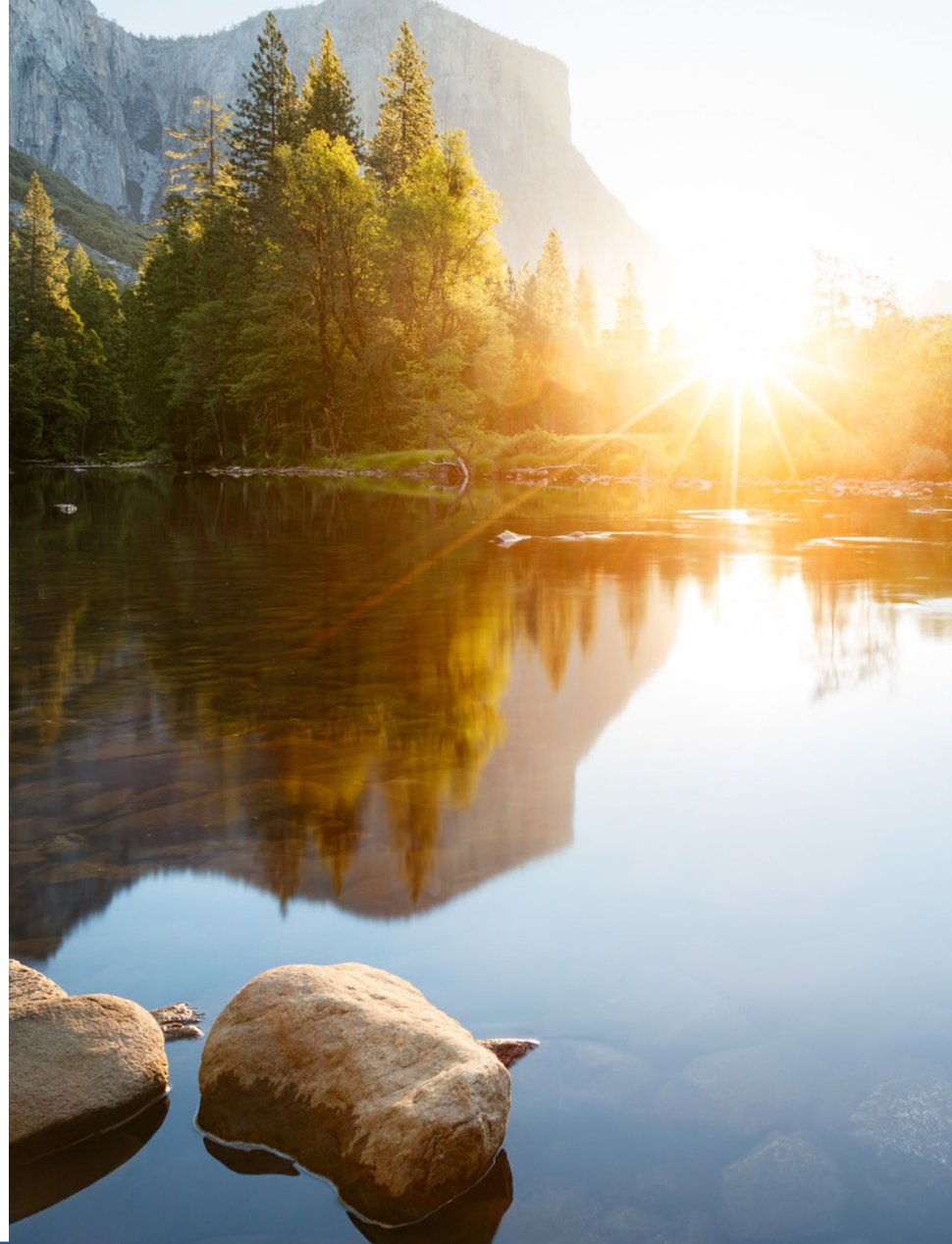
June 8, 2023

Heather Foslund

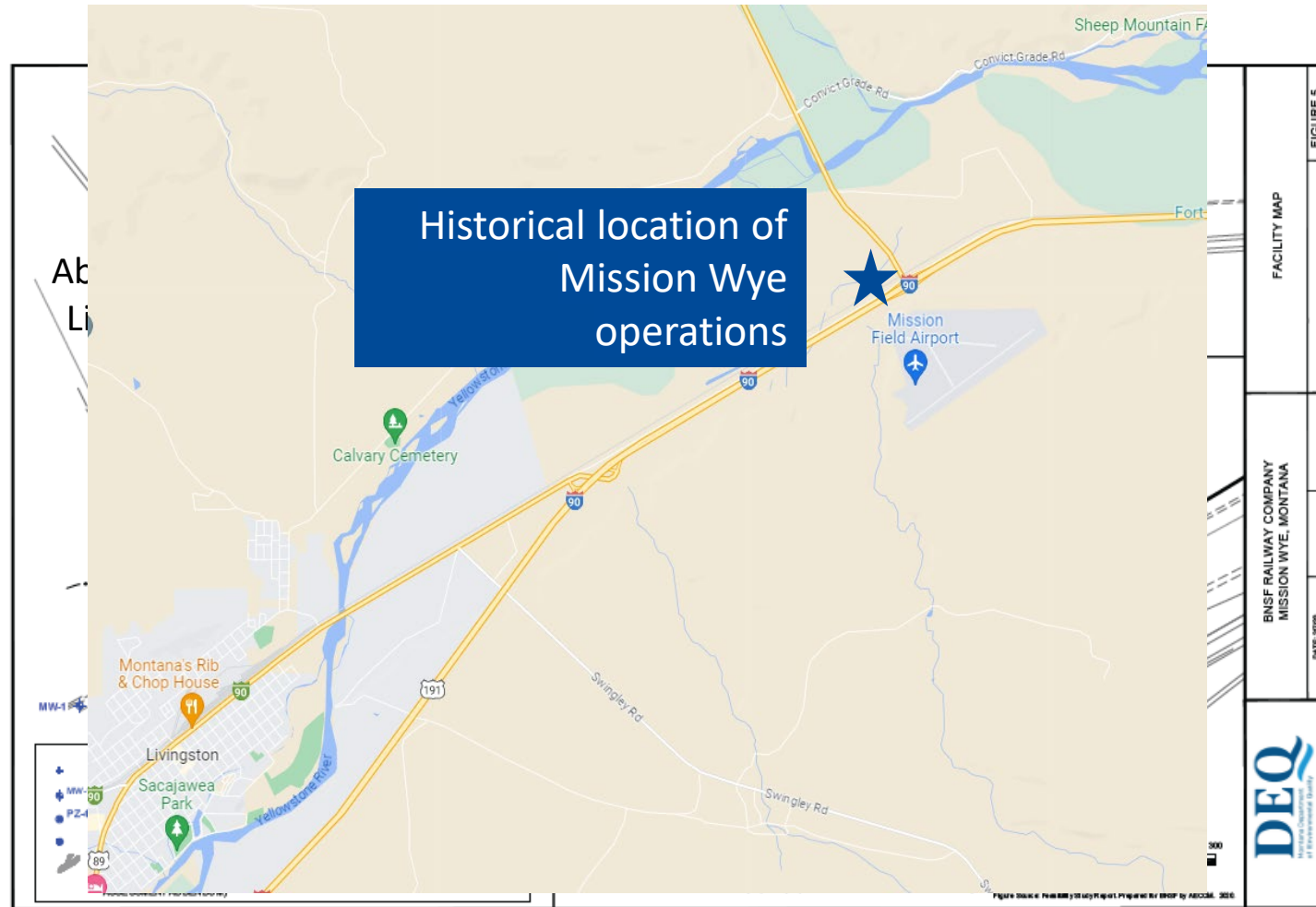


Mission Wye Topics

- Facility location, boundary, and background
- CECRA process
- Selected remedy
- Groundwater monitoring trends
- What's next



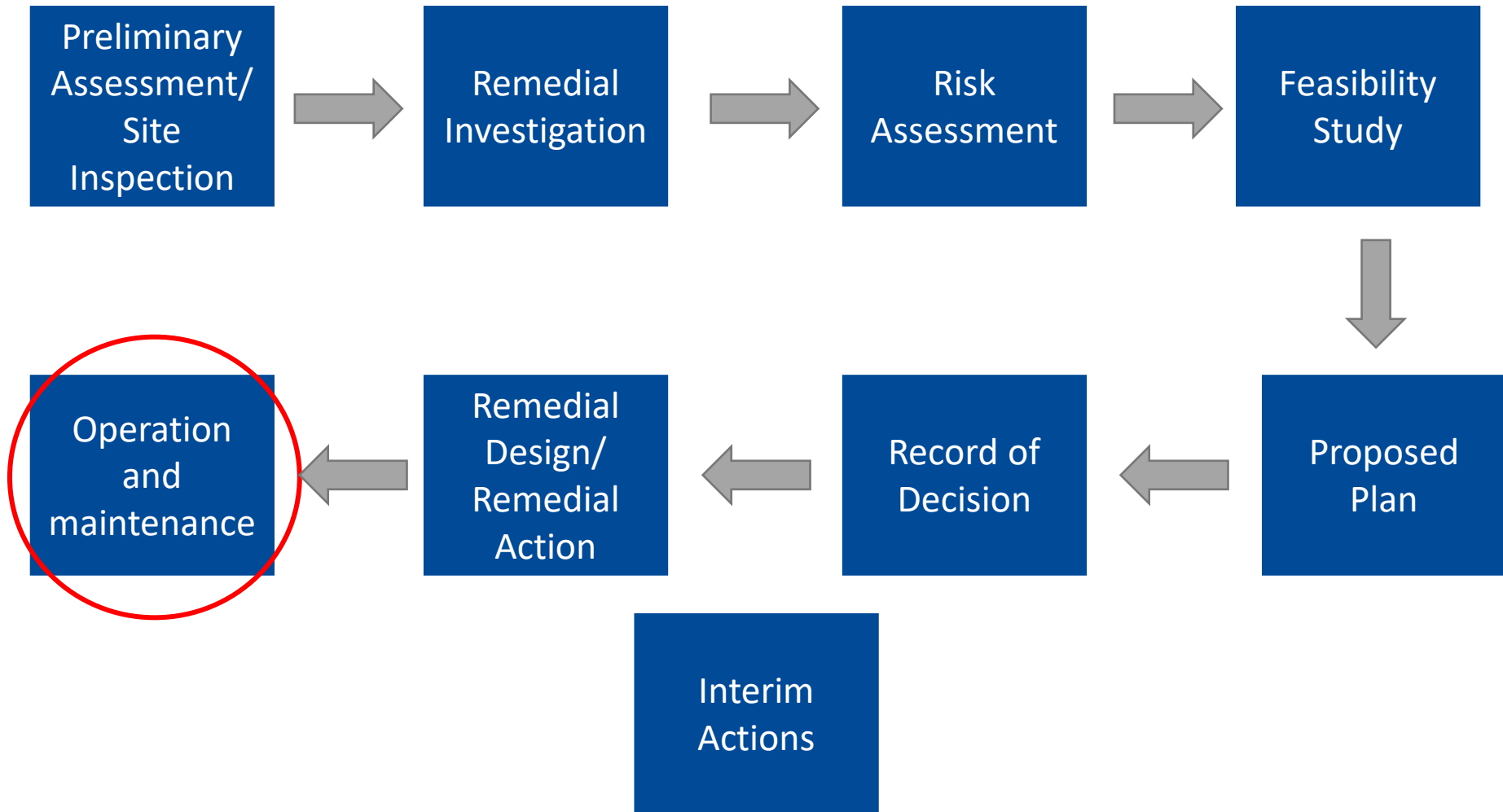
Mission Wye Facility Boundary and Location



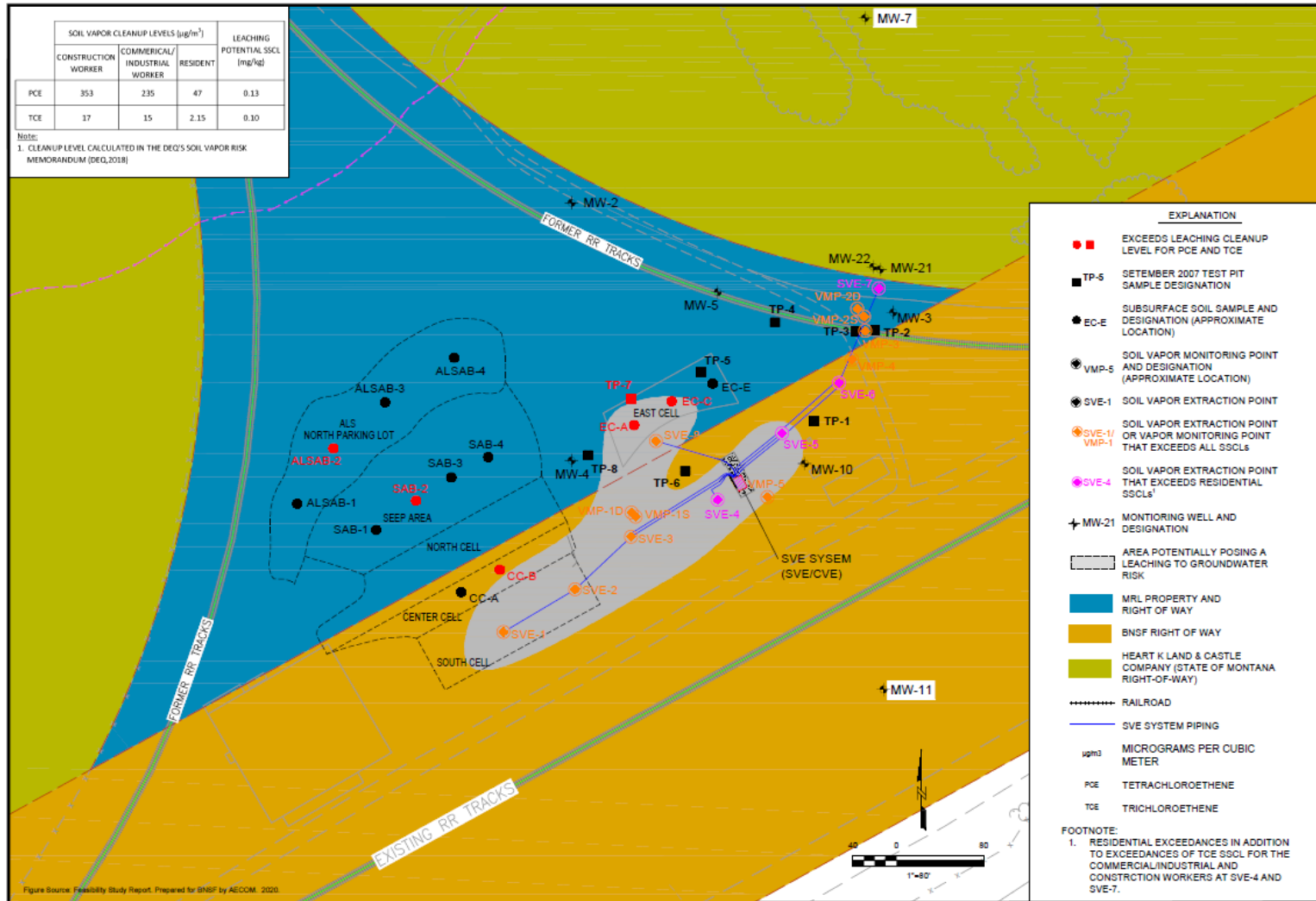
Mission Wye Facility Background

- 1955 – 1979: Industrial landfill
 - The contaminants of concern are tetrachloroethylene (PCE) and trichloroethylene (TCE)
- 1989: State Superfund Facility
- 1990: BNSF and DEQ entered into a Consent Decree
- 1990s - 2017: Interim Remedial Actions
- 2020: DEQ issued the Record of Decision (ROD) and BNSF is implementing the selected remedy

CECRA Process



Remaining Contamination



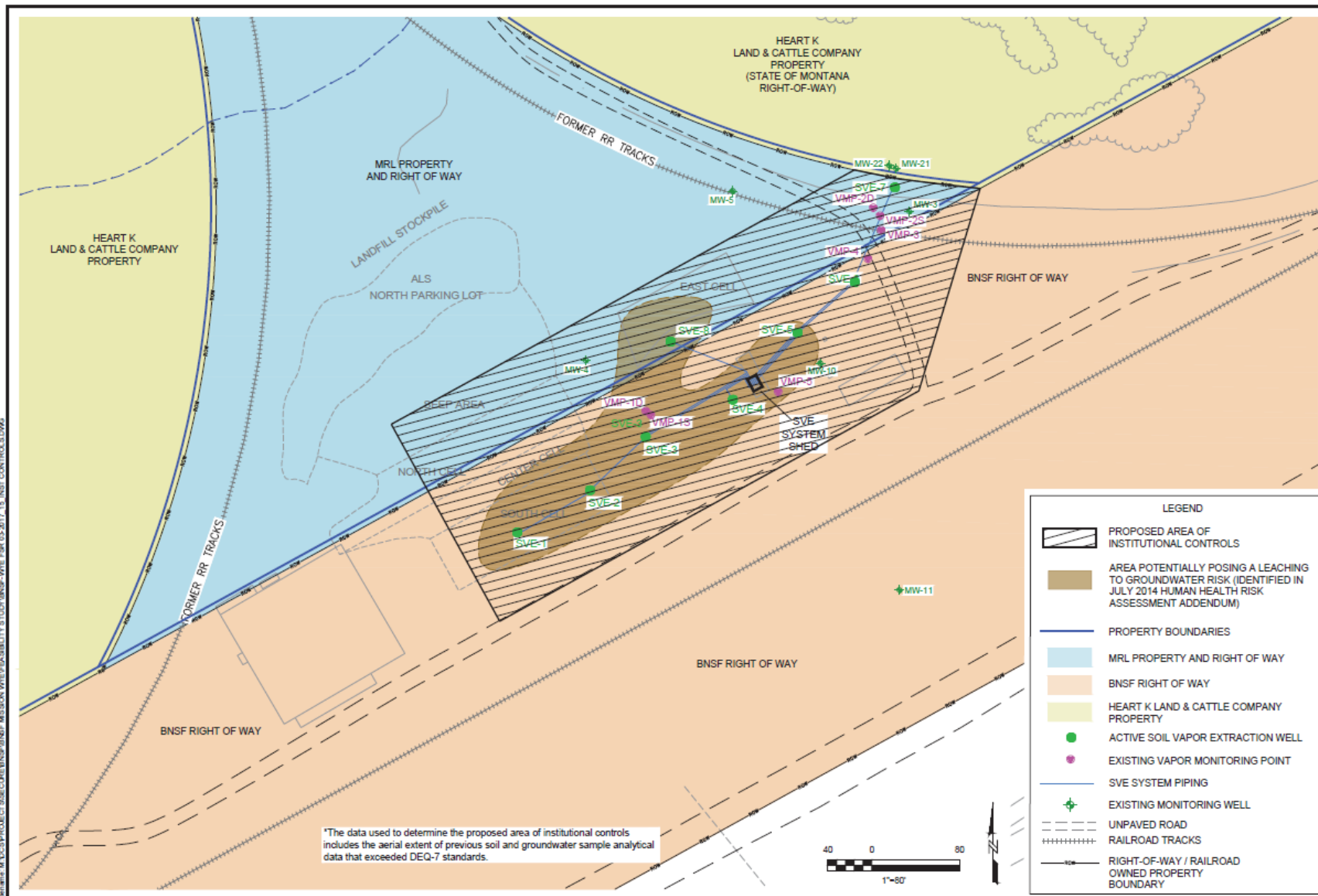


Figure: 15

PROPOSED INSTITUTIONAL CONTROLS AREA

Final Feasibility Study

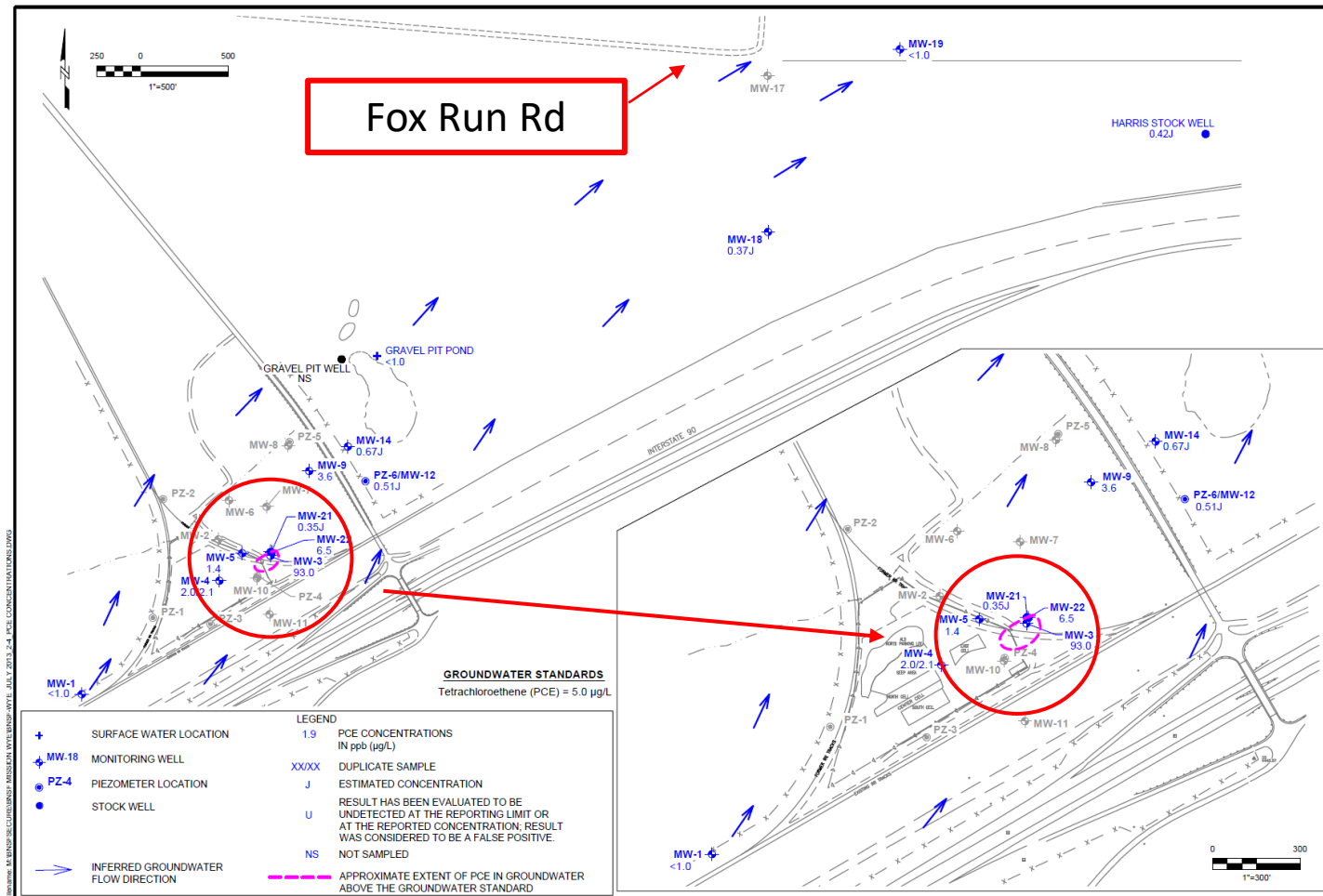
BNSF, Mission Wye, Montana
 Project No.: 60517242 Date: October 2018

How the selected remedy works

- ICs inspections:
Ensuring no compliance violations have taken place
- Groundwater monitoring every year
- Results of the IC inspection and groundwater monitoring provided in an annual report



Groundwater Monitoring Trends



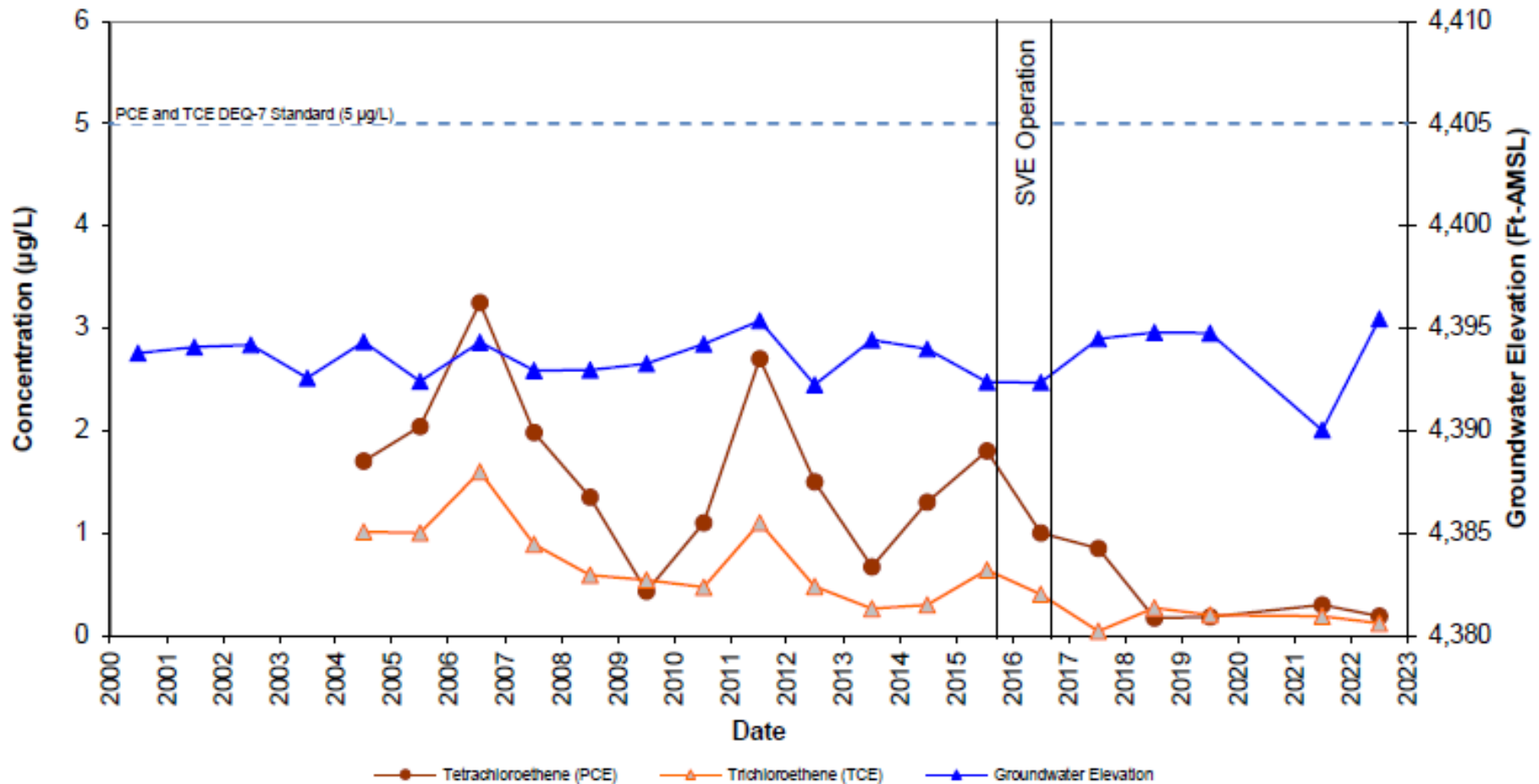
AECOM
Figure: 2-4

ESTIMATED EXTENT OF PCE CONCENTRATIONS
IN GROUNDWATER JULY 2013

2013 Annual Report
Mission Wye, Livingston, Montana
Project No.: 60300652 Date: 10/30/13

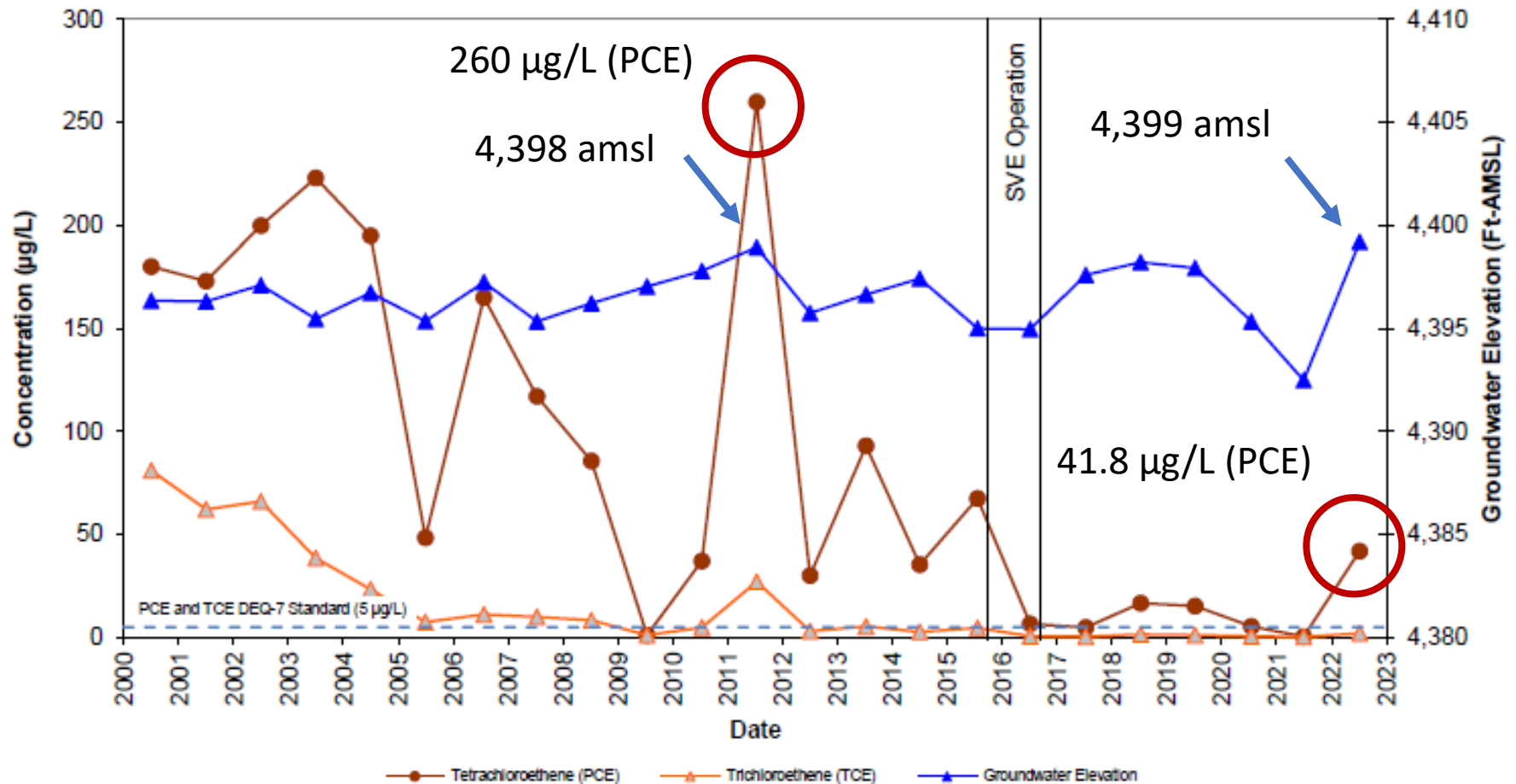
Groundwater Trends

MW-14 (Off Site Down Gradient) Historic Groundwater Concentrations



Groundwater Trends

MW-3 (Former Source Area) Historic Groundwater Concentrations



What's next?

- Next groundwater monitoring event will take place in July 2023
- This will continue until two groundwater monitoring events results in all wells meeting the DEQ-7 standards



Questions?

Connect with us!

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