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Public Involvement Plan (PIP) Meeting

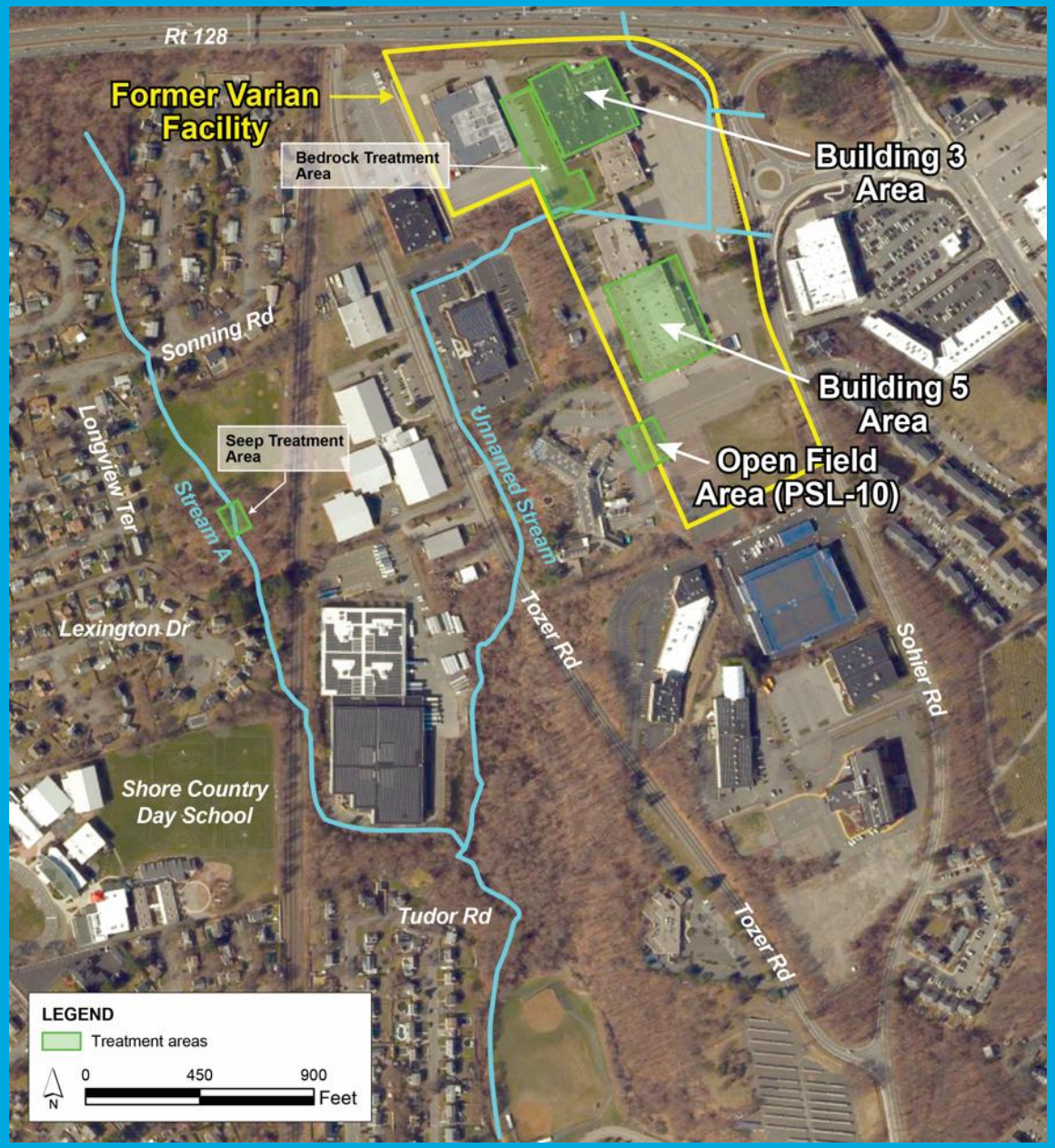
Phase IV Status Report

Former Varian Facility (Site 3-0485)
150 Sohier Road
Beverly, Massachusetts

Tuesday, May 12, 2026
Beverly Middle School

Presentation Objectives

- Present information from the most recent status report (February 2026)
- Provide an update on treatment installation
- Summarize progress of treatment systems operation
- Receive feedback and answer questions from the public



Status Update on Treatment System Operations, Monitoring, and Construction

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Summary of Activities Since the October 2025 Public Meeting

- **Building 3 Area Thermal Treatment System**
  - Drilling finished
  - Construction nearing completion

- **Bedrock Treatment**
  - Stage 1 and Stage 2 injections complete

- **Building 5 Area Treatment**
  - Stage 1 drilling and injections complete

Power service installation

Thermal treatment wells inside Building 3

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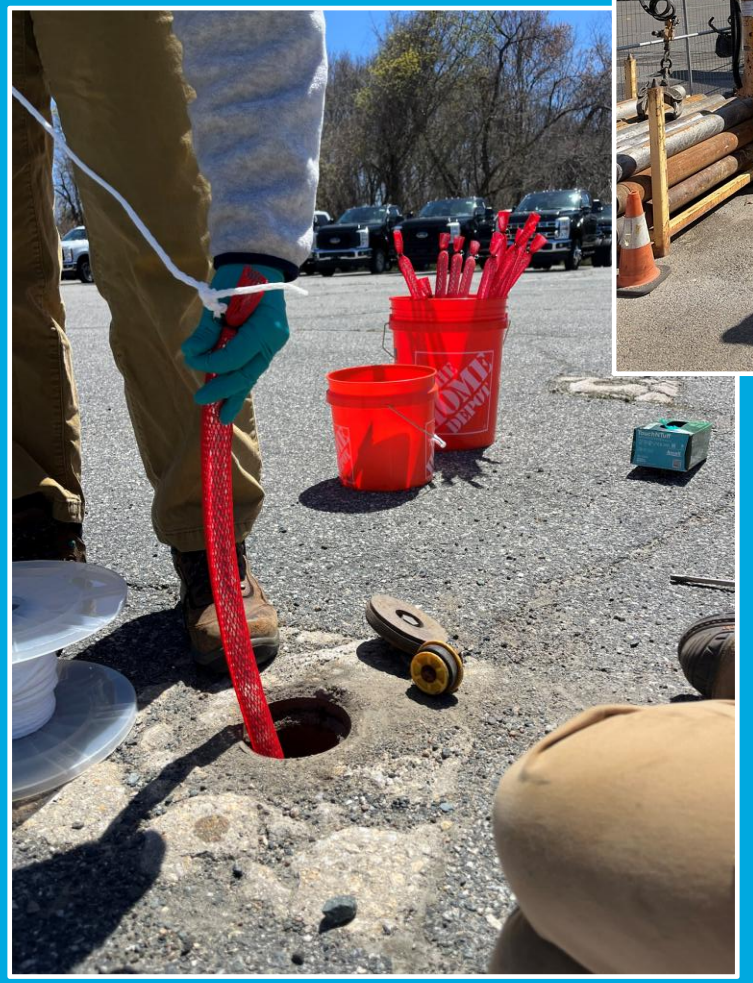
Summary of Activities Since the October 2025 Public Meeting

- **PSL-10 Subgrade Biogeochemical Reactor**
  - SBGR monitoring continues
- **Stream A Reactive Core Mat**
  - Inspections continue with no issues observed
- **Site Monitoring**
  - Routine groundwater and indoor air testing continues

Angled well drilling near Building 5



Deploying sampling equipment

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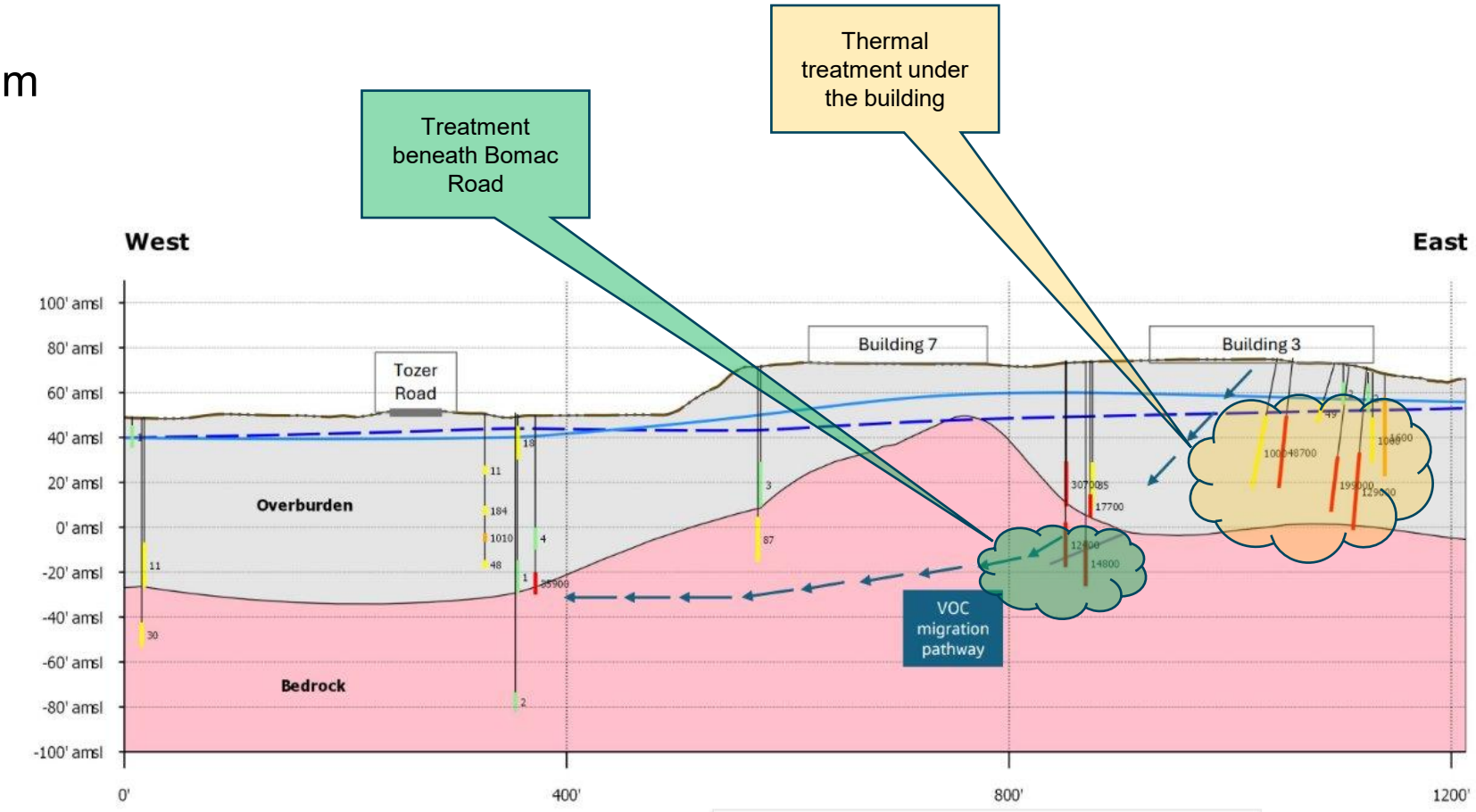
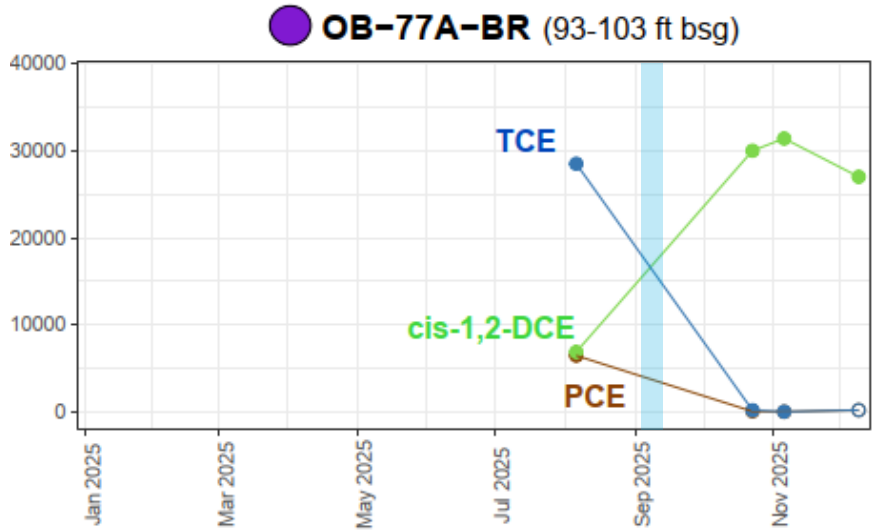
Bedrock

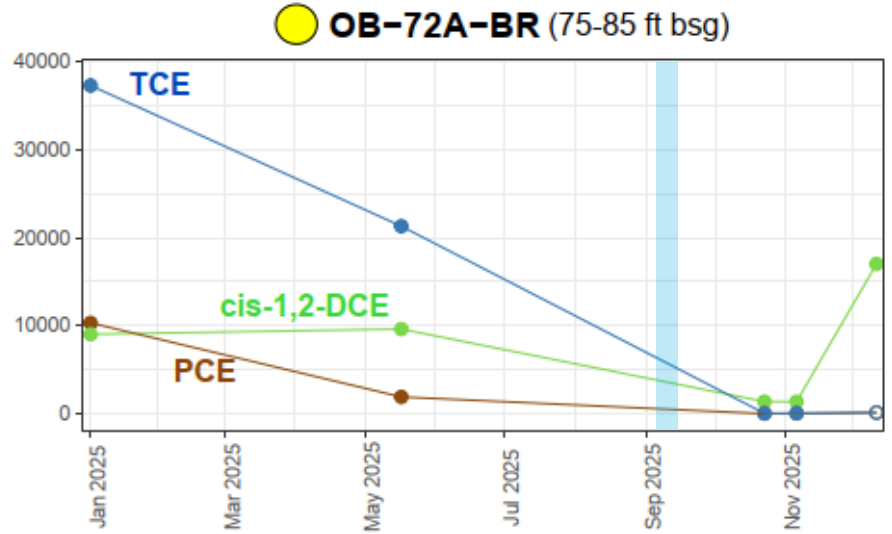
❖ In situ chemical reduction (ISCR)

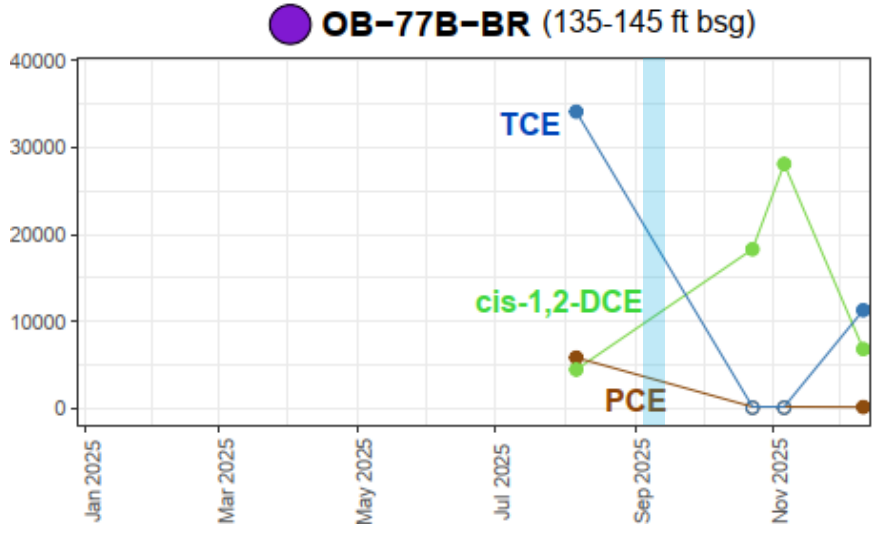
- Injecting amendments to degrade VOCs in bedrock fractures
  - Limit VOCs that may migrate from source areas during treatment activities
  - Reduce downgradient VOC concentrations moving back into the overburden
- Stage 1 and 2 are complete
- Stage 3 will start soon
- Performance monitoring continues

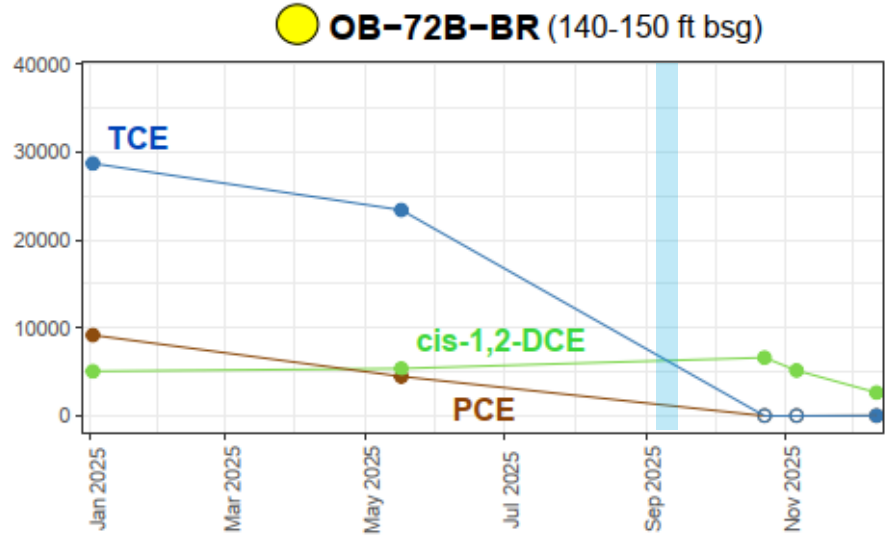


Bedrock Injection – Stage 1 Results (concentrations in µg/L)



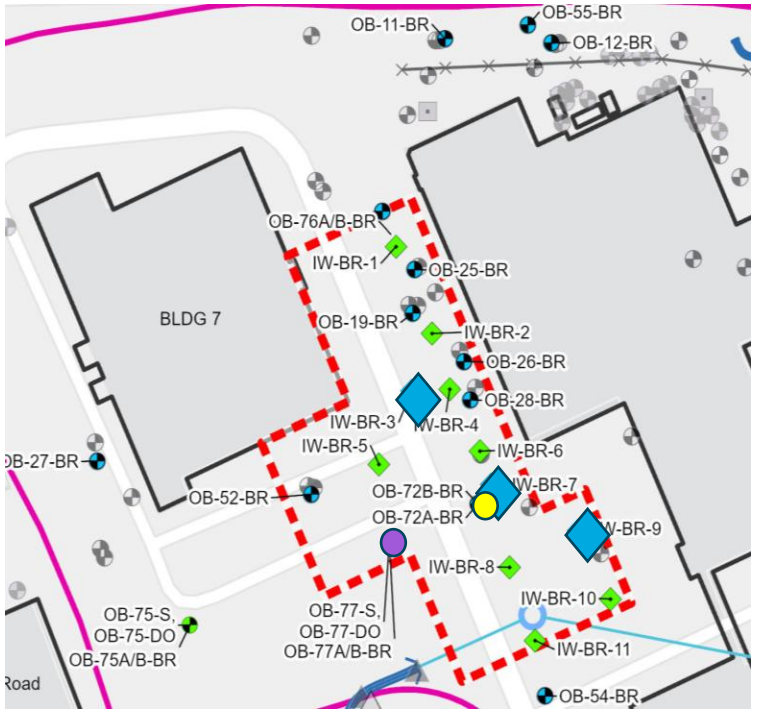






Stage 1 Injection Event (Sept 4-18, 2025)

Stage 1 Bedrock Injection Locations



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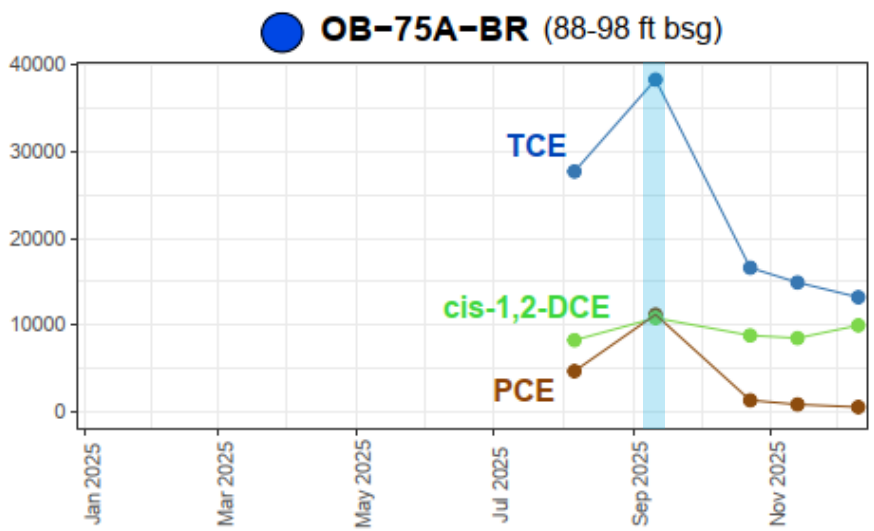

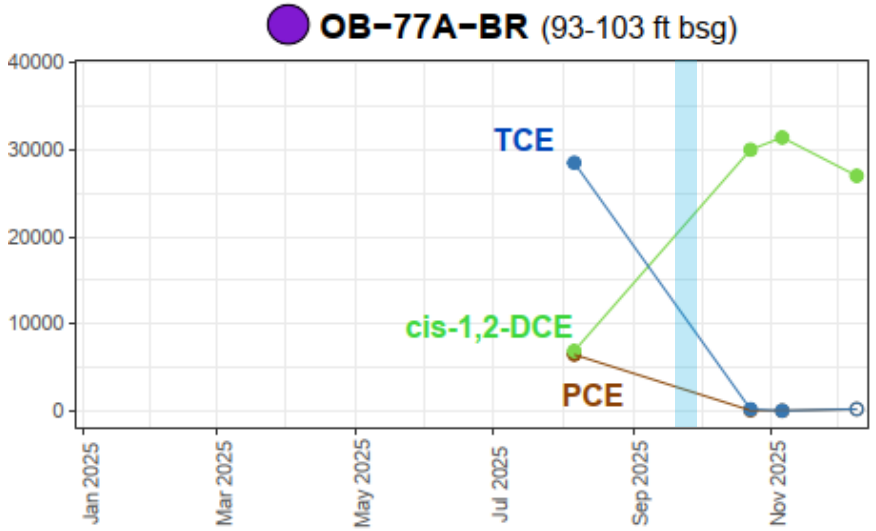

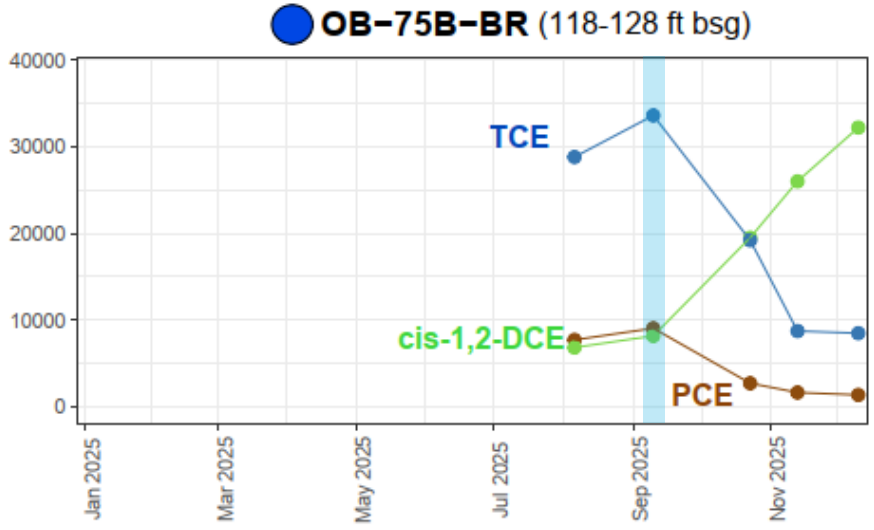

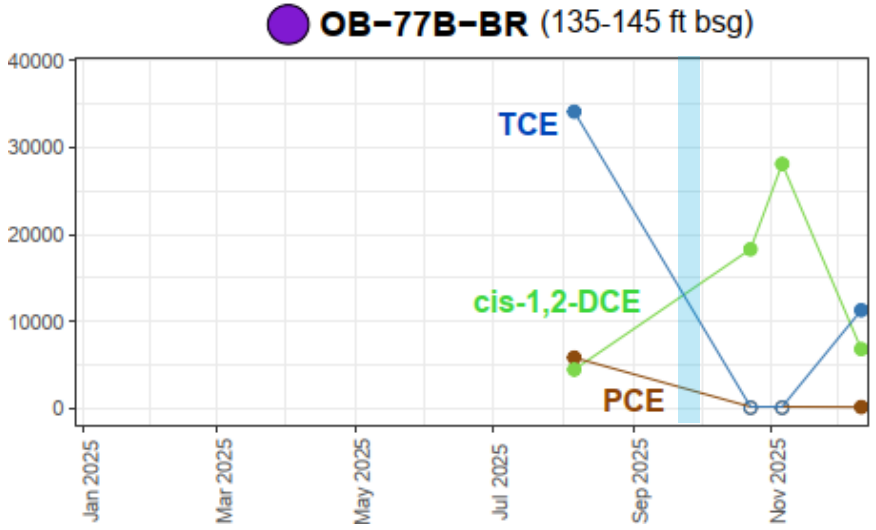

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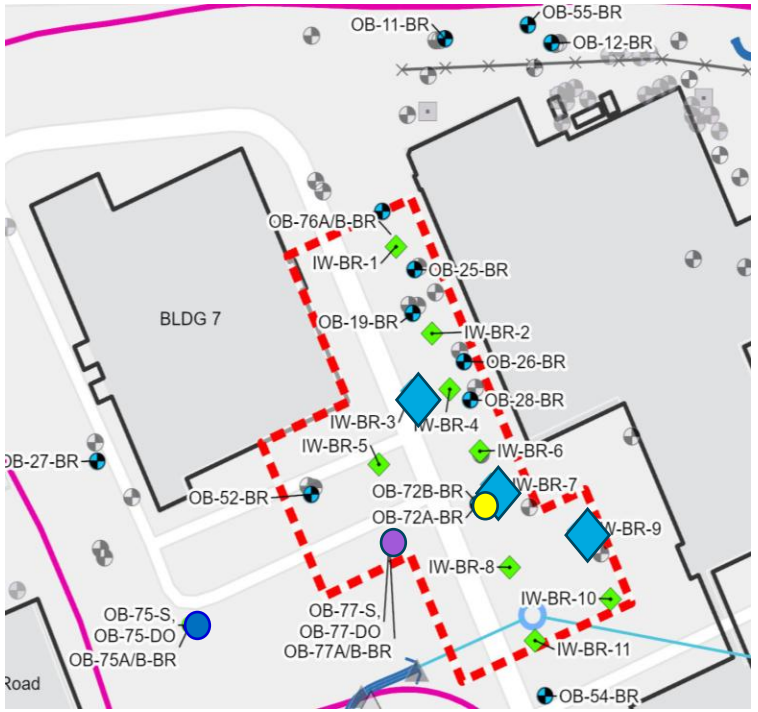
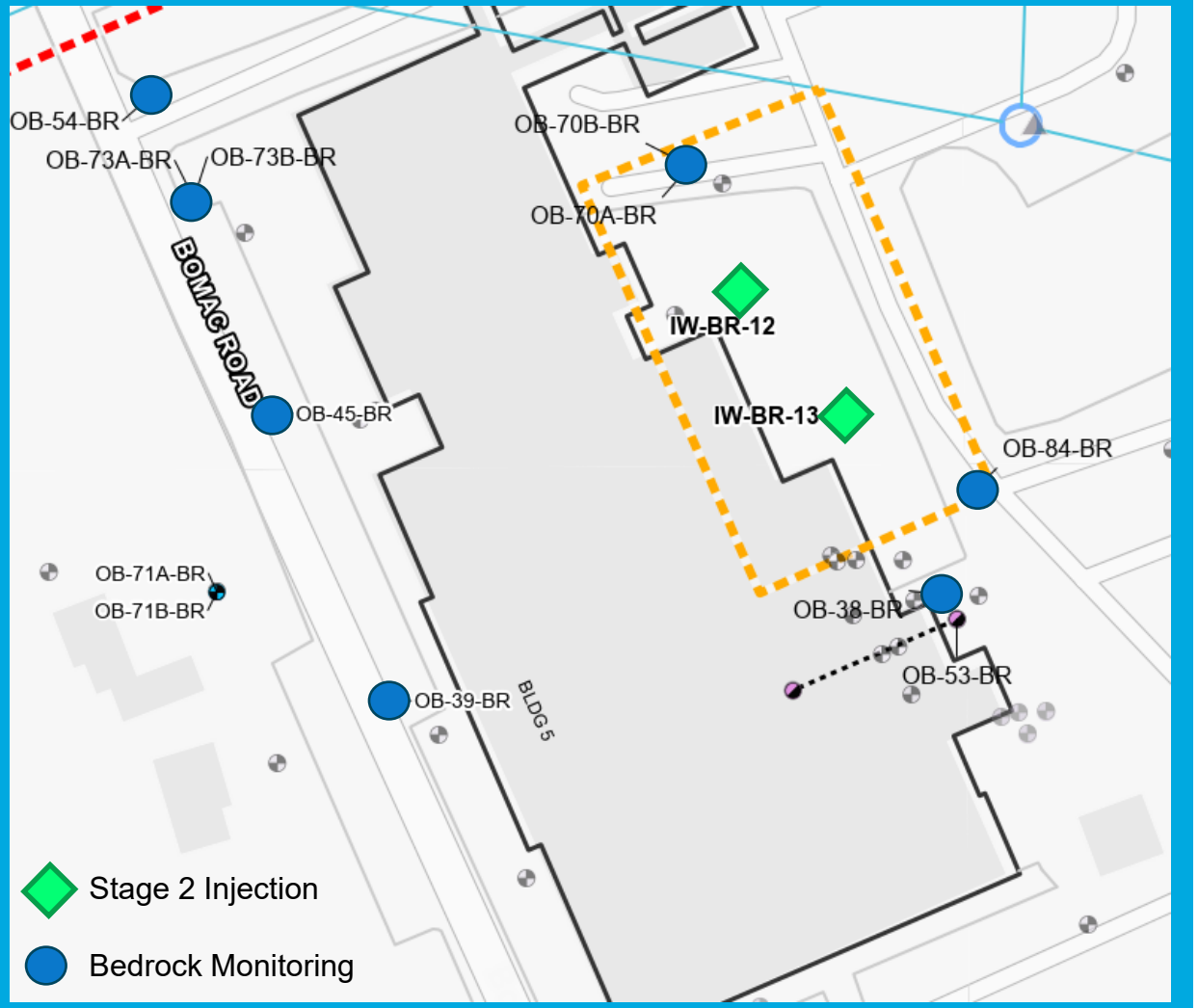


Bedrock Stage 2 Injections



- Injections at two locations were completed in January 2026
- Bedrock was less transmissive in this area compared to the Stage 1 area
- Initial monitoring following treatment has indicated positive results from Stage 2 treatment
- Complete results of Stage 2 activities will be provided in the August 2026 Status Report

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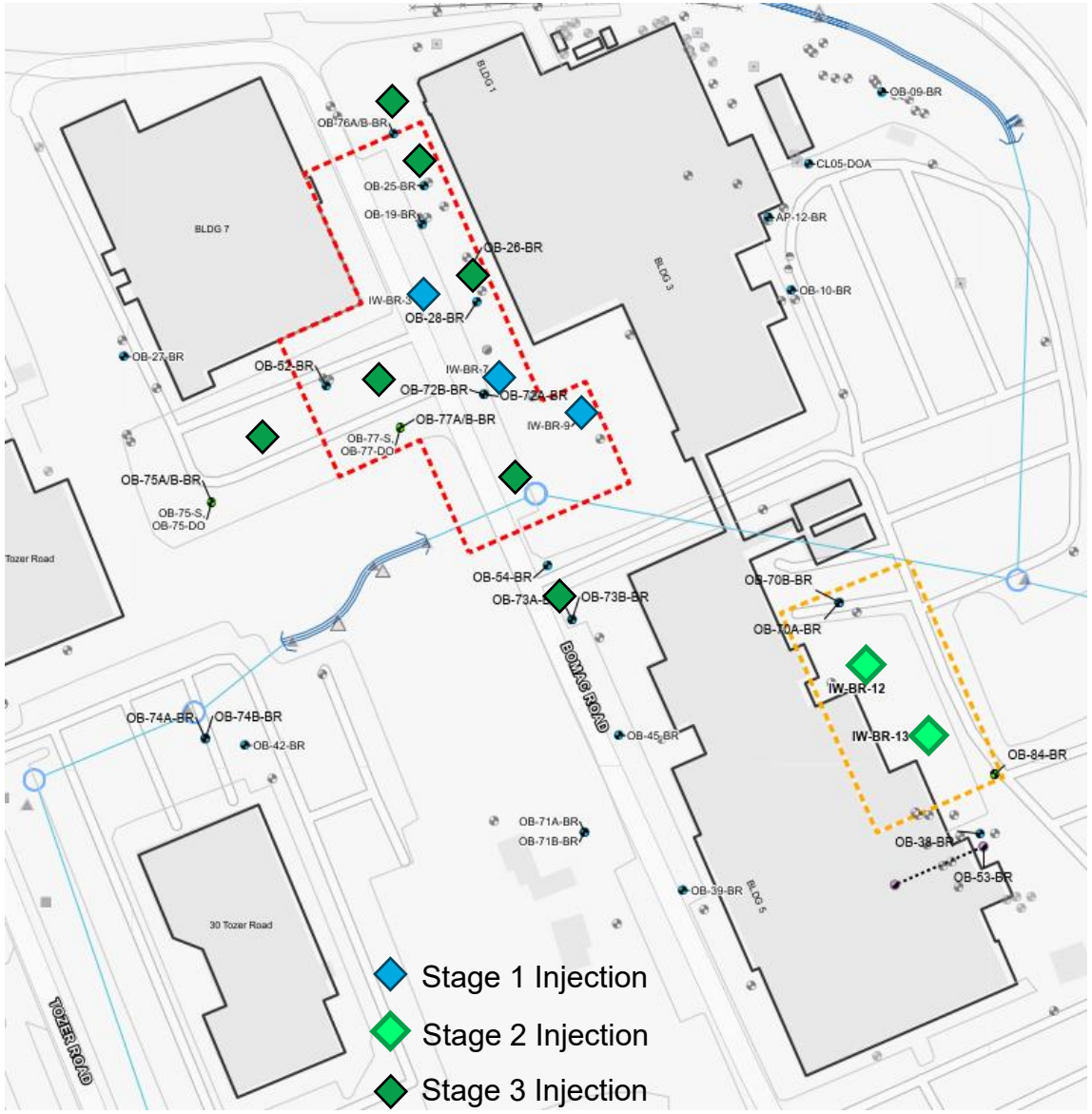
Bedrock – Next Steps



- Stage 1 performance monitoring (May, August, November)
- Stage 2 performance monitoring (May, August, November)
- Construction of Stage 3 injection borings/wells (six locations)
- Stage 3 treatment in Fall 2026 (six new borings and one existing well)

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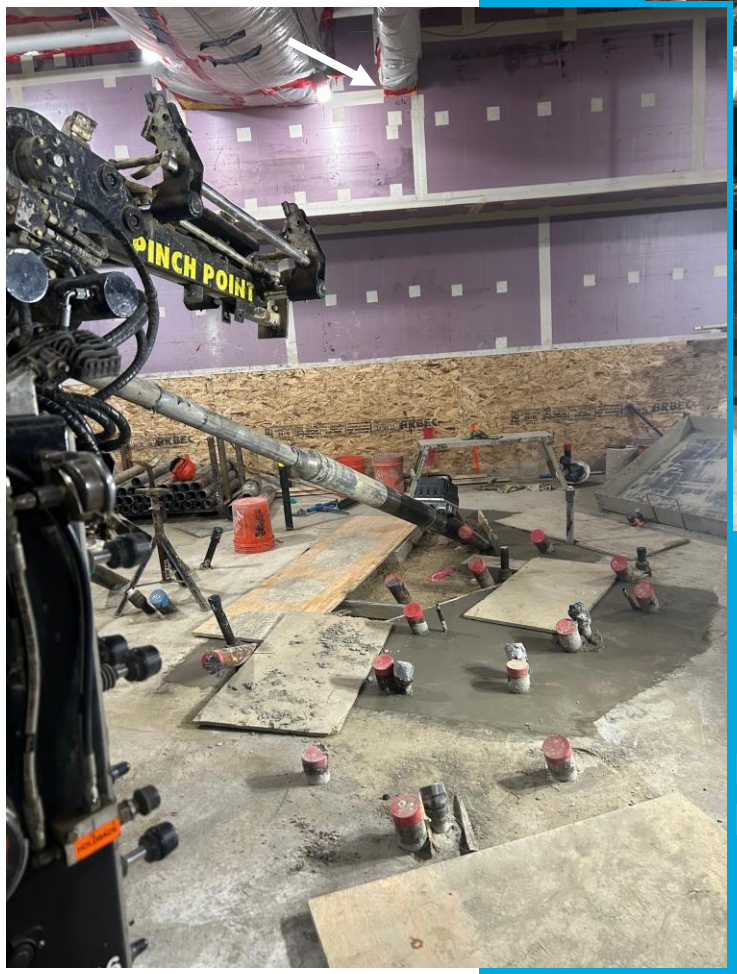
Building 3 Source Area

- **In situ thermal treatment**
- **In situ bioremediation polish**
- **Continued soil vapor extraction (SVE)**

- Subsurface drilling complete
  - More than 10,000 feet of drilling performed
- Drilling observations consistent with conceptual model of VOC distribution underground
- Stockroom floor restoration complete
- Aboveground construction ongoing

Tight Quarters



Final Stockroom Boring

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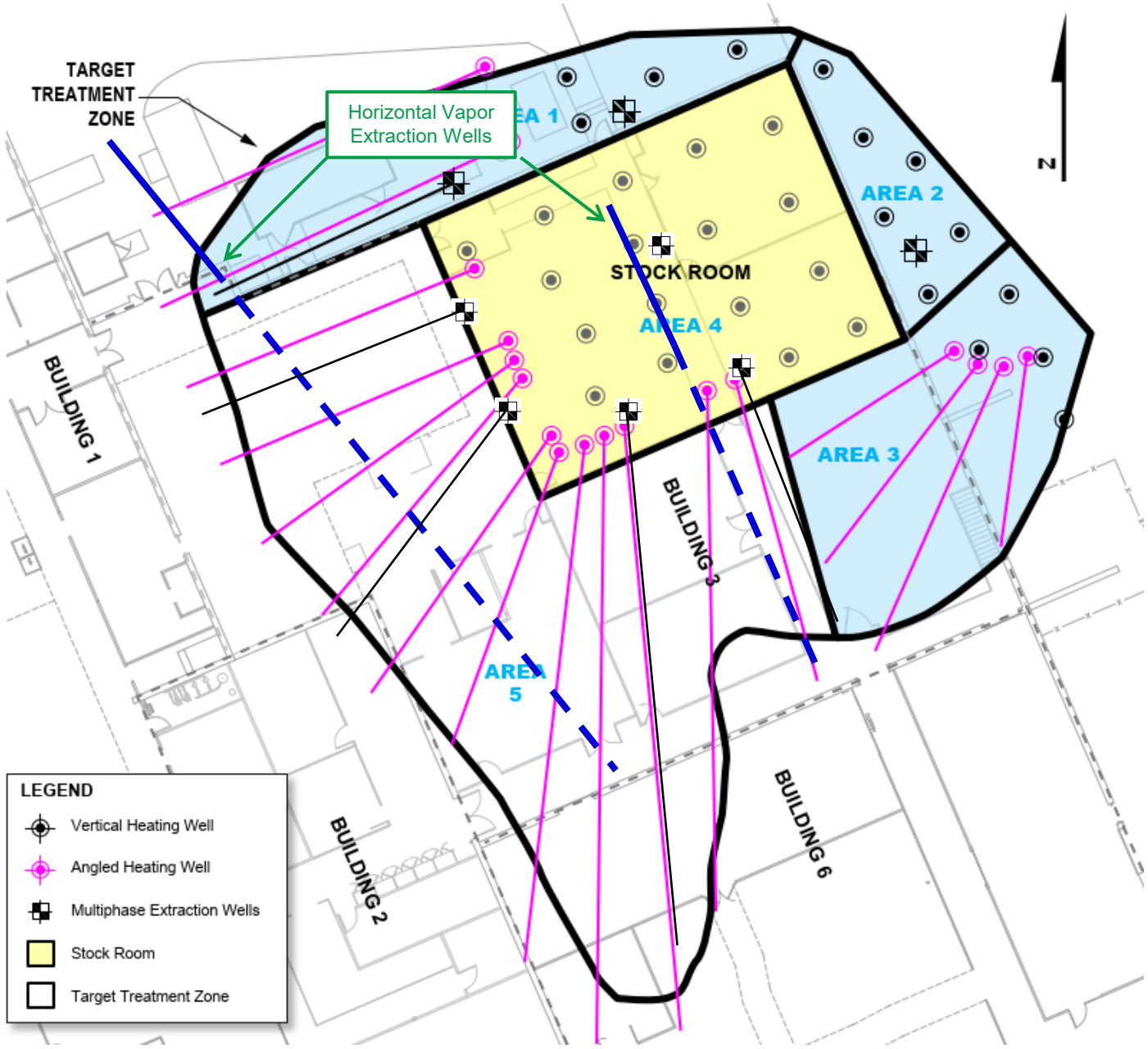
Building 3 Treatment

- Subsurface heating mobilizes VOCs from soil and water
- Vapor extraction captures steam and VOCs
  - Recovery wells co-located with select heaters
  - Horizontal wells installed a few feet below the building floor
- Groundwater extraction
  - Provides hydraulic containment
  - Supplements VOC extraction
- Extracted water and vapor containing VOCs treated at surface



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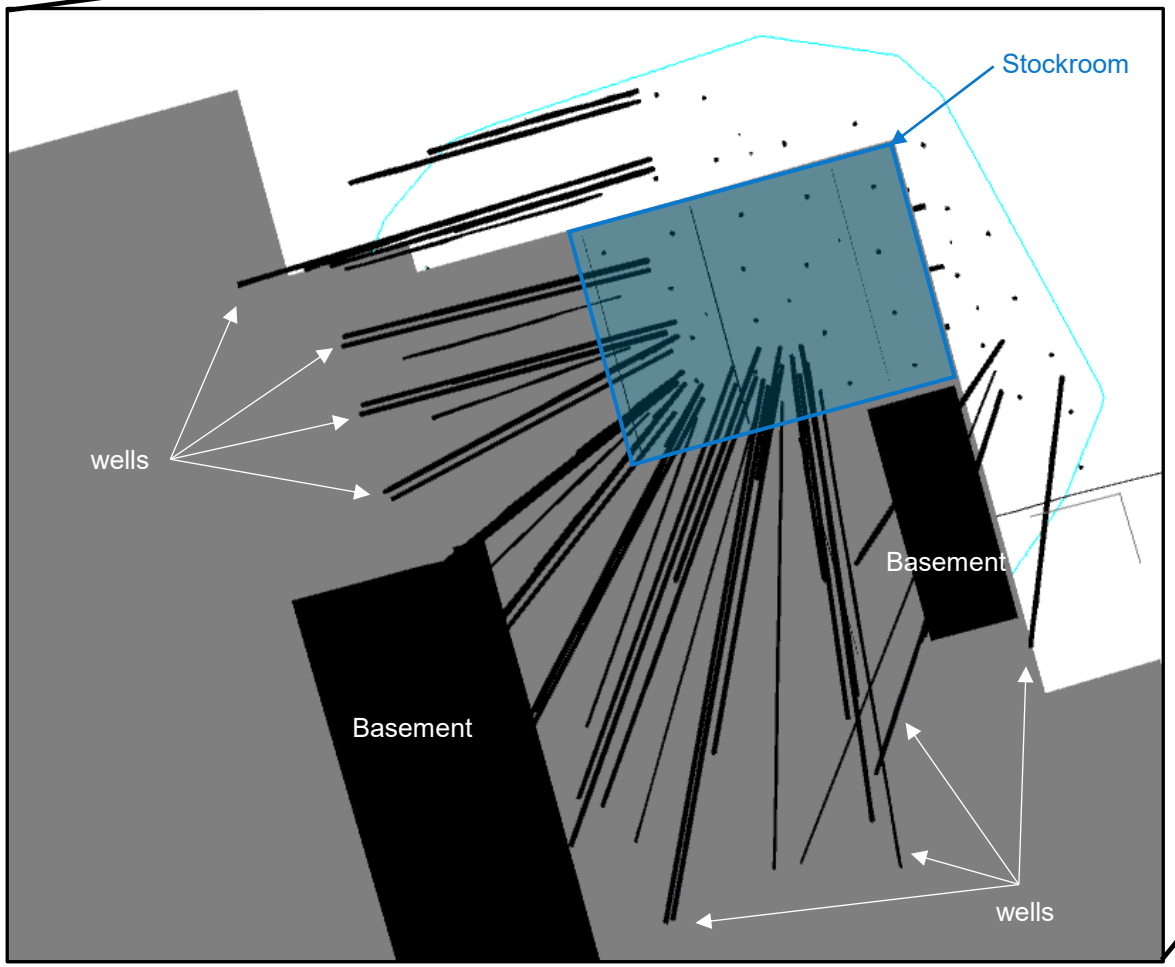
Subsurface Construction As-Built

Looking straight down from above



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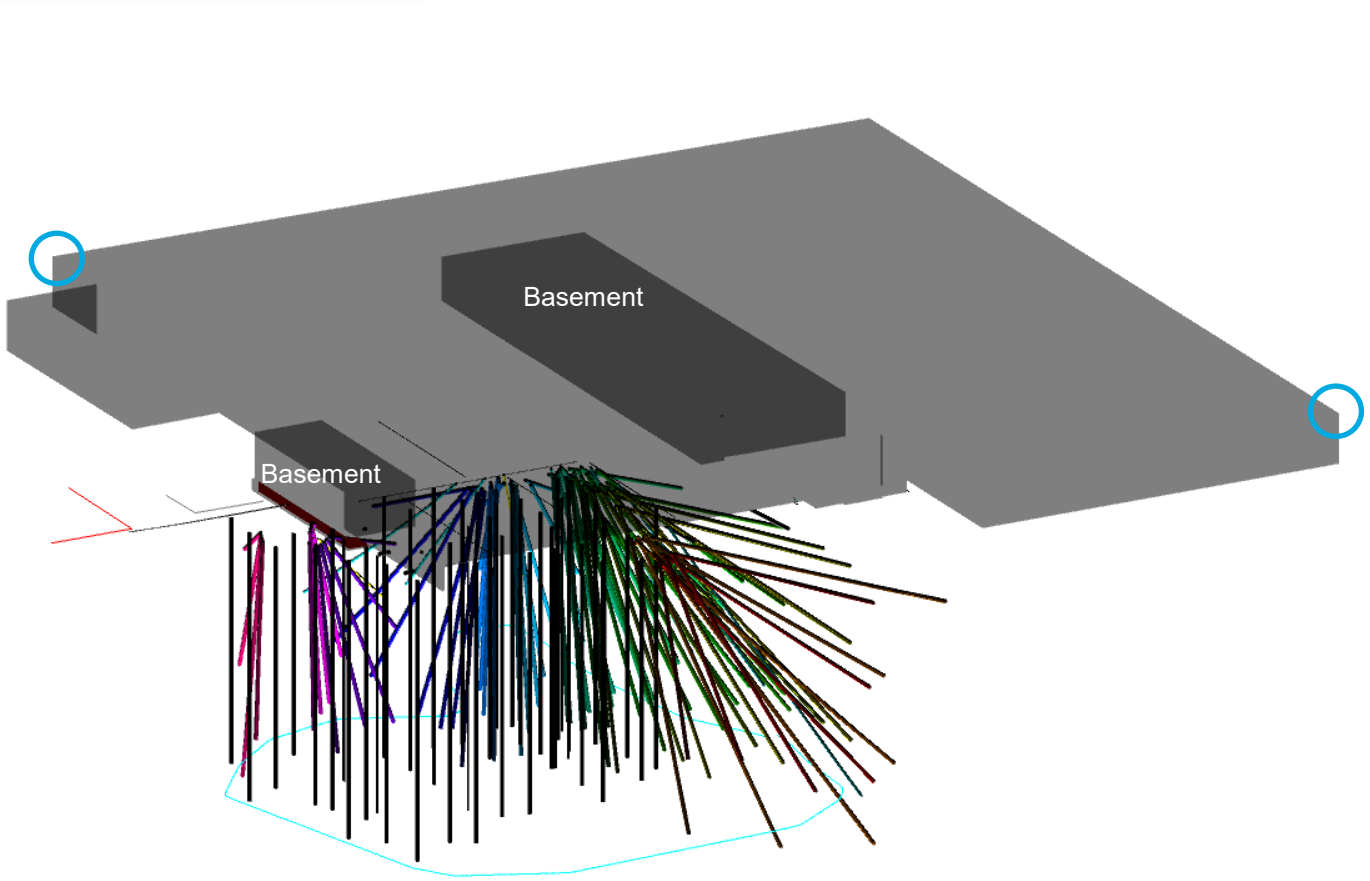
Subsurface Construction As-Built

Looking at a cross-section from the northeast



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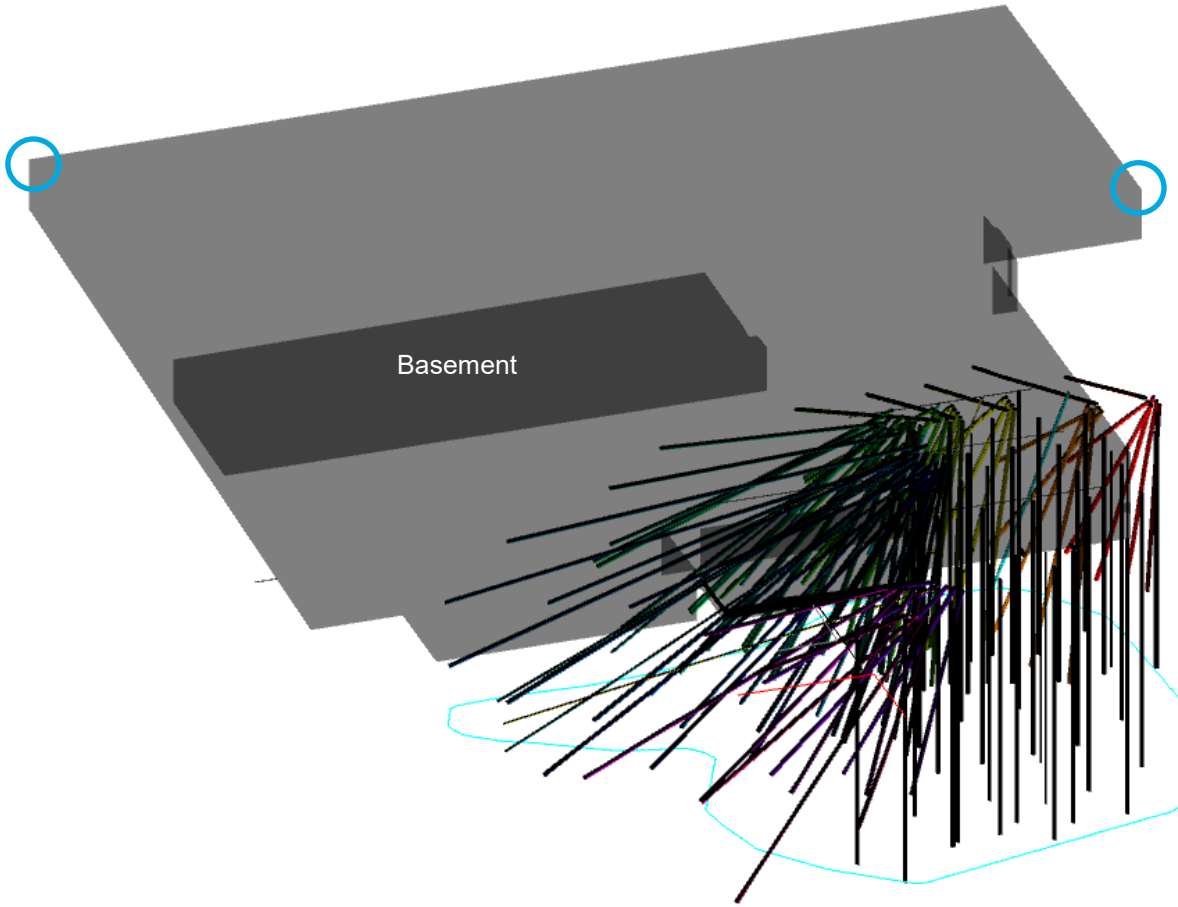
Subsurface Construction As-Built

Looking at a cross-section from the east



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Building 3 Treatment

Stockroom Construction

Vapor Extraction Piping

- Vapor and liquid treatment equipment installation ongoing
- Improvement of existing building ventilation systems underway
- Sewer discharge permit received
- Relocation of selected utilities underway
- Next Steps
  - Equipment wiring
  - Verify equipment operation
  - National Grid service activation
  - Extraction system startup
  - Heating system startup

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Building 5

- **In situ bioremediation**
- **Continued soil vapor extraction**

- Drilled angled wells to reach beneath the building
- Assessed soil type and VOC concentrations during drilling

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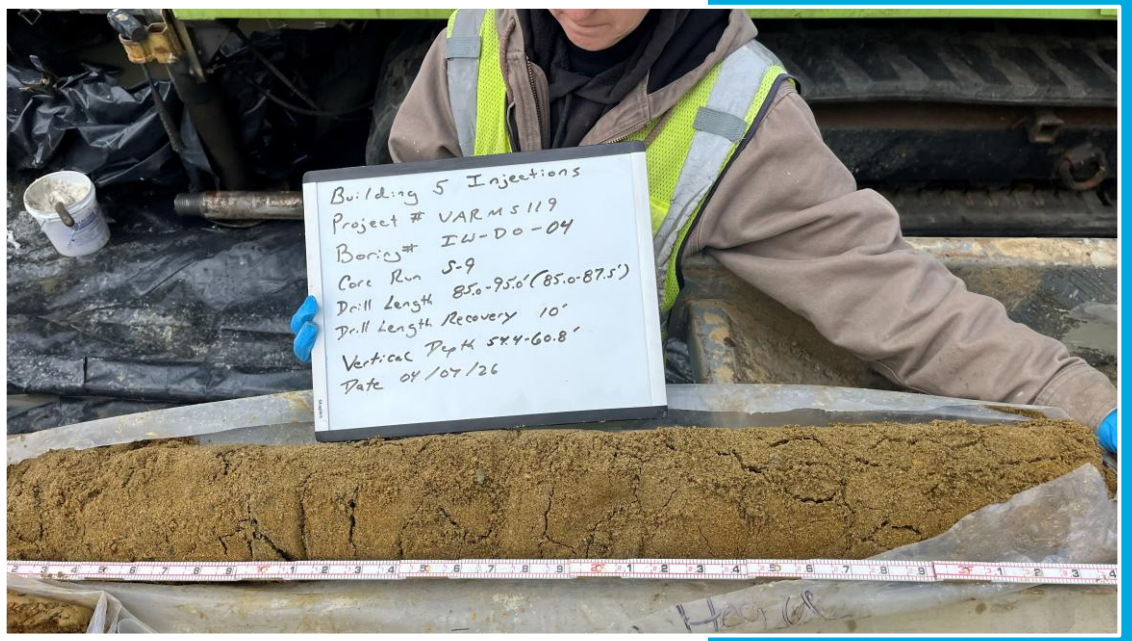
Building 5

- Used test data collected during drilling to conduct treatment beneath the building
- Pneumatic injection of sand to enhance permeability
- Treatment with zero-valent iron (ZVI) and emulsified vegetable oil (EVO)

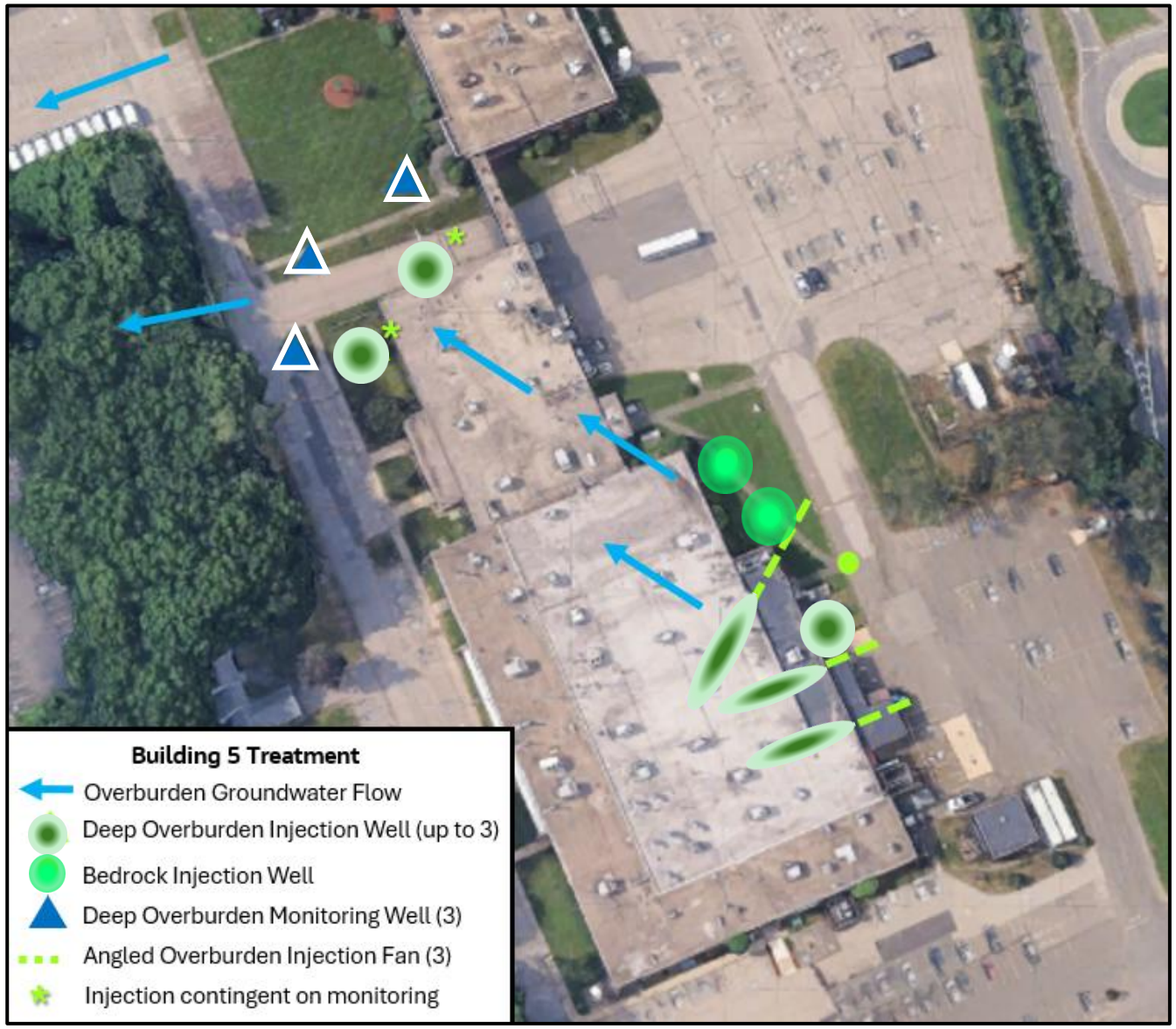
Dense glacial till from beneath Building 5 (5 to 55 ft deep)

Angled well drilling



Sandy soil from beneath Building 5 (55 to 74 ft deep)

Building 5 Treatment




Pneumatic injection equipment

PSL-10 – Overview

❖ Subgrade biogeochemical reactor (SBGR)

- SBGR continues to operate
  - Passive operation providing treatment of groundwater
  - System will pump water again soon
- Sampling was completed in September and November 2025
  - Results continue to indicate lower PCE and TCE concentrations next to the cell
  - Additional sampling was conducted in February and will occur again in May
  - Results will be provided in August 2026 status report

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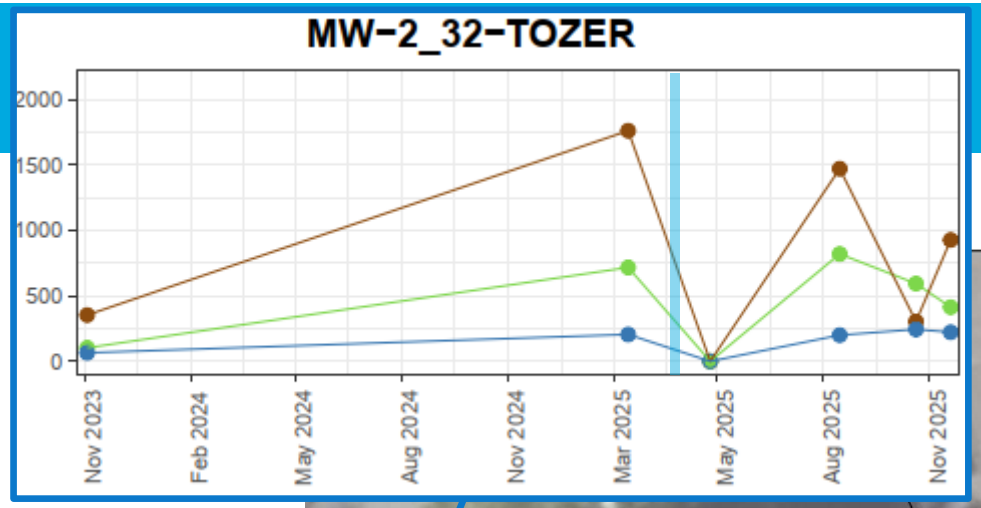
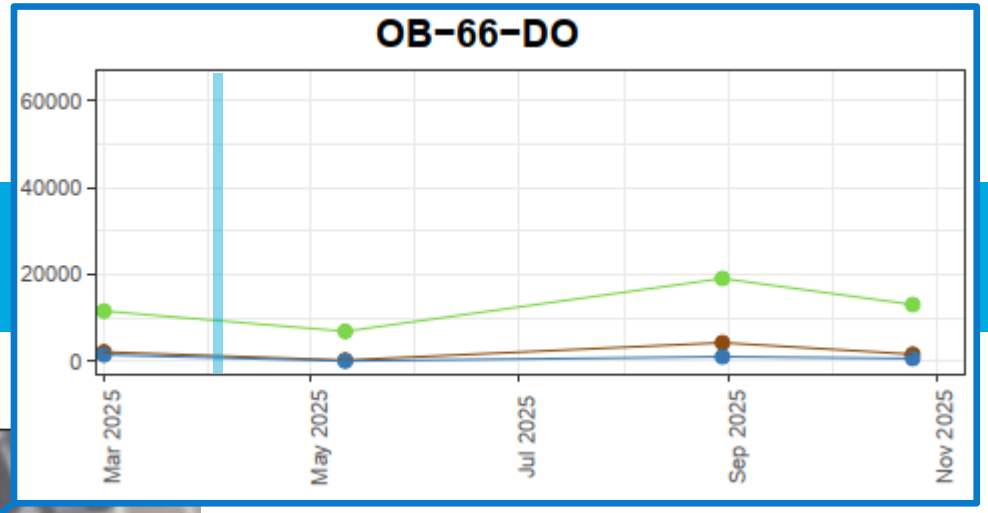
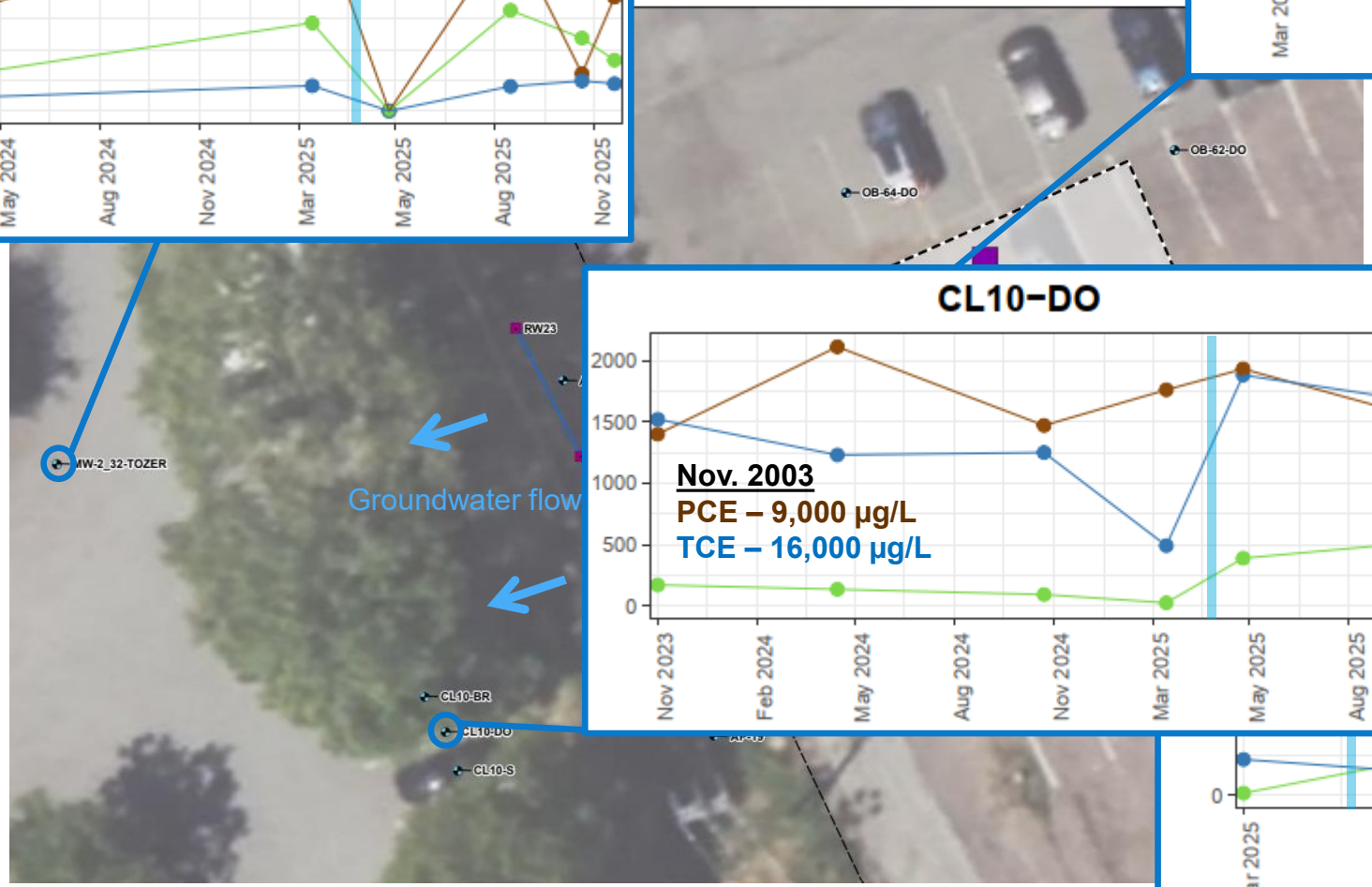
PSL-10 – Preliminary Results

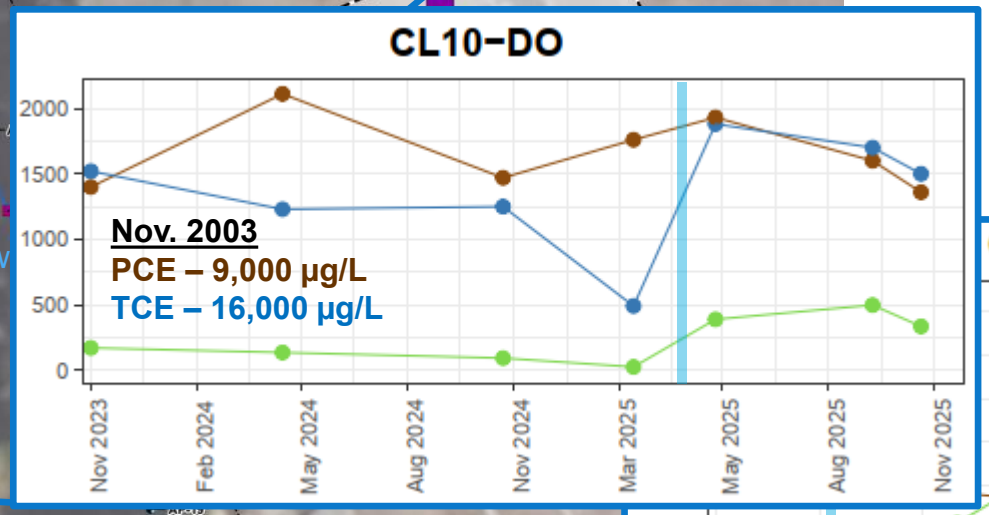
Results (µg/L)

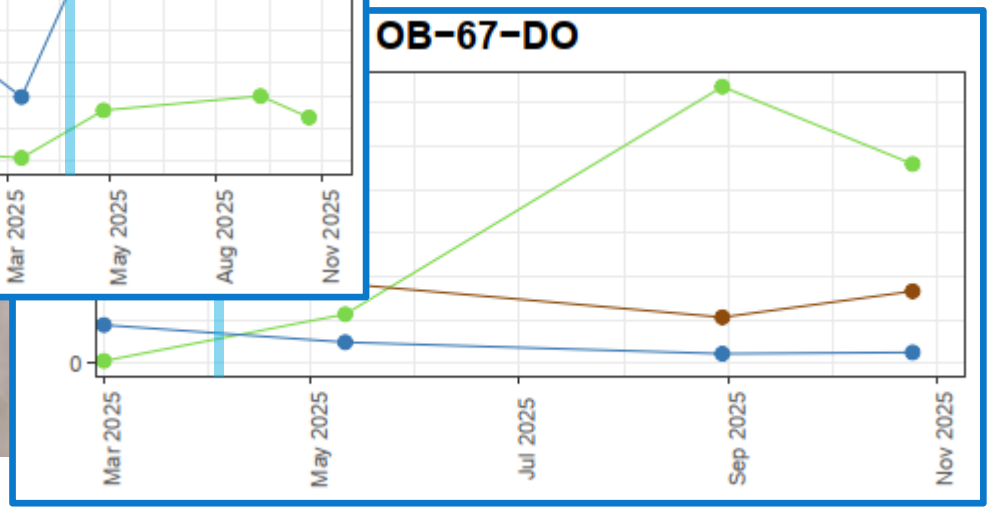






Nov. 2012
PCE – 16,000 µg/L
TCE – 4,300 µg/L





1,2-DCE PCE TCE VC

Start of Treatment

System Installation Schedule*

Treatment Area	System Design	System Installation	Start of Treatment	Monitoring
Building 3 (Thermal)	Complete	In Progress	May 2026	2026
PSL-10 (SBGR)	Complete	Complete	Complete	Ongoing
Building 5 (Bio)	Complete	Complete	Complete	Ongoing
Bedrock (ISCR)	Complete	Stage 1 Complete Stage 2 Complete Stage 3 May 2026	Stage 1 Complete Stage 2 Complete Stage 3 Fall 2026	Ongoing
Stream A (Mat)	Complete	Complete	Complete	Ongoing

NOTES:
* = Estimated schedule, subject to change
Bio = Bioremediation
ISCR = In situ chemical reduction
Mat = Reactive core mats
SBGR = Subgrade Biogeochemical Reactor

Upcoming Submittals and Public Involvement

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Upcoming Submittals and Public Involvement Opportunities

Next Deliverables

- Phase IV/Temporary Solution Status Report (Aug 2026) – semiannual status report

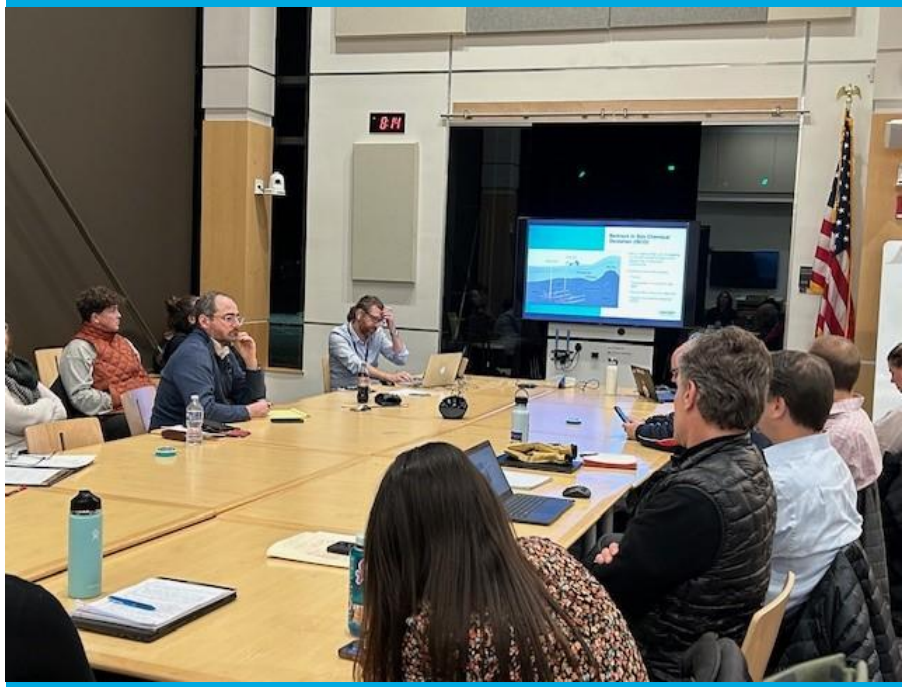
Upcoming Meetings

- Quarterly – alternating PIP and TAG meetings
  - Summer TAG (July or Aug 2026)

Monthly Updates

- Sign the mailing list with your email address if you would like to receive updates by email only (no more paper mail)
- Website homepage updated first week of the month

Sign-up Link



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Reports Available

- Prior reports available here:
  - Hard copy
    Beverly Public Library Reference Desk
  - Or online
    https://eeaonline.eea.state.ma.us/portal/dep/wastesite/viewer/3-0000485

For More Information

- Website: https://beverlysitecleanup.com/
  - Homepage updated monthly
  - Public meeting videos
  - Presentation slides
  - Overview of environmental investigation and treatment to date
  - Links to MassDEP and EPA fact sheets on cleanup process and technologies
  - Forms to submit comments or sign up for emailed site mailing list
- Email: beverlysitecleanup@jacobs.com

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Questions

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