

COLD REGIONS RESEARCH AND ENGINEERING LABORATORY RESTORATION ADVISORY BOARD MEETING

Christopher Kane, USACE Project Manager
Date: 17 September 2025

"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."



COLD REGIONS
RESEARCH AND
ENGINEERING
LABORATORY





AGENDA

U.S. ARMY

- Introductions
- Review/Approve May 2025 Meeting Minutes
- Administrative Record Update
- On-Site Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Investigation Status
- Connecticut River Remedial Investigation and Feasibility Study Report Status
- Roof Sampling Results
- Groundwater Management Zone Sampling
- Upcoming Work
- Adjourn





INTRODUCTIONS



Members

- Christopher Kane, RAB Chair and USACE Project Manager
- Kristine McDevitt, Community Member
- Bree Carlson, Member Representing Dartmouth College
- Roelof Versteeg, Community Member
- Deputy Chief/Fire Marshal Michael Gilbert, Member Representing Town of Hanover
- Tony Daigle, Member Representing SAU 70

Support

- Roberto Rivera - USAEC Environmental Support Manager
- Terry Harwood, ERDC-CRREL IRP Manager
- Dr. Samuel Beal, ERDC-CRREL Deputy IRP Manager
- Julia Rupp – Contract Office Representative
- Amy Rosenstein, USACE Risk Assessor
- Whitney Plasket, USACE Technical Lead + Environmental Engineer
- Dr. Steve Potts, USACE Geologist
- Katherine Miller, USACE Chemist
- James Wieck, GZA/Dartmouth
- Scott Calkin, WSP PM
- Amberlee Clark, WSP Deputy PM
- Amy Quintin, WSP Risk Assessor
- Katy Sarsfield, Risk Assessor
- Ryan Ordung, WSP Hydrogeologist
- Daniel Servetas, WSP Engineer
- Wolfgang Calicchio, WSP Chemist
- Bryan Connolly, WSP HAPSITE® Operator

Regulatory Agencies

- Rene Nahlik, NHDES PM
- Richard Spiese, VTDEC PM





ADMINISTRATIVE RECORD UPDATE

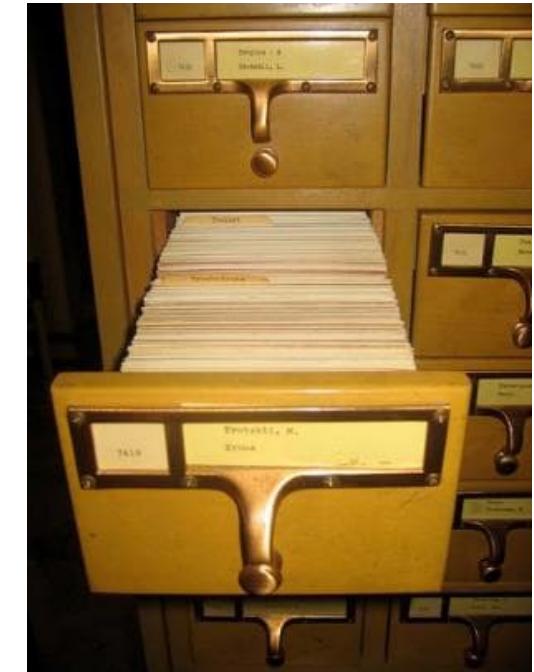


The Administrative Record is available for review:

- CRREL library (hard copies)
- CRREL SharePoint (digital copies) site and
- Howe Library in Hanover (digital copies)
 - Includes all final reports
 - See the information desk to access the files

September 2025 Update Includes:

- 13 Groundwater monitoring permit submittals in 2025



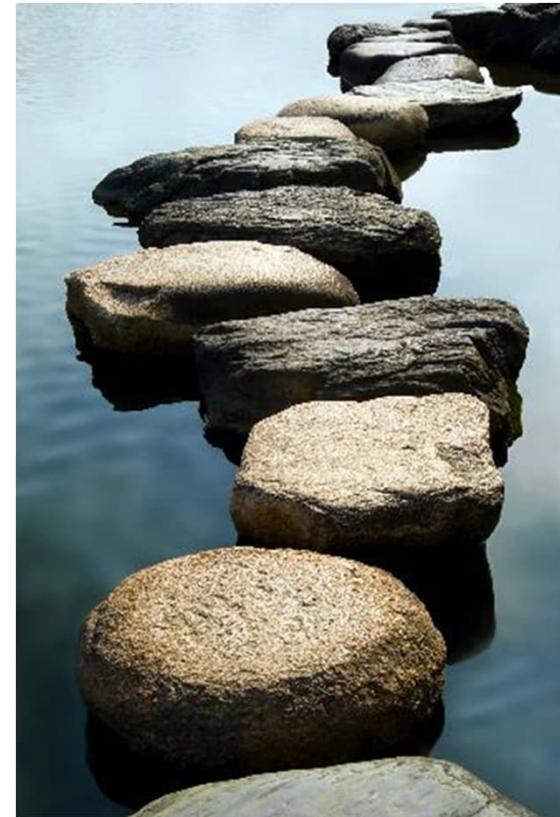


ON-SITE CERCLA INVESTIGATION STATUS



Next Steps:

1. Currently in process to draft FS Addendum to include revision to ARARs and revision of Water Treatment Plant Alternative Costs
2. Once FS Addendum is issued, Proposed Plan and Decision Documents will follow thereafter
Provides public and stakeholders an opportunity to comment on selected remedy(s) per CERCLA, including public meetings as part of each document cycle.
Provides formal record and rationale for the selected remedy(s) and commits parties to the remedy(s).
3. Groundwater Treatment Plant 100% Design has been tabled to keep in line with the CERCLA Process
Design will be completed after the Decision Document is finalized.
Extraction well design/pilot planned to optimize final design

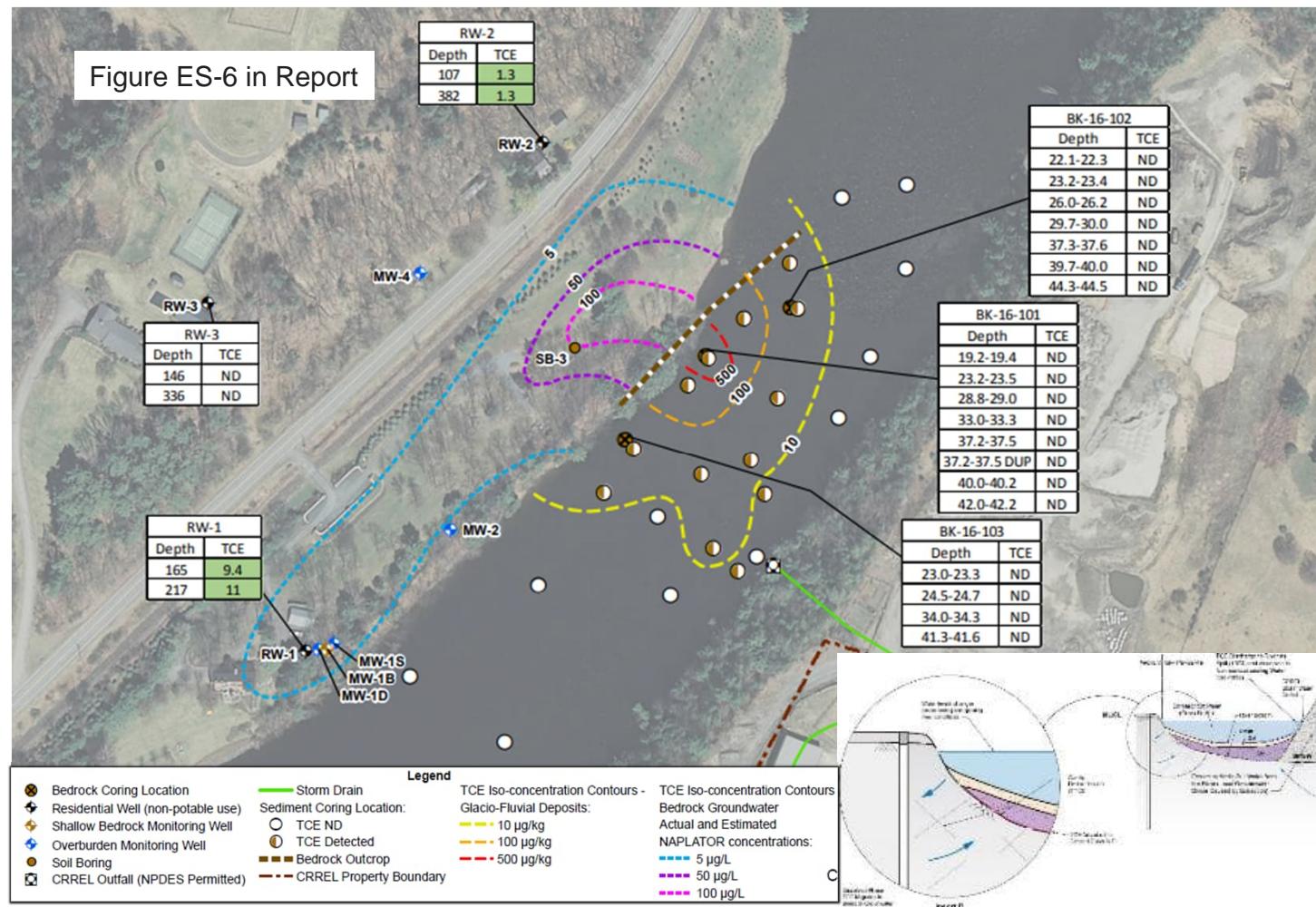




CONNECTICUT RIVER CERCLA INVESTIGATION REPORT



- In Draft Final Status – Vermont DEC approved the report to issue as final in July 2023.
- USACE received report comments from NHDES in October 2023.
- USACE sent formal response letter to NHDES on 19 August 2025.
- WSP is currently editing the document to incorporate NHDES comments and issue as final.
- Feasibility Study, Proposed Plan, and Decision Documents will follow thereafter.





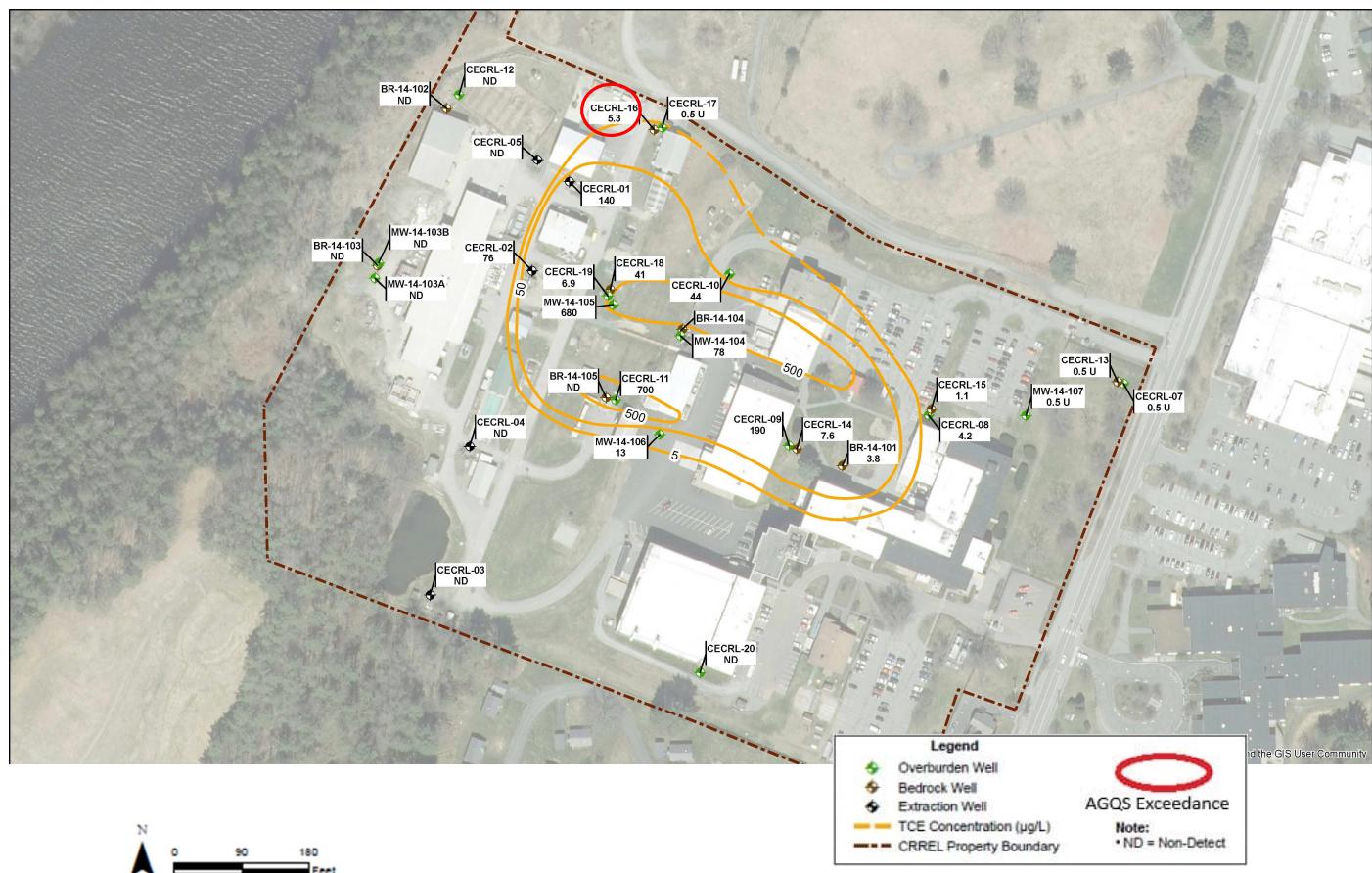
GROUNDWATER MANAGEMENT ZONE SAMPLING

JULY 2025



July 2025 TCE Results		
Sample ID	Result	Qualifier
CECRL-01	140	
CECRL-02	76	
CECRL-03	0.5	U
CECRL-04	0.5	U
CECRL-05	0.5	U
CECRL-07	0.5	U
CECRL-08	4.2	
CECRL-09	190	
CECRL-10	44	
CECRL-11	700	
CECRL-12	0.5	U
CECRL-13	0.5	U
CECRL-14	7.6	
CECRL-15	1.1	
CECRL-16	5.3	
CECRL-17	0.5	U
CECRL-18	41	
CECRL-19	6.9	
CECRL-20	0.5	U
CECRL-OUTFALL	0.5	U
MW-14-103A	0.5	U
MW-14-103B	0.5	U
MW-14-104	78	
MW-14-105	680	
MW-14-106	13	
MW-14-107	0.5	U
BR-14-101	3.8	
BR-14-102	0.5	U
BR-14-103	0.5	U
BR-14-105	0.5	U

Notes:
All units in micrograms per liter (µg/L)
J = estimated
U = not detected
Bold = exceeds NH AGQS (5 µg/L)





ROOF SAMPLING

U.S. ARMY

The objectives of the roof materials sampling and analysis include:

1. Determine TCE concentrations and total mass within the various component materials that make up the roof of the Main Laboratory building.
2. Evaluate the TCE concentration distribution across the Main Laboratory roof system.
3. Generate a line of evidence to support identification of the source of TCE concentrations in the Main Lab 2nd Floor.

- Sampling of 3 locations completed on May 20, 2025.
- HAPSITE® analyses completed on July 15, 2025.



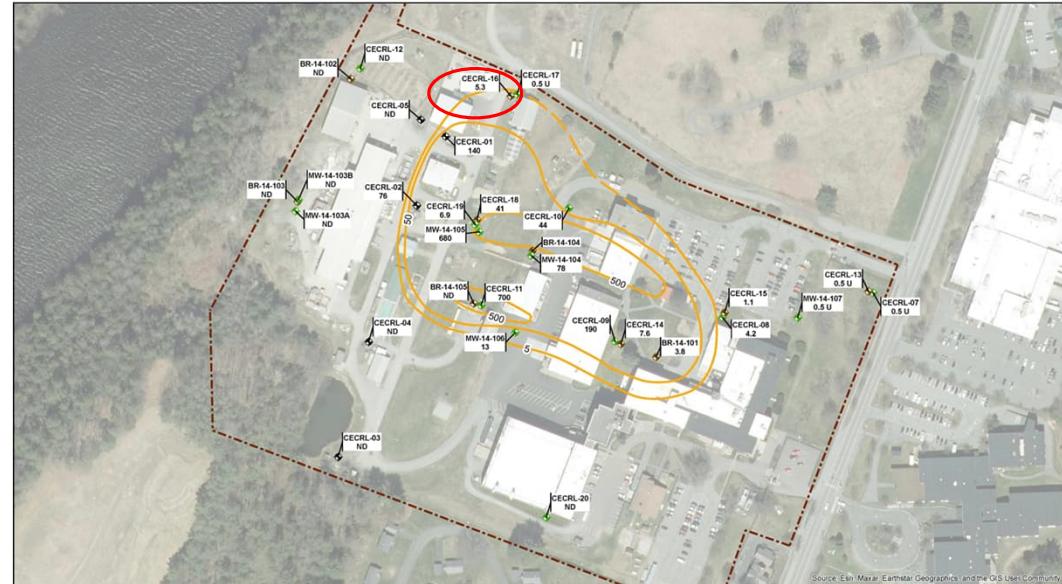


UPCOMING WORK



Indoor Air

- Continued HAPSITE® monitoring throughout campus
- Plenum Study - Fall 2025
- VI Pathway Study – Fall 2025
- TCE-Impacted Glycol Piping Removal – TBD, Anticipated FY 2026
- Tentative restart/expansion of VaporSafe® monitoring – Anticipated FY 2026
- Data Gap Analysis – Anticipated FY 2026
- All campus Summa sampling – Anticipated February 2026



Groundwater

- Complete groundwater extraction pilot work plan
- Groundwater Treatment Plant Design pending extraction pilot test results

Soil Gas

- SVE Pilot Re-Start awarded





UPCOMING WORK - CONTINUED

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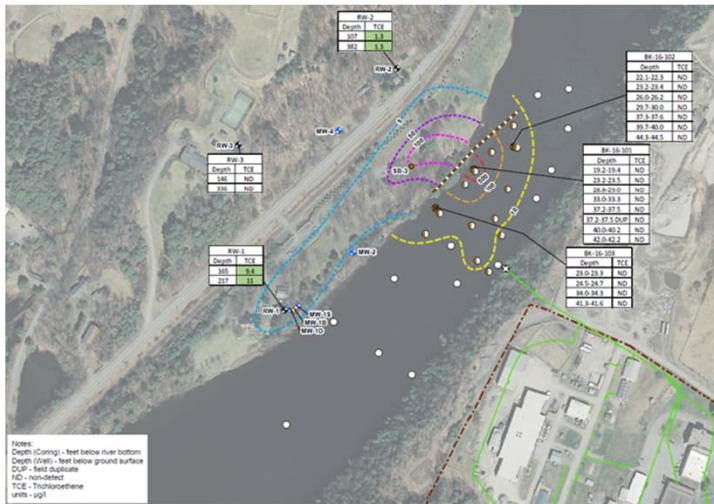


CRREL RI/FS/Proposed Plan/Decision Document

- Prepare Feasibility Study Addendum
- Draft Proposed Plan and Decision Document

Connecticut River RI/FS

- Prepare Final RI incorporating NHDES Comments
- Submit revised Draft Feasibility Study after the RI is finalized.
- Next Steps - Draft Proposed Plan and Decision Document



Groundwater Treatment Plant

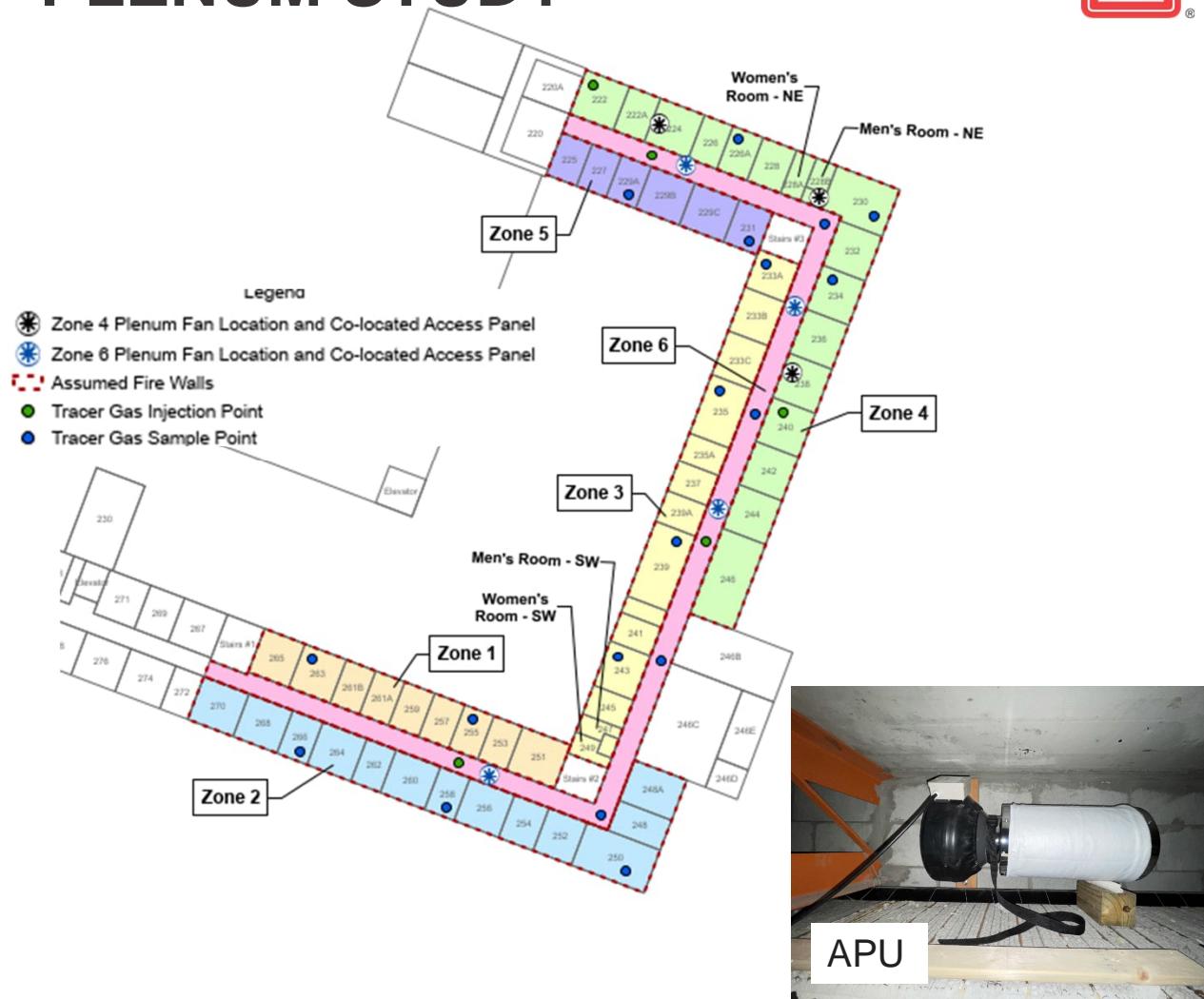
- Replacement VFD Installations
- CECRL-04 pump replacement
- P1/P2 replacement
- Complete tray stripper pilot testing
- Air Stripper Tower 1 Inspection
- Repair leak in waterline to Groundwater Treatment Plant



UPCOMING WORK - PLENUM STUDY



- Finalize Work Plan
- Scheduled work to begin November 2025
- Primary Objective is to collect data sufficient to design a ventilation system through the following activities:
 - Visual confirmation of plenum zones, structure, penetrations, etc.
 - Identifying airflow patterns through tracer testing
 - Quantifying effectiveness of APUs through targeted HAPSITE® monitoring



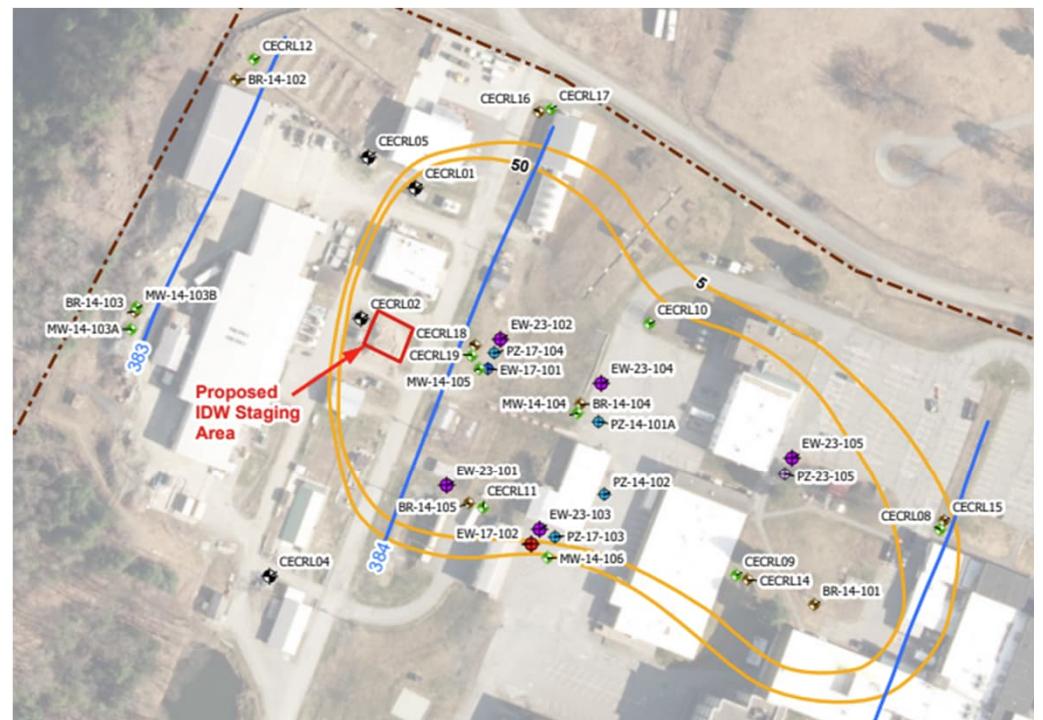


WORK PLANS IN DEVELOPMENT



12

- Vapor Intrusion Pathway Study Work Plan
 - Study to identify any remaining VI pathways from the subsurface to indoor air.
- Groundwater Extraction Pilot Test
 - Design of extraction wells, water conveyance, and testing plan for a 5-well network to better understand dynamics of the upgradient aquifer
- Quality Assurance Project Plan (QAPP)
 - QAPP has been updated and submitted as Draft-Final to NHDES for review.
- Groundwater Sampling Plan
 - The updated Groundwater Sampling Plan has been submitted to NHDES for review.



Legend

◆ Bedrock Well	◆ Pilot Extraction Well	◆ TCE Concentration ($\mu\text{g/L}$)
◆ Overburden Well	◆ Piezometer	◆ CRREL Property Boundary
◆ CRREL Cooling Water Well	◆ Proposed Extraction Well	◆ AOC Boundary
◆ Destroyed/Abandoned Well	◆ Proposed Piezometer	◆ Potentiometric Contours July 2024



WORK PLANS IN DEVELOPMENT

13



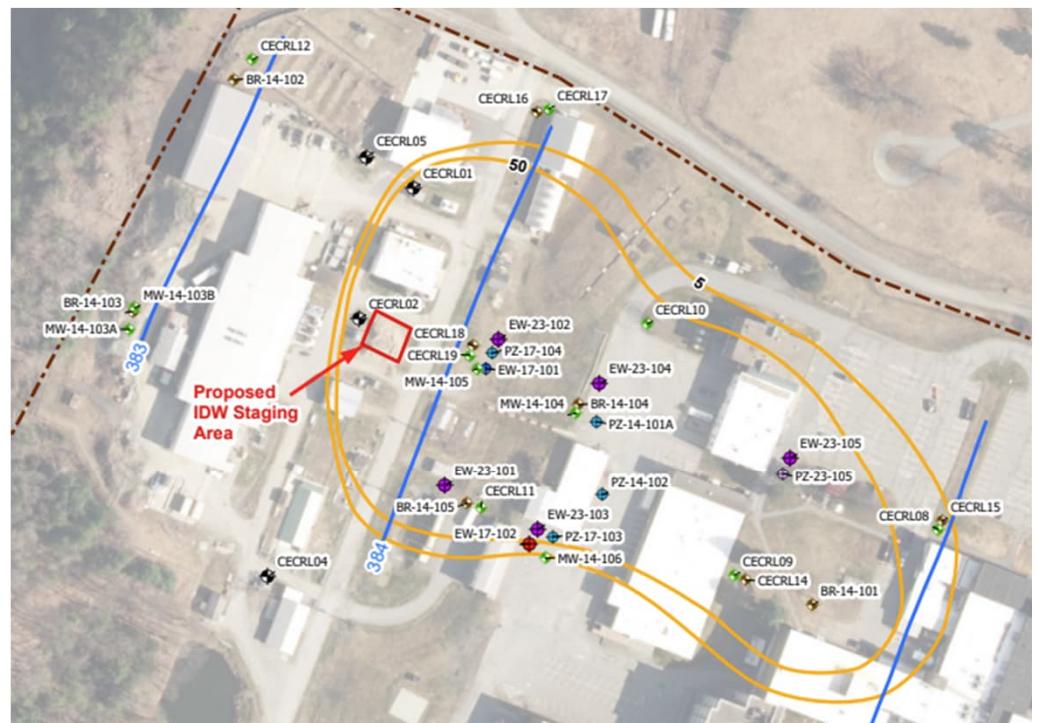
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Pipe Chase



Floor Drain



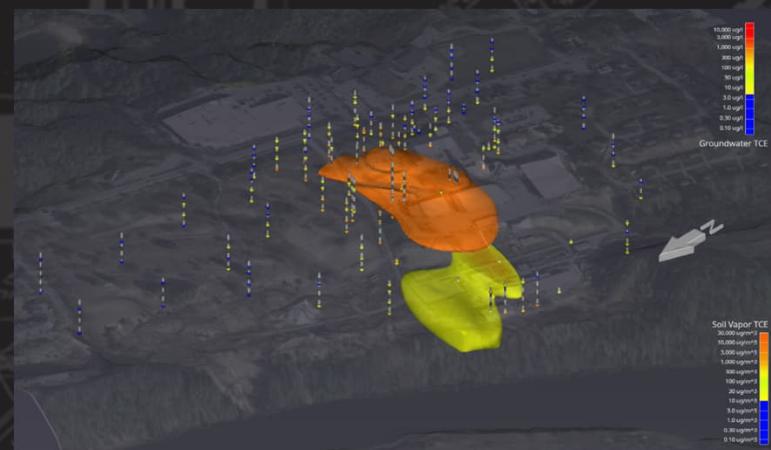
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◆	Overburden Well	◆	Piezometer	◆	CRREL Property Boundary
◆	CRREL Cooling Water Well	◆	Proposed Extraction Well	◆	AOC Boundary
◆	Destroyed/Abandoned Well	◆	Proposed Piezometer	◆	Potentiometric Contours July 2024

QUESTIONS OR COMMENTS

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