

WELCOME

VIRTUAL MEETING WILL BEGIN AT

11:30 AM Central

Society of American Military Engineers
Omaha Post
September 8th 2026 Meeting

Omaha Post Meeting

Society of American Military Engineers
Omaha Post
September 8th, 2026 Meeting

Meeting Agenda

- Pledge of Allegiance
- New Member/Guest Introductions
- Invocation
- Lunch
- Announcements
- Member Spotlight – CDM Smith – Laura Kelley
- Presentation – PFAS Soil Remediation – Shaun Malin
- Q&A
- Split Kitty Drawing
- Closing Remarks

Pledge of Allegiance



I pledge allegiance to the Flag of the United States of America, and to the Republic for which it stands, one Nation under God, indivisible, with liberty and justice for all.

Introductions

Introductions

- Welcome Student Chapter Members
- Welcome New SAME Members
- Introduction of SAME Guests

Invocation

Please join us in the invocation before we dismiss for lunch

Lunch

Dismiss by table

Announcements

■ SAME Omaha Post / University of Nebraska Resume Workshops

- ▶ UNL – Kiewit Hall – September 18, 2026
- ▶ UNO – Peter Kiewit Hall – October 2, 2026
- ▶ 9:00am – 2:00pm CT
- ▶ POC / RSVP: Bobbi Jo Lang blang@blex.com or 573-702-5392

Announcements

- **SAME Omaha Post Member Engagement Program**
 - ▶ October 8, 2026: 3:30pm – 4:00pm (immediately preceding Happy Hour)
 - ▶ Location: Big Grove Brewery
 - ▶ POC: Tom Svoboda & Capt Jay Hamann

- **SAME Omaha Post – “We Survived the Federal Fiscal Year” Happy Hour**
 - ▶ October 8, 2026: 4:00pm – 6:00pm
 - ▶ Location: Big Grove Brewery
 - ▶ POC: Bobbi Jo Lang blang@blex.com

Announcements

- **SAME Omaha Post / APEX Accelerator – Virtual Matchmaking**
 - ▶ October 15, 2026
 - ▶ Time: TBD
 - ▶ POC: Bobbi Jo Lang blang@blex.com

- **SAME Omaha Post Annual Scotch Tasting**
 - ▶ December 8, 2026
 - ▶ Location, Time: TBD
 - ▶ POC: Bobbi Jo Lang blang@blex.com

Announcements

- **SAME Omaha Post Student Mentoring Program – Call for Mentors!**
 - ▶ 33 years of encouraging students to consider A/E/C and stem pathways
 - ▶ POC: Nicole Hunter SAMEsmp@gmail.com



Student Mentoring Program

Announcements

- **SAME Omaha Post 2027 Industry Day**
 - ▶ June 2 - Golf Tournament
 - ▶ June 3-4 – Industry Day Events

Announcements

■ 2026 SAME Monthly Post Meeting Forecast

- ▶ October 13. Field Club of Omaha. Secure Construction (ICD 705, SCIFs)
- ▶ November 10. Field Club of Omaha. TBD.
- ▶ December 8. Field Club of Omaha. Regional USACE Districts Updates
- ▶ Register here: <https://www.same.org/omaha/events/>
- ▶ POC: Ted Kocher tkocher@schemmer.com

Member Spotlight Presentation

CDM Smith

Laura Kelley, CHMM, PMP

Environmental Client Service Leader

CDM Smith



What happens **NEXT** is happening **NOW**.

Laura Kelley, CHMM, PMP
Vice President, Environmental Client Service Leader

September 8, 2026



Overview



75+ years



7,600+ employees



Annual Revenues
\$1.4 Billion



Employee-owned



CDM Smith Services

What We Do:

Water
Transportation
Environment
Energy and Facilities



How We Work:

Consulting
Design
Construction
Program Management



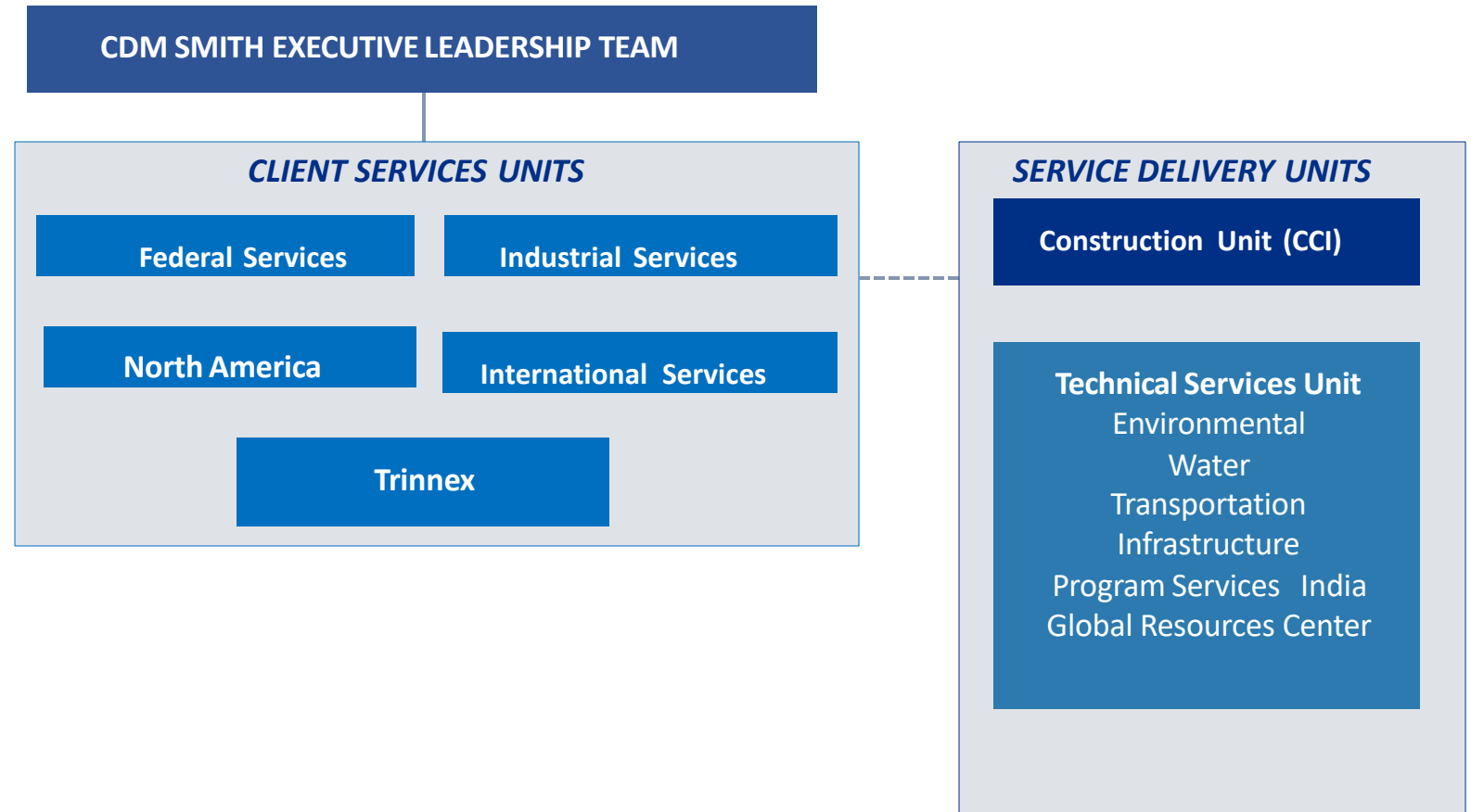
Who We Work With:

Development Assistance
Federal Government
Industry
Municipal Government



CDM Smith Organization

- CDM Smith operates as a matrixed organization
- Our support to USACE comes from our Federal Services, Technical Services, and Construction units

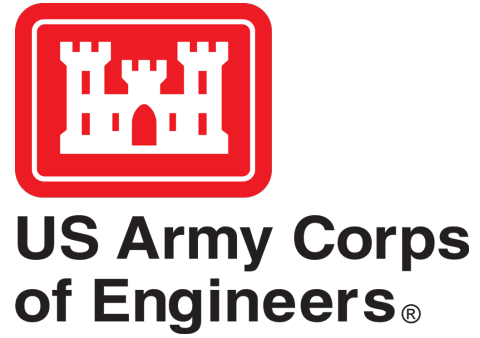


CDM Constructors Inc.

- General contractor with engineering licenses across the U.S.
- 500+ construction professionals worldwide
- \$1 billion aggregate bonding capacity
- Types of projects for the USACE include constructing buildings, water treatment plants, and levee repairs

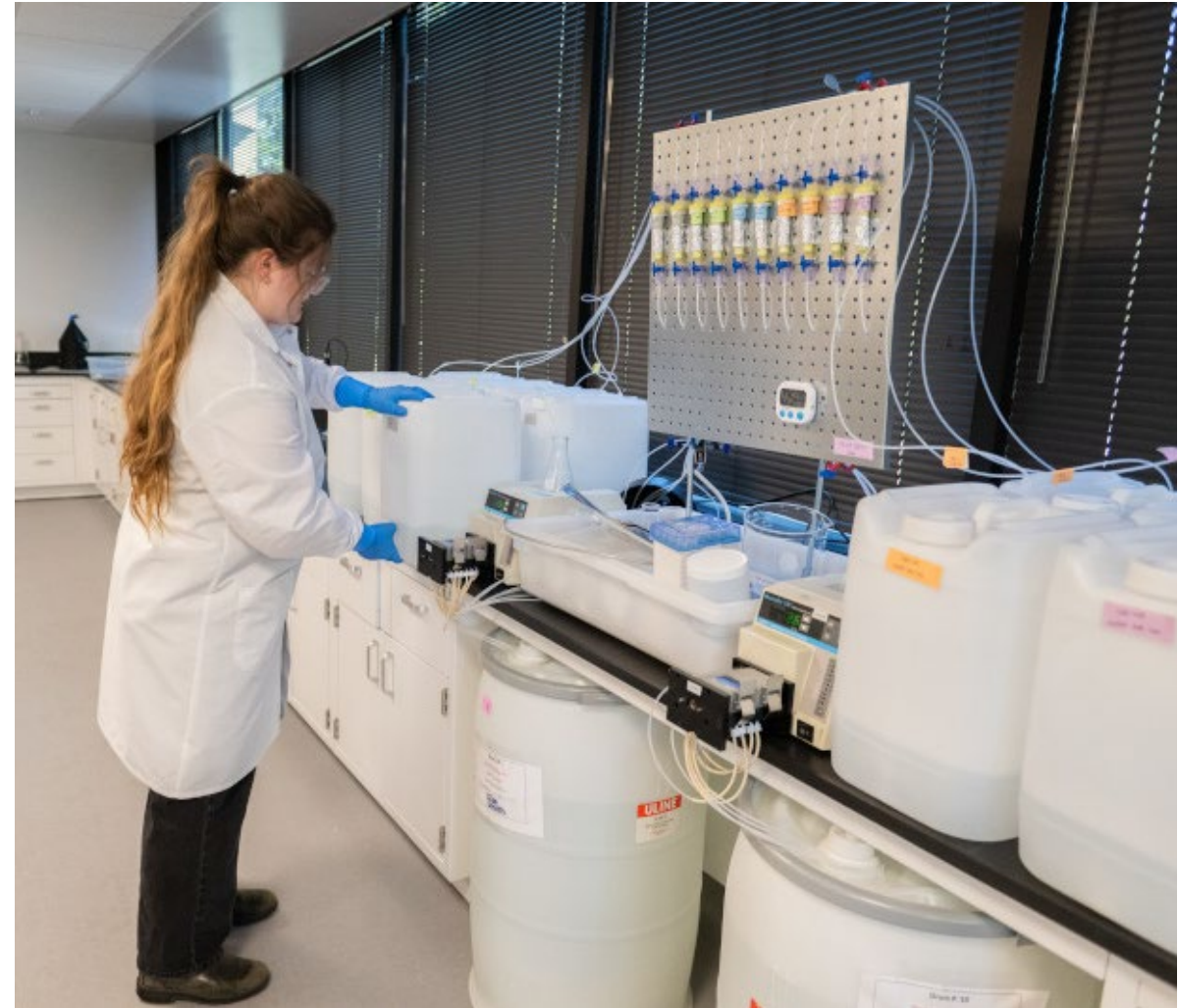


Federal Clients



In-House Laboratory Capabilities

- Bellevue, WA and Denver, CO Research and Treatability Laboratories
 - Strategic Environmental Research and Development Program (SERDP) and Environmental Security Technology Certification Program (ESTCP)
 - Air Force BAA and NAVFAC EXWC projects
- Accredited Boston-Area Geotechnical Laboratory



Mine Site Remediation

- Full capabilities from initial assessment and remedial investigations, through selection and design of remedies, to construction and operation of remedial actions
- Excavation of mine waste, residential yards, mine site repositories, haul roads



CDM Smith Public Involvement Expertise

40+ years of EPA and NEPA public outreach experience:

- Developing stakeholder engagement strategies
- Facilitating public meetings and workshops
- Preparing fact sheets, flyers, mailers, press releases, posters, and public notices
- Coordinating news media and preparing surveys



- Virtual Public Meeting Spaces

Project Examples

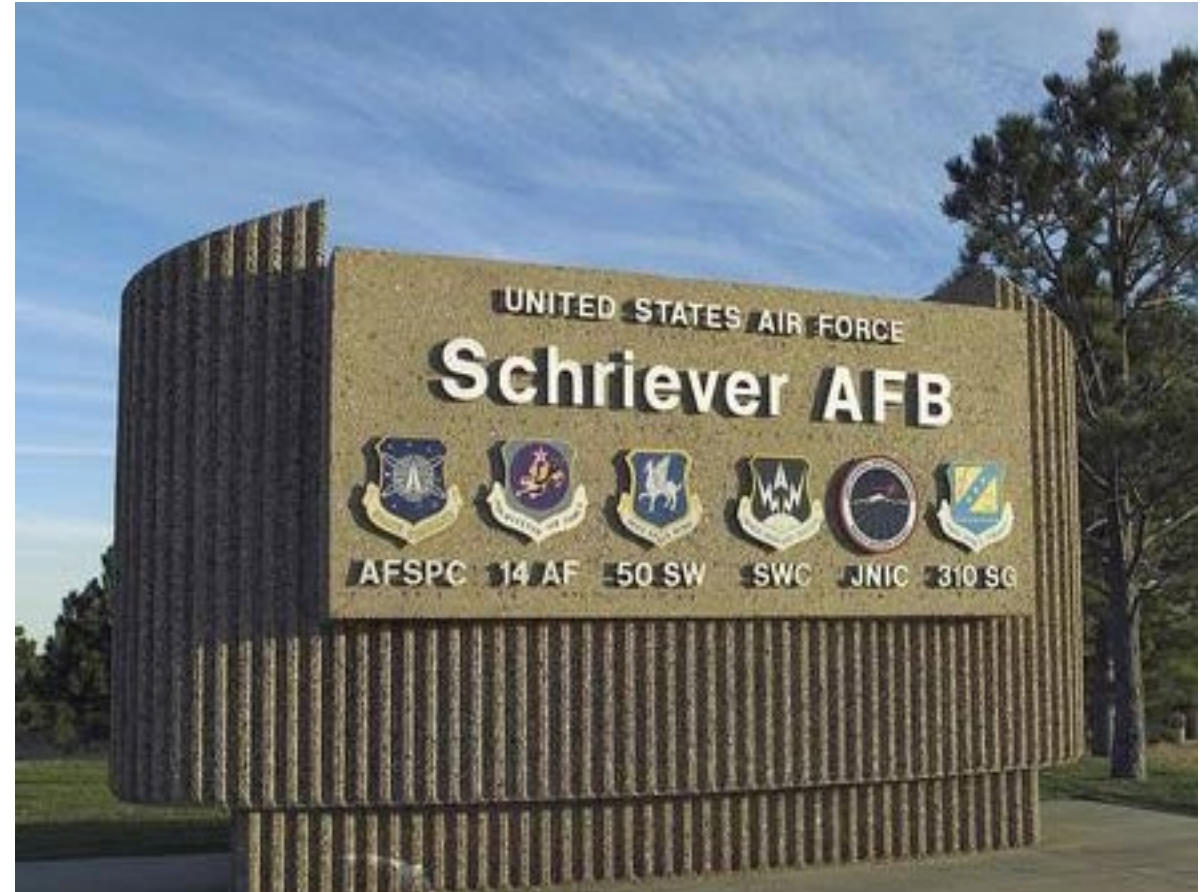
Libby Asbestos Superfund Site, MT

- Partnered with EPA Region 8 and the Omaha District to address asbestos in yards, homes and other structures
- Advancing cleanup of the former mine site



Schriever Space Force Base, Colorado

- For Omaha District ER Group, performed bench-scale studies of soil washing, foam fractionation, and electrochemical oxidation to assess treatment and destruction of PFAS from AFFF-impacted soils, sediments, and water.



St. Vrain Creek Flood Risk Management Study

- Section 205 Flood Risk Management Study
- HEC-HMS and HEC-RAS modeling to evaluate flood risk and watershed performance
- Developed and evaluated alternatives for channel improvements, levees, bridges, and grade-control structures to improve community resilience
- Integrated hydraulic engineering, sediment analysis, inundation mapping, and environmental considerations to support Omaha District decision-making.



Buckley Space Force Base Visitor Control Center Relocation

- Renovated Building 1553
- Designed a new access drive and parking lot
- Added a pedestrian bridge
- Streamlined the process for visitors seeking authorization to enter the installation.
- Incorporated antiterrorism and force-protection criteria to bring the site into compliance with security requirements.



Pojoaque Basin Regional Water System

- \$360 million design-build water treatment plant for Dept. of the Interior
- Regional water infrastructure investment with 73 miles of transmission lines
- Collaborative stakeholder engagement throughout the project





30 years Working with the Omaha District

Omaha District Relationship

30 years

contracting with the District

55 task orders

Civil Works • HTRW • EPA support

\$62M

Omaha design-build + construction

Active Omaha contracts

\$249M Environmental A-E MATOC

Air Force + EPA Region 8 | through 2031

shared capacity • W9128F-24-D-0016

\$240M Unrestricted ERS / MMRP

HTRW + munitions response | through 2026

shared capacity • W9128F-22-D-0011

\$999M RDI MATOC

Contingency + rapid infrastructure | through 2027

shared capacity • W9128F-20-D-0002



Thank You and Questions!



Feature Presentation

PFAS Soil Remediation Strategy: Rapid Leaching Technology (RLT) & its Applicability to MILCON

Shaun C. Malin, PG

Principal & Director of Strategic Development

HRP Associates, Inc.



September 8, 2026

Closing the Cost Gap: PFAS Soil Remediation via Mass Reduction

PRESENTATION BY:



INTRODUCTION



Shaun Malin, PG

NAICS: *562910 (small)*, 541620, 541330, 541690, etc.

- HRP Associates, Inc. founded in 1982
- Shaun has 23 years of collective environmental consulting experience
- Site investigations & remediation
- VOCs, PCBs, metals, PFAS, etc.
- Fixer.

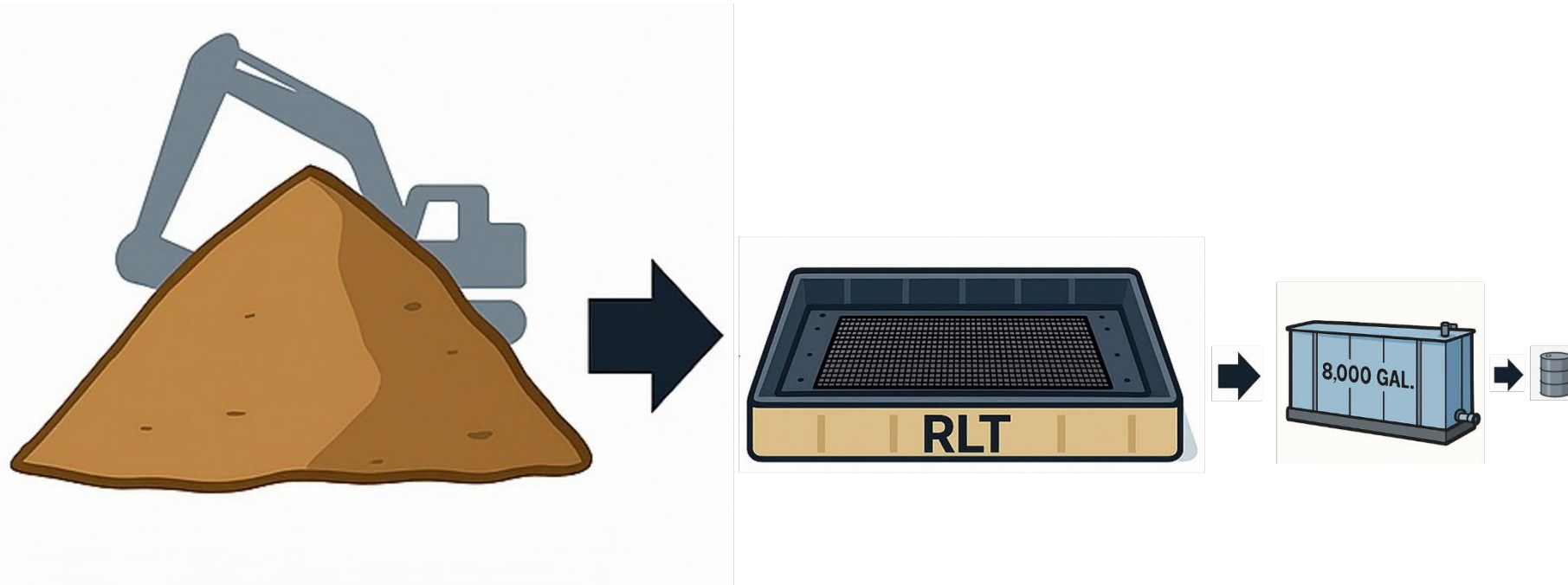


PFAS are disrupting construction projects.

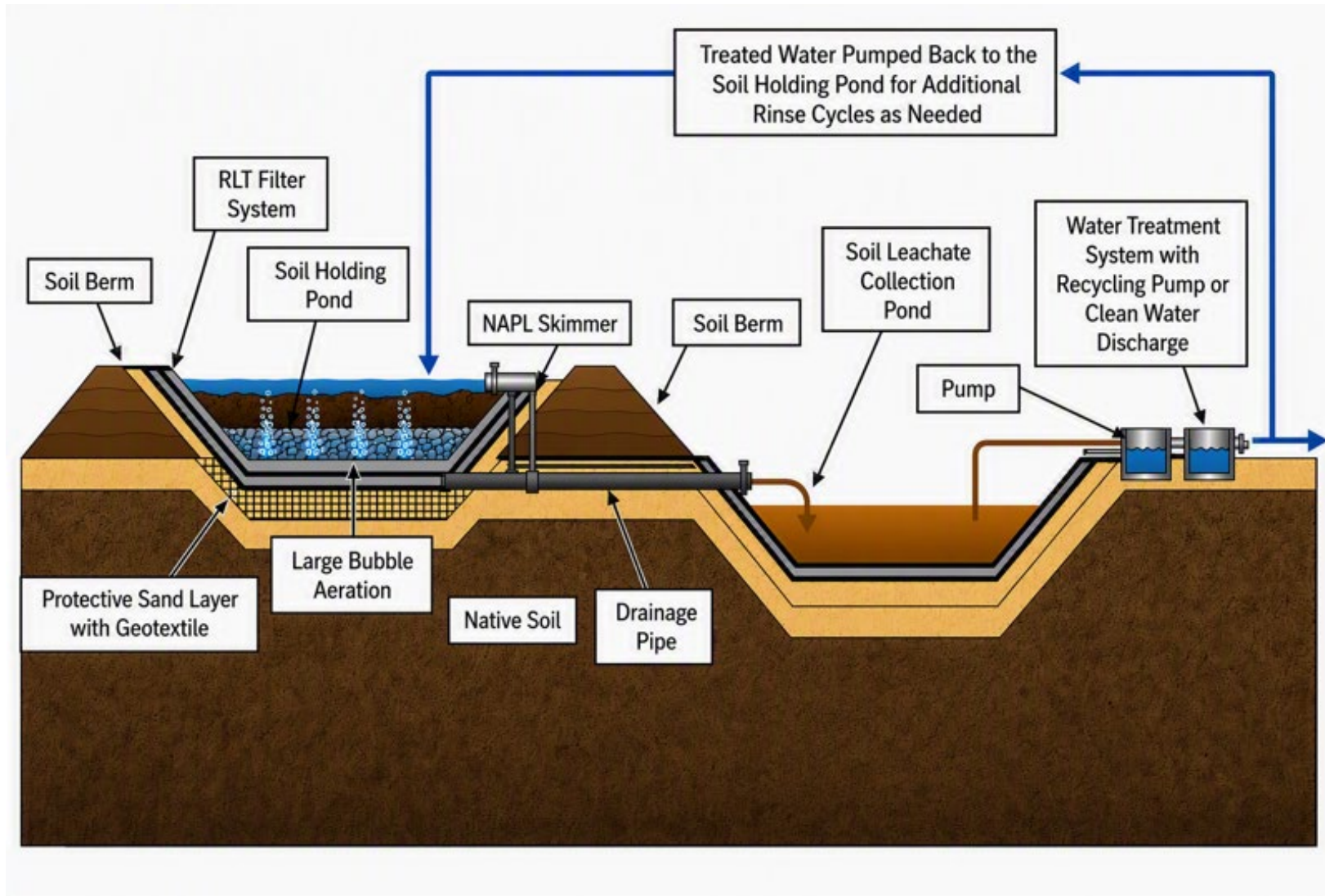
- Construction **timelines** and **budgets** getting derailed.
- Excavation triggers regulated waste haul, and disposal logistics dominate schedule.
- Unknown concentrations → increases contingency \$\$\$.
- Stockpile management + secondary containment requirements.
- Potential groundwater impacts that effect dewatering operations.



Remedial Separation Technology = Massive Volume Reduction

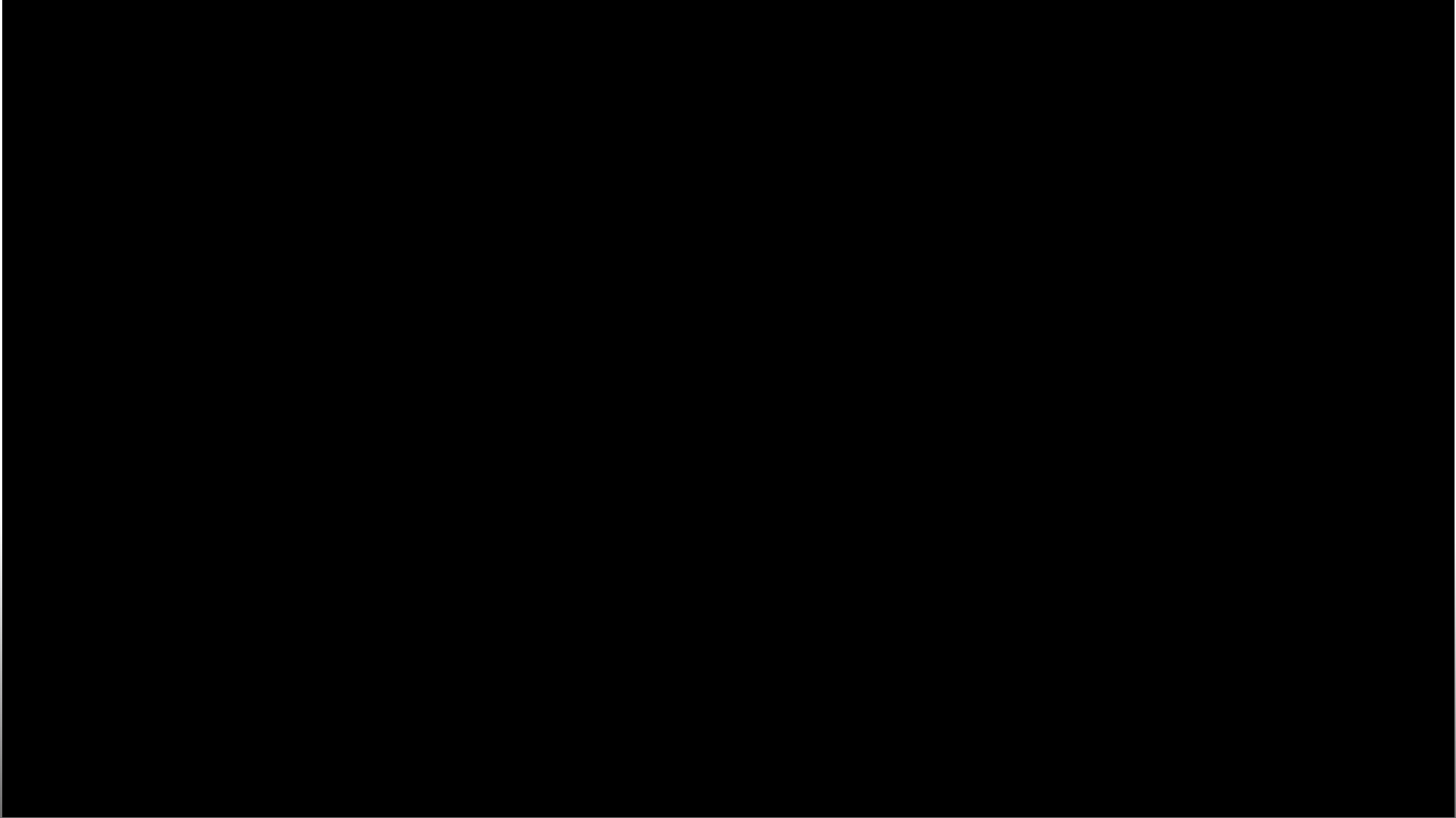


RLT X-Section





CONSTRUCTION





DESIGN PROCESS

- 1) Laboratory Bench-scale Tests
- 2) Field Pilot Study

BENCH-SCALE TEST (Step 1):



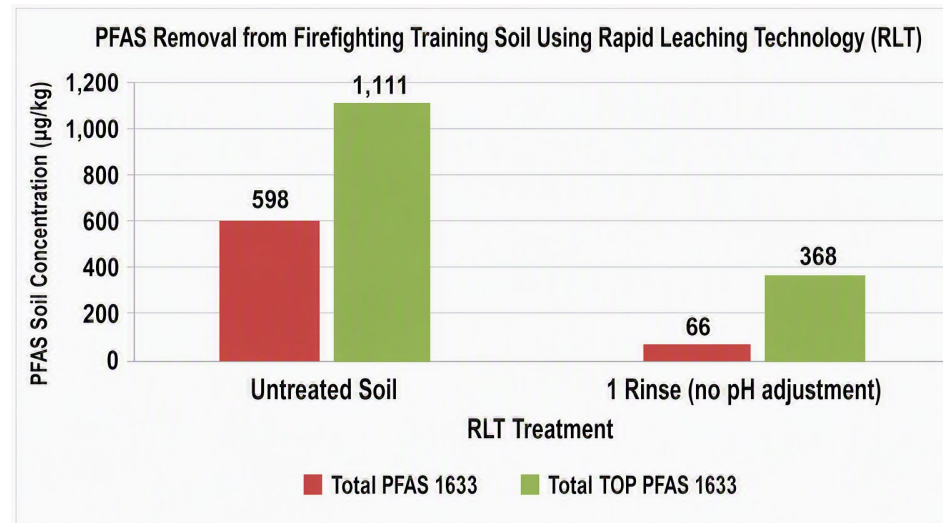
- Firefighting training exercises (AFFF impacts)
- 5 soil samples – 1 composite
- 5 cubic yards of soil excavated



BENCH-SCALE TEST (cont.)



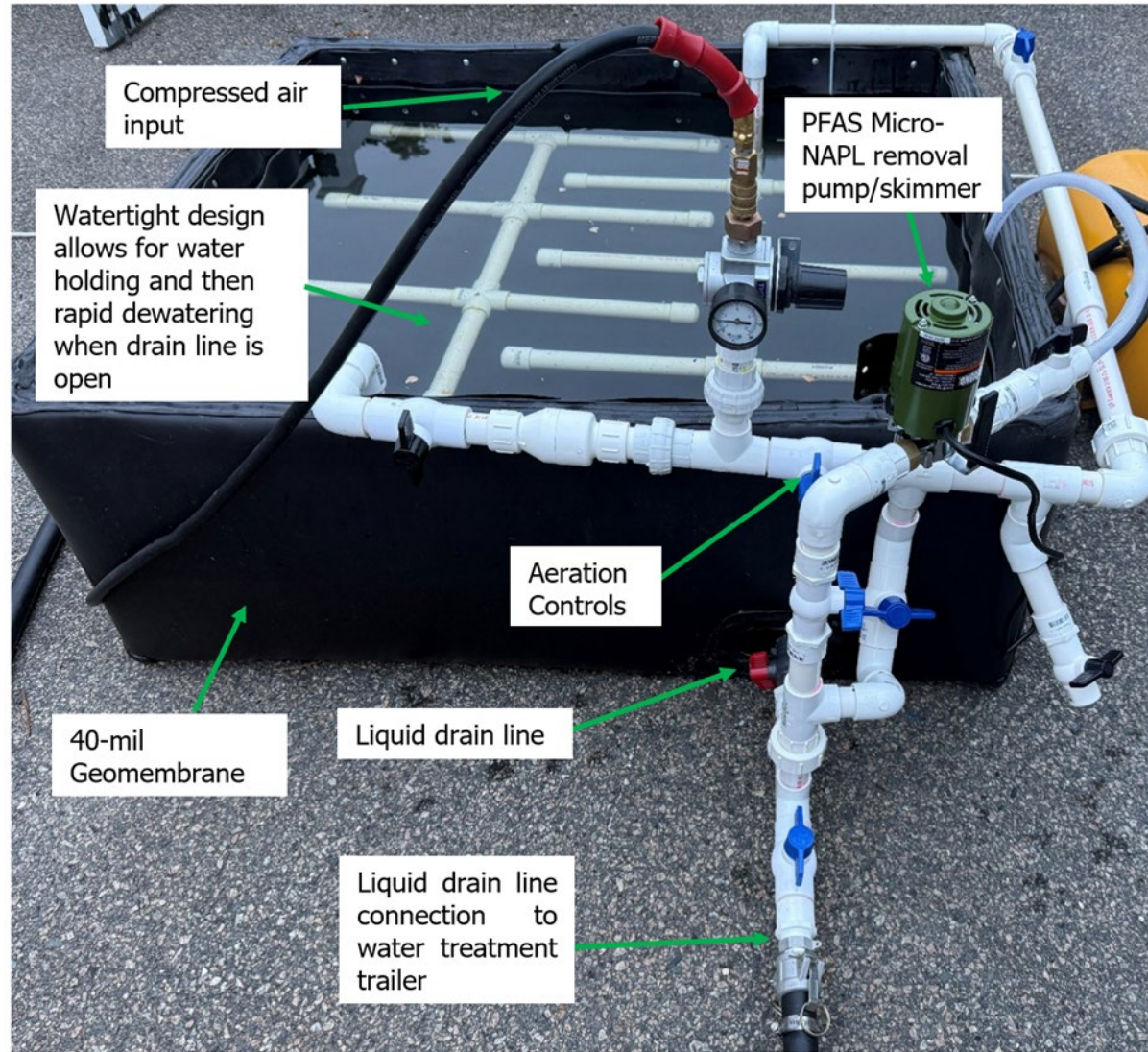
- Bench-Scale Tests documented average Total PFAS removal of **89%** with a single rinse. Total PFAS is defined as the sum of all PFAS analytes reported in **EPA Method 1633**.
- Additional rinse cycles can be used to approach **99.99%** removal.



FIELD PILOT (Step 2)



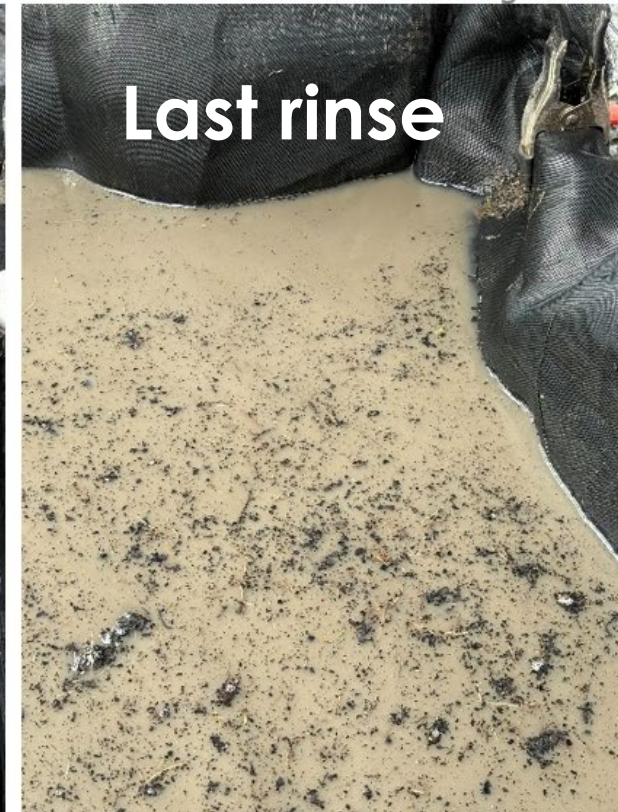
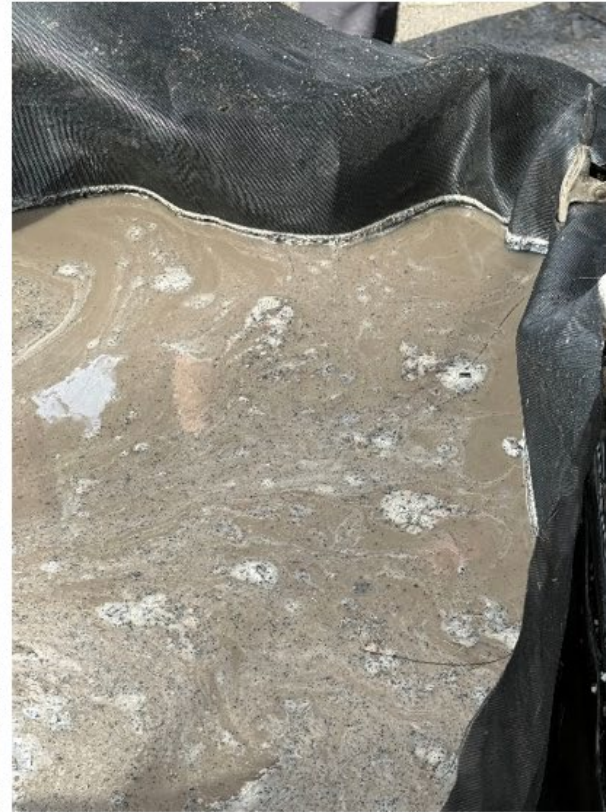
MOBILE DEMONSTRATION UNIT (MDU)



FIELD PILOT – MDU (cont.)



FIELD PILOT



FIELD PILOT SUMMARY

- Removed 96% of total PFAS in six rinses.
 - ~3 ppm to 0.1 ppm
- Moving to full-scale pilot
 - Alkaline pH adjustment to achieve up to 99.99% removal with less rinses.
 - Raising the pH causes the functional groups within the soil organic matter to deprotonate (lose protons).
 - The negatively charged PFAS are repelled by the negatively charged soil causing the PFAS to desorb, enter the aqueous phase, and leach at a highly accelerated rate.

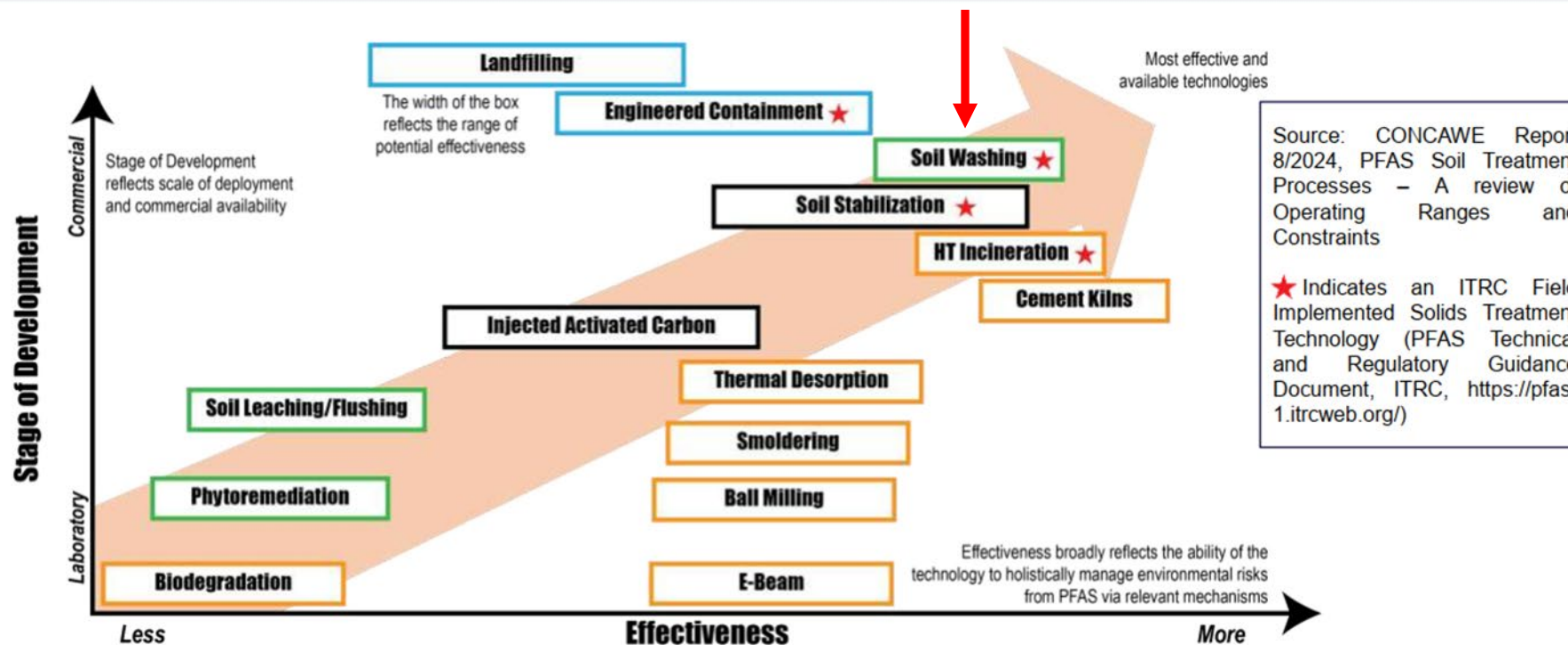




ADOPTION & COST ANALYSES



Current Status of Solids Treatment Options



UNCLASSIFIED★

Your Success is Our Mission!

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Graphic above. (2025, May 14). *Solutions for the MILCON and FSRM PFAS Challenge*. SAME Joint Engineer Training Conference, Louisville, KY.



RLT vs. Standard Soil Washing

➤ The difference:

- RLT's incorporation of **air** promotes full water saturation of soil and the generation of a **micro-NAPL** that is removed.
- RLT continuously **recycles** water (i.e., green).
- pH adjustment can be used to achieve up to 99.99% PFAS removal.
- Large scale RLT systems discharge rates greater than 1,000 GPM
- **Foam Fractionation or electrostatic concentration** of leachate generates a low volume waste stream that can be destroyed.



COST ANALYSIS: RLT vs. Dig/Haul

Excavation of 35,000 yd ³ Between 2-5 ft below ground surface	Rapid Leaching Technology	Soil Excavation and Disposal (Subtitle C Landfill)
	100'X100' Cell	500 tons per week, 70 weeks
Leachability/Benchtop Testing	\$55,000 to \$65,000	N/A
Soil Disposal Characterization for Landfill (One sample per 500 cubic yards)	Not Applicable	\$100,000 to \$120,000
Civil Engineering Design Costs	\$70,000 to \$100,000	\$70,000 to \$100,000
Environmental Engineering Design Costs (Water Treatment Design)	\$25,000 to \$35,000	N/A
Reactor Cell Construction	\$1,560,000 to 1,700,000	N/A
Wastewater Treatment System Mobilization	\$40,000 to \$80,000	N/A
Construction Oversight /Equipment Costs	\$6,400,000 to \$6,600,000	\$2,800,000 to \$3,000,000
PFAS Post Treatment Sample Collection (one per 500 cubic yards)	\$35,000 to \$45,000	NA
Soil Import and Placement	N/A	\$3,150,000 to \$3,250,000
Soil Borrow Source Testing	N/A	\$50,000 to \$55,000
Soil Disposal	N/A	\$63,000,000 to \$63,200,000
TOTAL COST	\$8,185,000 to \$8,625,000	\$69,170,000 to \$69,725,000

- Costs based on an **AFFF** airport site in Massachusetts.
- Weekly constructions costs for RLT based on oversight engineer, WWTP operator, dust monitoring, foreman, laborer, three operators (dump truck, excavator, loader and consumables).
- T&D costs based on a previous PFAS project located in proximity.
- Weekly constructions costs for excavation based on oversight engineer, dust monitoring, foreman, laborer, three operators (dump truck, excavator, loader and consumables).

88% delta

RLT SUMMARY

- RLT is a demonstrated pre-treatment, **waste minimization** strategy to **cost-effectively** address large volumes of material
 - MILCON projects
 - Source areas and IDW
 - Emergency action fence-line objectives
- Deployable, ready-now, cost-effective technology
 - Fewer truckloads (\$\$\$/ton),
 - lower incineration volumes (\$,\$\$\$/ton),
 - reduced landfill reliance

THANK YOU

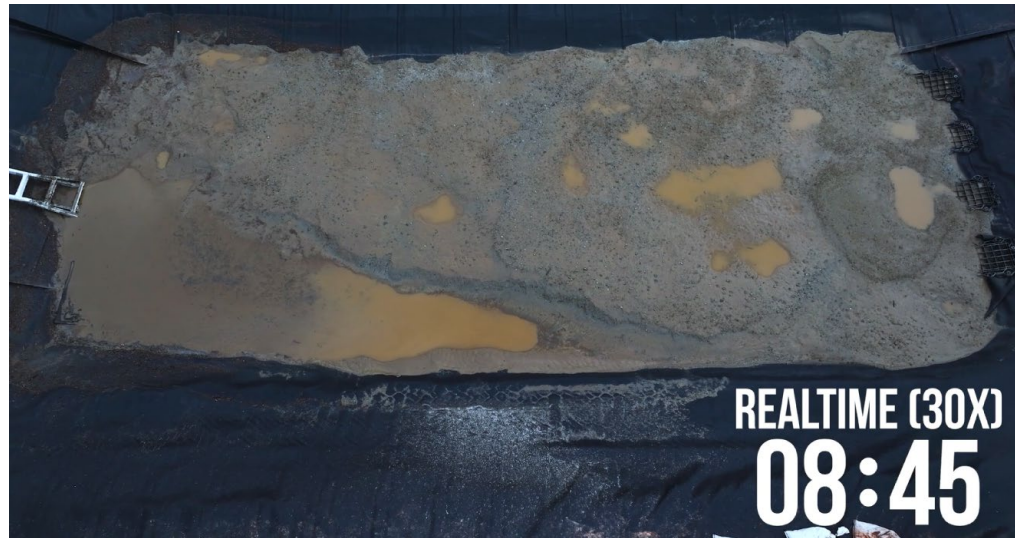
Shaun Malin, PG
(864) 561-5007
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Spare Slides →



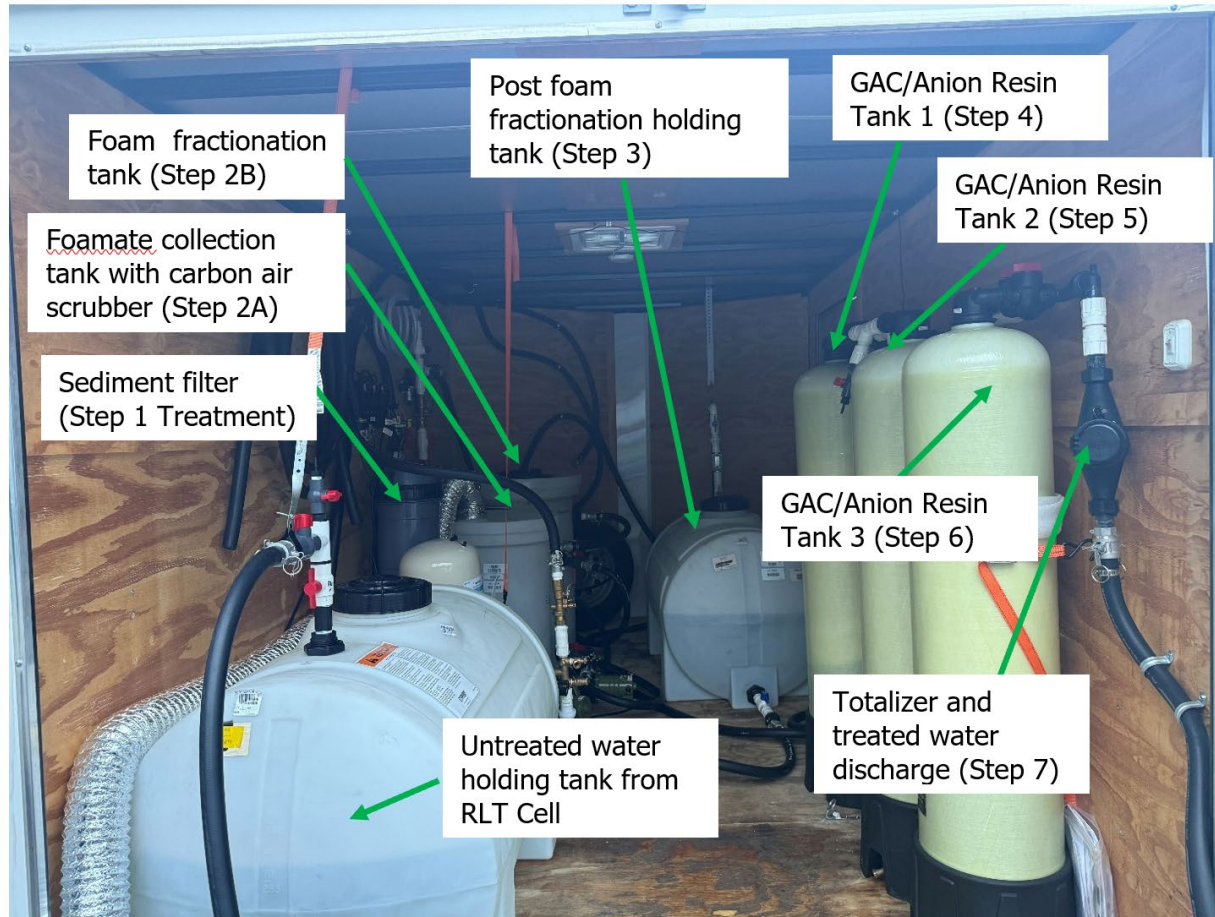




FIELD PILOT – MDU (cont.)



FIELD PILOT – MDU (cont.)



Leachate treatment trailer includes advanced PFAS remediation technology including:

- Foam Fractionation with GAC off-gas treatment
- Lead, lag, and protector GAC/IXE tanks (2.5 cubic feet each)
- Advanced high flow filtration
- 500 gallons of storage with 1-3 GPM treatment rates

Soil Technology Summary

>1,000 tons

Option	Key Elements	Sweet Spot	Challenges	Relative \$
Soil Washing	Onsite, mobile, volume reduction, most sustainable	>10,000 tons <30% fines (treat) - no limit fines for stabilization	Deep impacts – Ex-situ Process	\$ - \$\$
RLT	“Beneficial Reuse”	Can address fines		\$100 to \$200/ton
Soil Stabilization/ Solidification (Shallow)	Onsite, in-situ or ex-situ, sustainable	>5,000 tons for best economics	Long-term monitoring	\$-\$\$\$ ↑
Soil Stabilization/ Solidification (Deep)	Onsite, in-situ or ex-situ, sustainable	>10,000 tons for best economics	Long-term monitoring	\$\$-\$\$\$\$
Thermal Desorption/ Smoldering	Onsite, mobile	Fines/organic treatment Mixed wastes	Off-gas emissions	\$\$\$ -\$\$\$\$\$+
Landfilling	Off-site transport,	<50 miles from site, small volumes	Long-term liability	\$\$\$-\$\$\$\$\$

Table above. (2025, May 13). Cost-effective, Sustainable Treatment Alternatives for PFAS-Impacted Soil. SAME Joint Engineer Training Conference, Louisville, KY.



Meeting Close

- Split Kitty Drawing
- PDHs available from the Omaha Post Website
 - ▶ <https://www.same.org/omaha/resources/>