

# CAPABILITY STATEMENT

HRP Associates, Inc.



## WHO WE ARE

We provide a full range of environmental and civil engineering consulting services which include the investigation and remediation of environmental impacts from the past; for example, the design and construction of a sub-slab depressurization system to mitigate historical solvent contamination beneath an existing building. Other environmental services are focused on improving current operations and programs, such as the installation of a web-based Environmental Management Information System to help your organization manage EH&S issues, regulatory deadlines, and training requirements in a more systematic and efficient manner. Still other services look entirely to the future, such as the development of a Process Safety Management Plan to address the risks of a new chemical process, or the design of a zero-net discharge storm water infiltration system to qualify your new commercial facility for LEED credits.

## DIFFERENTIATORS

- Operates in a diverse, equitable and inclusive environment which supports the growth of our staff and innovation on your projects.
- With over 40 years of experience, we are driven by continuous improvement, core values and client satisfaction.
- Flexible and attentive to client's needs to ensure they get effective and sustainable solutions that last.
- A partnership approach that provides your agency with the level of service and integrity that exceed expectations.

## PAST PERFORMANCE

Our expert teams:

- managed remediation of over 50 sites totaling more than 100,000 tons of hazardous materials including asbestos, lead, PCBs, petroleum, and radiological sources.
- conducted over 2,000 environmental, health and safety audits and inspections for industrial, manufacturing, and private facilities in the US and over a dozen countries.
- performed over 5,000 inspections of hazardous materials including PCBs, VOCs, ACMs for property transfers, development, redevelopment, and renovation.
- assessed exposure of sites and products for emerging contaminants including PFAS.
- performed over \$100M worth of environmental and engineering services for federal and state agencies across the US.
- comprises of 20% of our staff who are dedicated to preparing management plans and associated training for public and private entities relative to emergency preparedness and response, employee health and safety, environmental compliance, and continual improvement including sustainability.

## AGENCIES WE SERVE



## CORE COMPETENCIES

- Environmental Engineering and Compliance
- Site Investigation and Remediation
- Health and Safety Training and Consulting
- Compliance Audits
- PFAS Forensics
- PFAS Source Delineation
- PFAS Remediation Design and Oversight
- Environmental Construction Management
- HazMat Surveys & Abatement
- NEPA Support and Ecological Studies
- Stormwater Management
- Tank Management
- Civil Engineering/Site Design/Permitting

## PERTINENT CODES

### Corporate Headquarters

197 Scott Swamp Road  
Farmington, CT 06032

### Unique Entity Identifier

FCEDLHDDE8Q6

**CAGE Code:** OS112

**DUNS Number:** 103968327

### NAICS Codes:

- 541330-Engineering Services
- 541620-Environmental Consulting Services
- 541690-Other Scientific and Technical Consulting Services
- 562910-Remediation Services



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MOVE YOUR ENVIRONMENT FORWARD

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## PFAS REMEDIATION FOR SOIL

This document describes a cost-effective proprietary “**RAPID LEACHING TECHNOLOGY**” (RLT) developed by Next Earth Environmental (NEE) and used to remediate PFAS in soil. One of HRP’s principals is the founding member of NEE and co-inventor of the technology. RLT is not a soil washing technology. Soil washing is cumbersome and results in the production of soil fines that are unable to be cleaned and are considered a hazardous waste. RLT is much more efficient at producing clean soils without any residual fines and results in PFAS destruction. It uses a containment cell with a patented drainage system that has been in use within the frac sand industry since 2017. The patent holder of this drainage system is one of our collaborators.

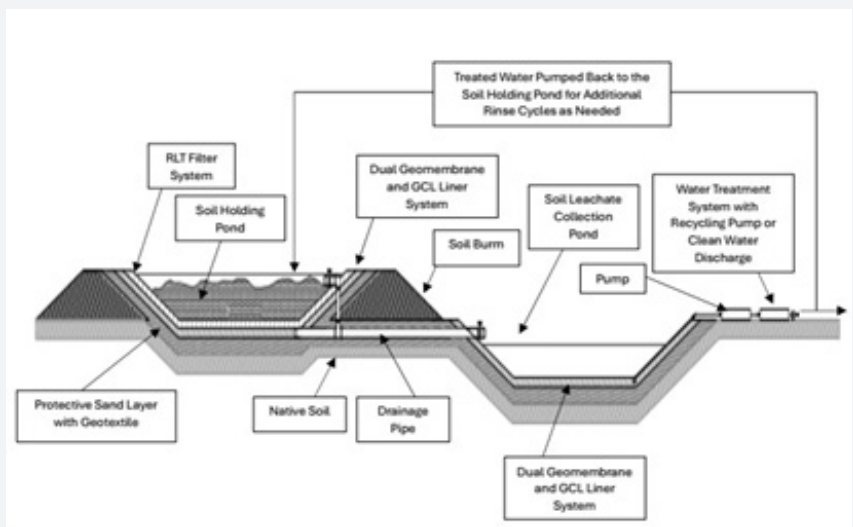
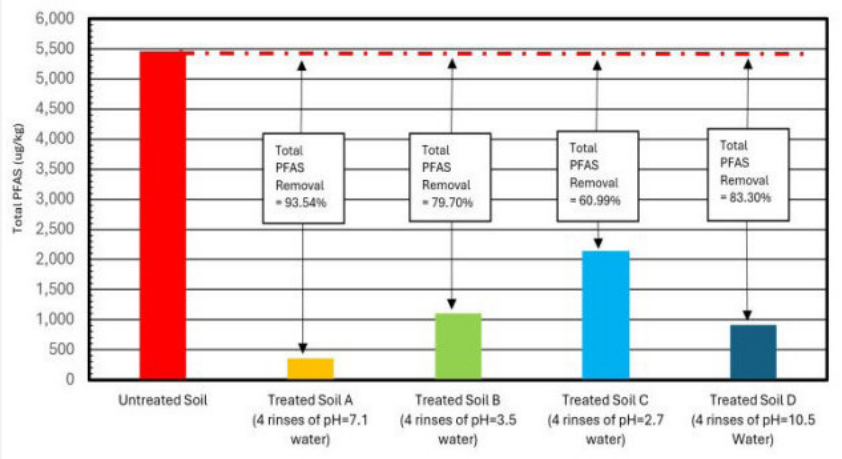
Benchtop testing of RLT has shown removal rates of over 93% for total PFAS and over 99% for PFOA after four soil leaching cycles. Total PFAS is defined as the sum of all 1633 PFAS analytes. This remediation technology mobilizes contaminants from soil to water and can be optimized for different contaminants. Once liquefied, contaminants are removed from water with traditional treatment methods. Refer to the chart below for Total PFAS removal rate efficiencies based on pH.

The treated water is then cycled through the soil again, drained, and reused. The entire soil treatment process takes place within a 40-mil double-lined and bermed watertight containment cell. The process of soil leaching and water treatment is repeated multiple times until the contaminant reaches the desired removal level.

RLT is a cost-effective solution compared to traditional PFAS remediation methods. Once installed, the treatment cell is reusable for future projects. The technology is completely adaptable and scalable to different sized projects, different contaminants, and addition of other technologies under development. The cross-section to the right is a simplified diagram of the components of the drainage system. The soil within the containment is completely submerged with water. Air is then delivered through the same pipe system that drains the water and is used to agitate the soil.

A leaching cycle consists of 10 to 60 minutes of agitation, depending on the soil type. During this cycle, large air bubbles move through the water and soil causing PFAS to leach out of the soil into the water. At the end of the leaching cycle, the water containing the PFAS is rapidly drained from the soil and treated. The soil is quickly dried and can be readily removed within 24 hours of the final leaching cycle. RLT can clean about 300 to 800 tons of soil a week depending on the size of the containment cell.

RLT is considered a **GREEN TECHNOLOGY**. It results in clean soil, clean wash water, no hazardous wastes, maintains landfill space, and reduces carbon emissions by limiting soil transportation to out-of-state facilities. PFAS remains trapped in activated carbon, which is then regenerated offsite via a process that destroys 99.9% of the contaminants and reactivates the carbon for future use.



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