

# A Nuclear Services and Waste Management Company

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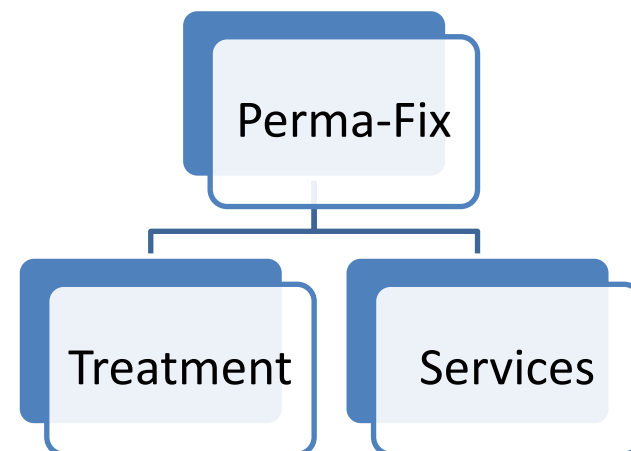
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# Company Overview

- Publically traded company
- Founded in 1991, completed over \$2 billion in waste, environmental and nuclear projects
- Industry Leader in Nuclear Radiological Controls
- Own /operate a commercial Radiological/IH Instrumentation and Calibration Laboratory
- Own/operate four commercially licensed and permitted nuclear waste facilities
- Provide engineering and regulatory consultancy
- Provide technical support to US Non-Proliferation and threat reduction programs
- Holder of over 12 patents and 13 advanced technology applications
- Research and Development program and laboratory



***Leveraging core assets to become a leader in the nuclear industry***



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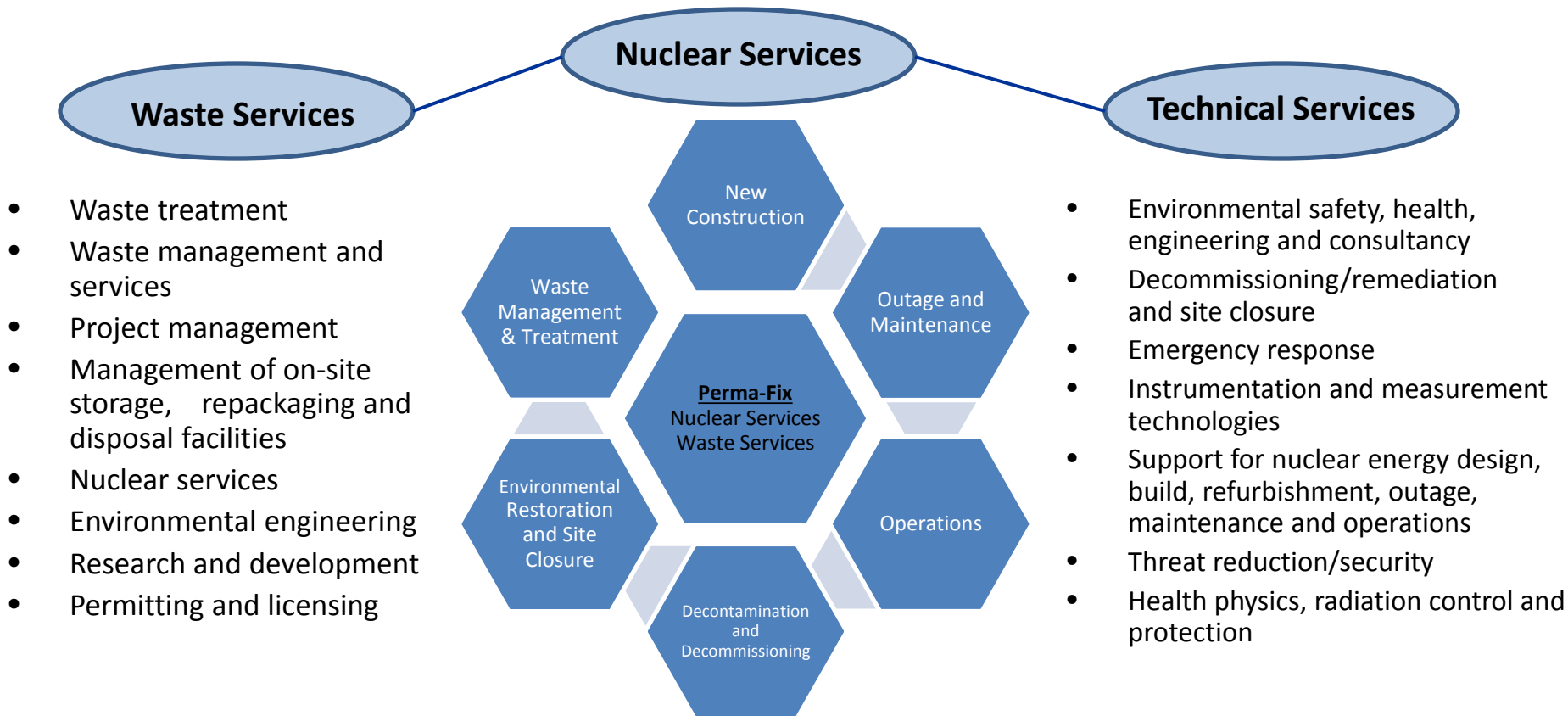


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# Complimentary Nuclear Capabilities



**Comprehensive service offering supports all client needs**



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# Locations



Perma-Fix Business Center  
 Knoxville, TN



DSSI - Kingston, TN



M&EC - Oak Ridge, TN



Perma-Fix Florida - Gainesville, FL



Perma-Fix North West - Richland, WA

Perma-Fix Headquarters  
 Atlanta, Georgia



Perma-Fix United Kingdom



Perma-Fix Canada



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# Perma-Fix Waste Services



**M&EC Oak Ridge, TN**



**DSSI Kingston, TN**



**PFF Gainesville, FL**



**PFNW Richland, WA**



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# Overview of Waste Treatment Technologies

- Thermal Technologies
  - Bulk Processing Unit
  - Thermal Oxidation
  - Vacuum Thermal Desorption
- Non-Thermal Technologies
  - Decon for Release
  - Size Reduction/Compaction
  - Neutralization
  - Stabilization
  - Reactive Deactivation
  - Macroencapsulation
- Other
  - Mercury Amalgamation



## Specialty Processing

- Tritium Capture System, a closed loop system that ensures minimal release of Tritium to the environment



Tritium Processing Enclosure

- High Dose Remote Processing



High Dose Processing



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# Low Level Waste Processing

- Volume Reduction
  - DAW - Thermal or Compaction
  - Liquids - Thermal
  - Soils – Soil Segregating
  - Concrete – Efficient Packaging
  - Metals – Compaction or Survey/Decon for Release or Reuse
- Final Disposition
  - Release/Reuse
  - BSFR
  - Exempt Cell Disposal





# Nuclear Services

- Completed over 2,100 nuclear remediation, decontamination, and decommissioning projects world-wide
- Remedial action of over 2.3 million M<sup>3</sup> of radiologically impacted soils and debris wastes
- Construction and operation of six landfills in U.S., U.K., and South Pacific
- Industry leader in Rapid Open Land Survey and Final Status Survey (over 20,000 FSSs performed)
- Treated and dispositioned > 26 million gallons of radiological (U, Ra, and Th) contaminated wastewater
- Authored portions of the National and International MARSSIM standards



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# Decontamination Technologies

- Perma-Peel Cs – Strippable coating, cesium specific
  - No water, minimum waste volume
  - Decontamination Factor >90%
  - Not toxic or flammable
  - Works on cement, brick, tile, metal, wood, plastic or painted surfaces
  - Computer code analyzes weathering patterns, orientation, location of structure, etc.

## Decontamination of surfaces & equipment

- Chemical
- Hydroblasting
- Surface cutting
- Dismantlement, removal or decontamination



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# Technical Services

- CHP's, HP's and Rad Engineers to support special projects
- Decommissioning Planning, Licensed Footprint Reduction Support
- Open Land and Structure Characterization
- Waste Segregation, Minimization and Reduction Support
- Instrumentation Calibration, Repair and Rental



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# Digital Capture of Radiological Survey Data for Open Land and Surface Surveys



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