

Perma-Fix Northwest Richland Inc. Exemption Request

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Treatment Operations

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Agenda

- Meeting Purpose
- Need for Exemption Request
- Introduction to Perma-Fix Northwest
- Technical Background
- Justification for Exemption Request
- Precedent
- Questions



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Meeting Purpose

- Discuss request for exemption from Part 70 licensing requirements to allow the possession, storage, and processing of wastes containing Special Nuclear Material (SNM) in quantities greater than those specified in 10 CFR 150.11



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Need for Exemption

- Processing of large volumes of waste with low concentrations of SNM is inefficient under mass-based limits of 10 CFR 150.11
- Pursuant to 10 CFR 150.11, Agreement State licensees are only authorized to possess SNM in quantities not sufficient to form a critical mass, without regard to actual criticality risk
- 10 CFR 150.11 does not consider SNM concentrations and the potential impact of moderators and absorbers



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Need for Exemption

- Exemption is needed to allow PFNW to possess, process, and store wastes that may contain SNM exceeding current mass limits provided the waste meets requested concentration and control restrictions
- Significant improvements in waste processing efficiency and ALARA may be realized through use of concentration-based limits



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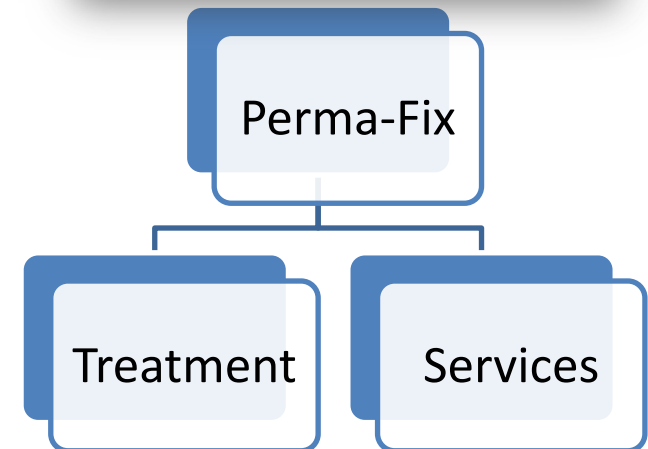
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Company Overview

- Founded in 1991, headquartered in Atlanta, GA, Certified small business
- Own and operate 3 licensed and permitted waste treatment facilities (LLW, MLLW, TRU, Hazardous) serving DOE, DOD and commercial generators worldwide
- Maintain strong safety culture at all facilities and projects
- Have completed over \$2 billion in waste, environmental, and nuclear projects
- International offices in Canada and the UK



Leveraging core assets to become a leader in the nuclear industry



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Locations



Perma-Fix Business Center
 Knoxville, TN



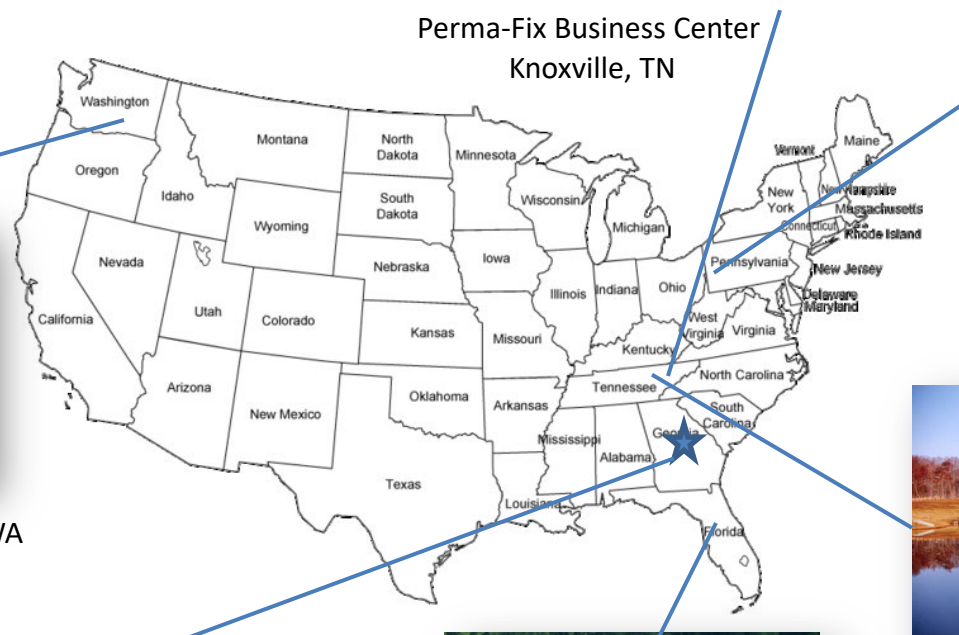
Technical Services Office
 New Brighton, PA



DSSI - Kingston, TN



Perma-Fix Florida - Gainesville, FL



Perma-Fix Northwest - Richland, WA

Perma-Fix Headquarters
 Atlanta, Georgia



Perma-Fix United Kingdom



Perma-Fix Canada



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Perma-Fix Northwest (PFNW)

- Two Radioactive Material Licenses, Mixed Waste and Low-Level Waste (WDOH)
- RCRA/TSCA Permit (WDOE/EPA)
- ISO and NQA-1 certified
- 75 Employees



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PFNW Aerial View



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Waste Streams

- Concentration-based limits are appropriate for high volume, low concentration SNM waste streams.
- Request is for approval of generic limits on SNM concentration and related control measures related to physical and chemical waste properties
- Potential customer waste streams will be evaluated for compatibility with control requirements
- Wastes may originate from
 - Department of Energy (e.g., Hanford) facilities
 - Commercial fuel fabrication facilities



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Waste Processing

- Waste treatment processes are as authorized by WDOH under existing licenses
- Proposal does not include thermal processing of the wastes
- Includes preparation and packaging of wastes to meet customer or disposal site waste acceptance criteria



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Waste Processing



- Employees process waste without the spread of contamination outside set boundaries
- Employees work with high levels of transuranic waste while maintaining dose ALARA
- Management monitors trends and trains to changes

Waste is shipped under Road Closure conditions with authorization from DOE under the Hanford Site Wide Transportation Safety Document



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Control Measures

Control Measures in addition to SNM concentration limits

1. Bulk chemical limits
2. Unusual moderator limits
3. Soluble SNM limits
4. Waste characterization & certification requirements
5. Inbound waste verification requirements



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Post-Processing

- Materials may be returned to the originating waste generator or other recipient authorized to receive the materials
- Perma-Fix is a licensed waste processor with no onsite disposal
- Disposition of the processed waste will be determined as part of contractual arrangements for processing prior to receipt



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Justification for Exemption Request

- Exemption request relies in part on NRC safety analyses prepared for prior exemptions granted to EnergySolutions and WCS
- Low SNM concentrations and the related restrictions modeled for NRC in support of the EnergySolutions and WCS exemptions mitigate criticality risks



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Precedent – EnergySolutions

- May 1999
- Order issued granting the Envirocare of Utah (now EnergySolutions) request for exemption from Part 70 SNM licensing requirements
- EnergySolutions currently has NRC-approved concentration-based SNM limits incorporated in their Utah licenses for the waste disposal facility



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Precedent – Waste Control Specialists

- November 2001
- Order issued granting the WCS request for exemption from Part 70 SNM licensing requirements
- NRC-approved concentration-based SNM limits have been incorporated in the Texas licenses for their waste disposal facility
- The 2001 WCS Safety Evaluation Report concluded

Based on its analysis of the operations and waste forms at the WCS Andrews County, Texas site, staff concludes that waste processing and storage operations can be conducted with an acceptably low risk of nuclear criticality.



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NEPA Compliance

- Exemption is administrative and procedural in nature and commensurate with a categorical exclusion as specified in 10 CFR 51.22



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Thank you

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