# Perma-Fix Nuclear Division Capabilities & Capacities

John H. Hagan
Sales Manager
Sales & Marketing



### Perma-Fix Facility Locations





#### Perma-Fix Treatment Facilities



M&EC Oak Ridge, TN



PFF Gainesville, FL



**DSSI Kingston, TN** 



PFNW Richland, WA



#### Perma-Fix Facilities Treatment Capabilities

	Process	M&EC Facilly	DSSI Faciilty	Perma-Fix of Florida	Perma-Fix of Northwest Richland
Neutralization and/or Stabilization of MLLW Liquids/Solids		~	~	~	~
Thermal Treatment of both TSCA and non-TSCA Regulated MLLW Liquids/Solids		J	~		
Thermal Treatment of high-special nuclear material (SNM) MLLW Liquids		V	~		
Macroencapsulation of MLLW Debris		~		~	V
Deactivation of MLLW (D003 wastes)		~	· 🗸	V	
Non-TSCA Regulated MLLW Labpacks		~	~	~	V
TSCA Regulated MLLW Labpacks		~			
MLLW Aerosols		~	~		
High Activity/Dose waste streams		~	~		~
TRU waste processing					~
Treatment of radiologically contaminated Mercury (Hg)	Elemental Hg (Amalgamation)	~		~	
	Hg<260ppm	~	~	~	· •
	Hg>260ppm	~			



### Major Treatment Processes







### Major Treatment Processes

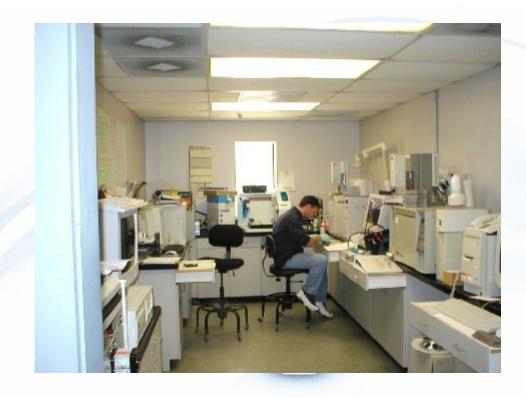






## Finding New Treatment Methods – Research & Development







### Latest Innovations – PCB Treatment

 DSSI began combusting PCBs April 2009



Waste	Total		
Form	Gallons		
	Received =		
	29,588		
Liquids	80%		
Labpacks	12%		
Solids	8%		



## Latest Innovations – High Dose Waste Treatment







# Rail Access - Large Components







## Latest Innovations – High Activity Waste Treatment







#### Disposal

- Disposed at every major disposal site:
  - NTS
  - Hanford
  - Clive
  - US Ecology
  - EMWMF
  - Barnwell
  - WCS (stay tuned)







#### 2009 Perma-Fix Capacities

Processes	Throughput (Yr)	Units
Combustion	512,460	Gallons
Compaction	26,000	Drums
Stabilization	3,380,000	Pounds
Macroencapsulation	22,601	Drums
TRU Sort/Repack	5,650	Drums
Labpacks (Reactives)	26000	Pounds
Amalgamation	78,000	Pounds



## US Nuclear Power Plant Waste Management LLW Processors

- Current administrations' renewed commitment to Nuclear Power;
- License renewal applications at all-time high
- Need for large component waste management solutions (steam generators, condenser replacements, etc.)
- Perma-Fix commitment to finding alternatives to direct disposal and;
- Protecting the environment.....

