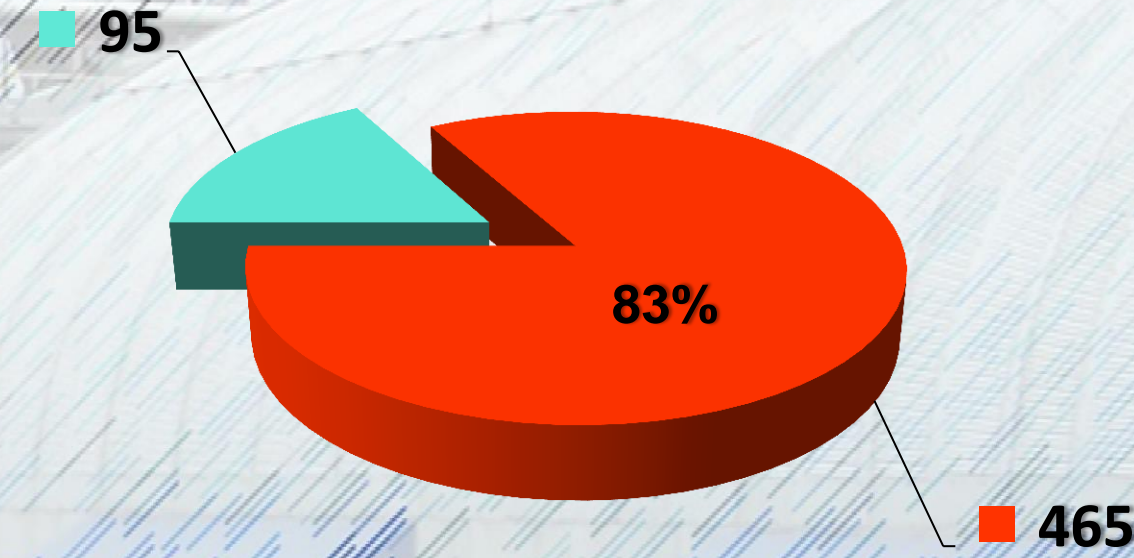




### TRU Waste Processing Center

Wastren Advantage, Inc., (WAI) is the DOE Prime contractor for the TRU Waste Processing Center (TWPC) located in Oak Ridge, TN. Multiple process improvements have been implemented at the TWPC to increase both Contact (CH) and Remote Handled (RH), Transuranic (TRU) waste handling capabilities, and increase processing and certification capabilities.

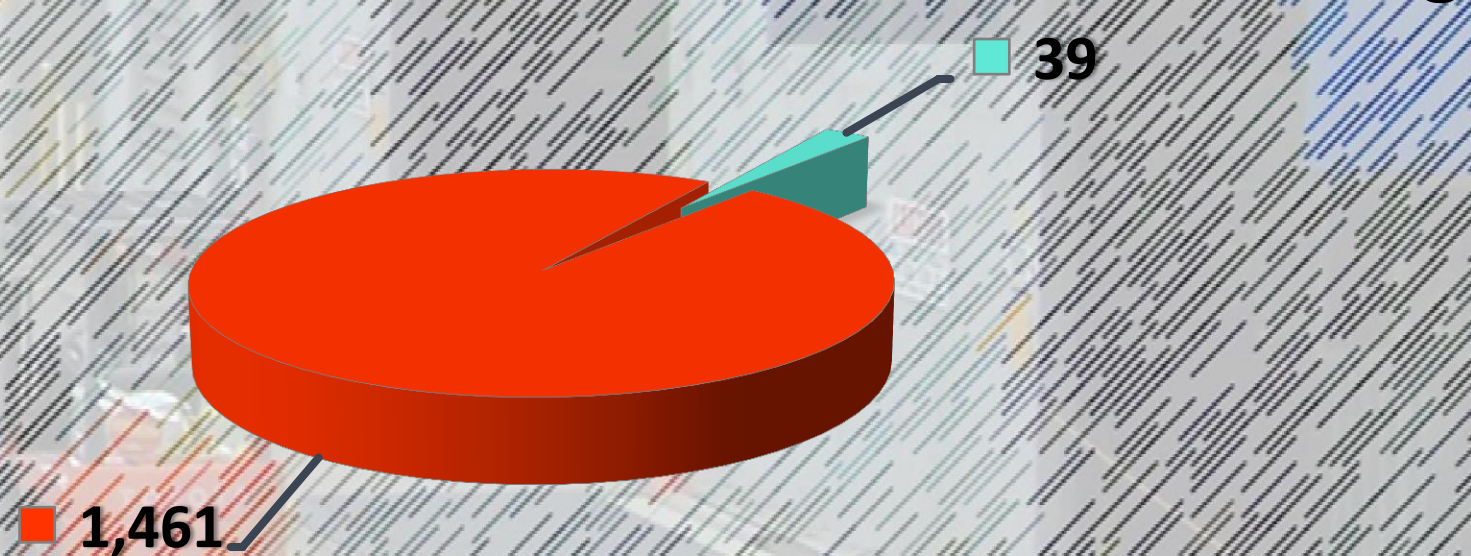
#### RH TRU Waste Cumulative Processing



Original RH TRU Waste Volume 560 m<sup>3</sup>

- Remaining RH TRU Inventory (m<sup>3</sup>)
- RH STP Processing of the original 560 (m<sup>3</sup>)

#### CH TRU Waste Cumulative Processing



CH processing complete = 97%  
Original CH TRU Waste Volume 1,500 m<sup>3</sup>

- Remaining CH TRU Inventory (m<sup>3</sup>)
- CH TRU Physically Processed of the original 1,500 (m<sup>3</sup>)

#### DRUM VENTING SYSTEM (DVS)

The Drum Venting System (DVS) was installed to vent overpacked CH-TRU waste drums in several configurations including 55-gallon drums overpacked in 79 or 85-gallon drums.



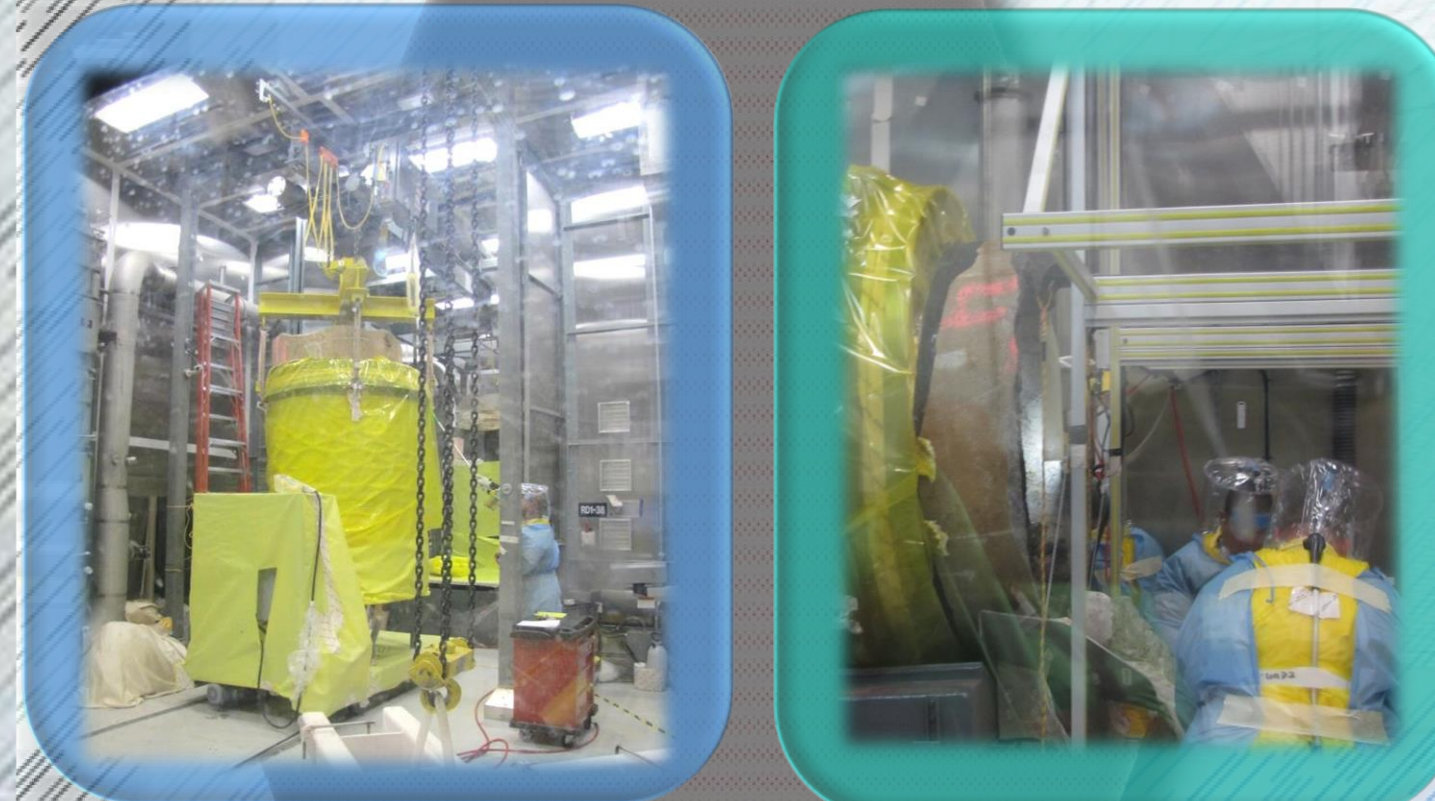
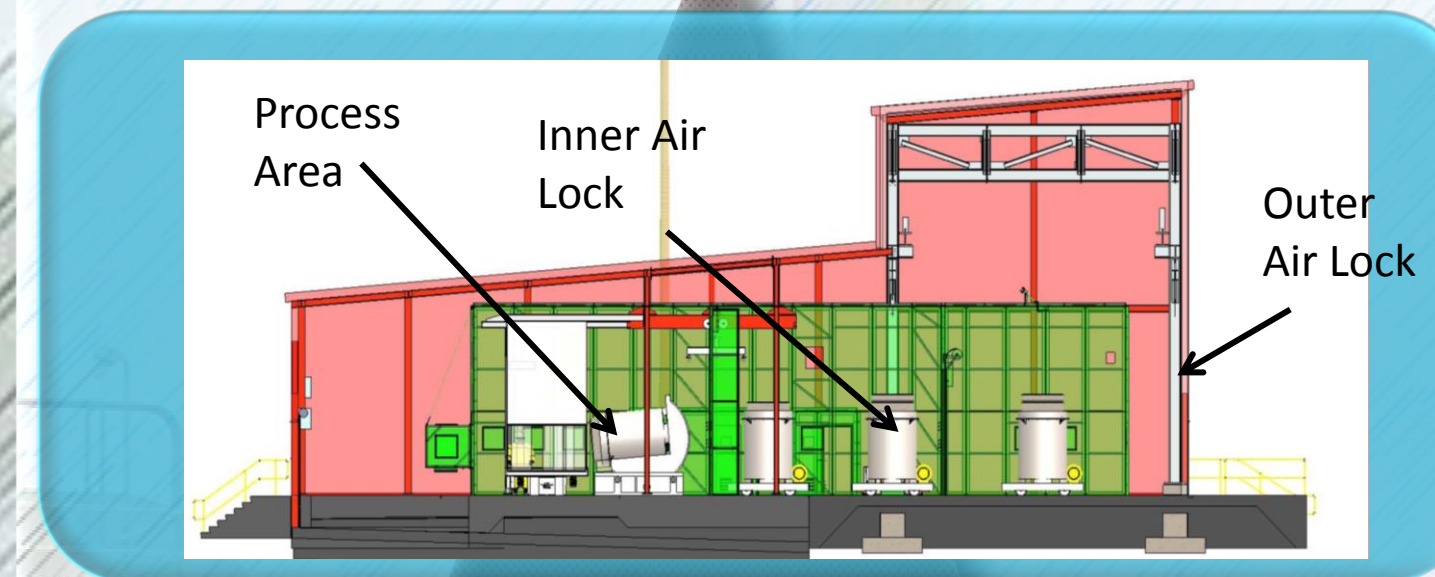
#### REMOTE DRUM OPENER (RDO)

The Remote Drum Opener (RDO) system was designed, tested and placed in service to vent drums discovered in overpack boxes and to vent overpack configurations (e.g., 110 gallon overpacks and multiple drum configurations).



#### CASK PROCESS ENCLOSURE (CPE)

The Cask Processing Enclosure (CPE) approach was used to repackage RH-TRU waste that exhibited high percentage of CH-TRU.



The results realized by implementing the CPE waste processing approach for RH waste casks include:

- Higher throughput rates for waste,
- Reduce waste processing costs
- Higher loading rates per drum
- Reduce down time in the Hot Cell
- Reduction in repairs and maintenance time
- Implement capability to load non RCRA Low Level Waste into empty cask
- Frees Hot Cell for high dose RH waste

#### HOT CELL OUTAGE

A planned Hot Cell outage was used to incorporate planned equipment modifications and improve processing rates.



#### Added Additional Certification Capability

To improve certification and segregation of CH-TRU additional equipment/facilities for Non-Destructive Assay (NDA) and Real Time Radiography (RTR).



#### CONCLUSIONS

The TWPC is a continuously improving organization and the specific achievements and process improvements described above help ensure that the projects mission, the DOE Environmental Managements Goals, and State of Tennessee waste disposition requirements are met. These achievements may be incorporated into other TRU waste processing sites across the country and around the world.

#### HIGHLIGHTS

- CPE operations cut approximately 2 years off of the base-line schedule for the Hot Cell and results in 16.42 million EUR (\$20M USD) in savings to the Client – US DOE.
- CPE process 125 casks (108 cubic meters) of RH waste – with contents saturated with groundwater from below ground burial.
- RDO system vented 187 overpacked containers, in various nested conditions.
- DVS system vented 847 drums of CH waste allowing drum reprocessing activities to meet scheduled processing rates.
- Increased certification capability (RTR and ISOCS redundant systems) increased throughput by 75%.
- Hot Cell outage and system improvements increased equipment reliability and reduced downtime.

4,720,855 Safe Hours  
No Lost Time Since April 2002

#### CONTACT INFORMATION

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