

EAST TENNESSEE TECHNOLOGY PARK (ETTP) PROJECT

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April 25, 2012



Presentation Summary

- Project Overview
- Waste Management Challenges
- Waste Management Initiatives



MOVING TO THE FUTURE BY CLEANING UP THE PAST

Project Overview *ORR clean-up priorities shifting*

1. Complete K-25 and K-27
2. Address mercury contamination at Y-12
3. Address high radiological concerns at ORNL
4. Complete ETTP



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Project Overview

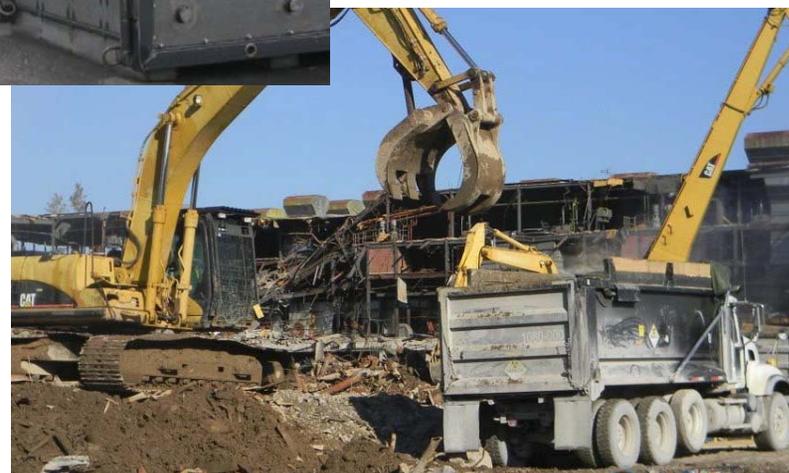
Active projects under UCOR scope:

- K-25
 - ~50,346 yd³ shipped through 2012 Qtr 2
- Tank W1A
 - ~1,355 yd³ shipped through 2012 Qtr 2
- Surveillance and Maintenance at ETTP, ORNL, and Y12
 - ~153 yd³ shipped through 2012 Qtr 2
- CNF Sludge
 - ~421 Drums shipped to disposal through 2012 Qtr



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Project Overview (Cont) K-25



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Project Overview (Cont) *Tank W1A*

- Strategy to prevent TRU waste generation
- Offsite processing of tank and contents
- Direct shipments for disposal
- Strategic packaging strategies to meet NNSW WAC requirements



Project Overview (Cont) *Surveillance & Maintenance*

- The Project Wipeout Pallet campaign completed in February 2012. ~ 4,500 pallets from ETTP, TSCA Incinerator, and CNF were disposed of in the Y-12 Industrial Landfill.
- Development of ORNL S&M Bounding Profile through the S&M Waste Handling Plan



Project Overview (Cont) *CNF*

- Shipped 421 containers to disposal
- Shipments being scheduled upon waste generation direct from CNF



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Waste Management Challenges

- **Exemptions from DOE Order 435.1 program resulted in significant quantity of legacy waste (~625,000ft³)**
 - UCOR contract requires full compliance with DOE Order 435.1
 - Waste generation will **not** be allowed without a disposition path identified and funding allocated
 - Proper pre-planning will be conducted to characterize and determine disposition path prior to generation
 - Waste will be dispositioned from the point of generation (no storage)
- Centralized waste management program implementing requirements of DOE Order 435.1 effective April 23-2012
- Disposition legacy LLW/MLLW stored > one year when funding allows
- Develop Radioactive Waste Management Basis and obtain approval from DOE/ORO



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Waste Management Challenges

- **Need available processing capacity (e.g., ORNL hot-cells) to disposition highly radioactive waste and no path to disposal waste**
 - Evaluate all DOE and commercial options to process waste
 - Continue to investigate new technologies to treat MLLW debris
 - Requested NNS prepare RCRA Permit modification to allow for disposal of dioxin/furan waste codes
 - Working with TSDF's to conduct treatability studies on several no path to disposal waste streams



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Waste Management Challenges

- **Reliance on offsite disposal capabilities (e.g., NNSS, ES/Clive)**
 - **It is too difficult to prepare EMWMF documentation and obtain approval for waste streams meeting the EMWMF WAC**
 - Streamline and manage process to profile and obtain approval for waste destined for EMWMF
 - Plan well ahead of waste generation to meet project schedule needs
 - On-Site disposal as first priority
 - Support ORR waste generators with utilizing EMWMF
 - **Waste cannot meet ORR landfill WAC**
 - Utilize volumetric and surface contaminated object criteria consistent with ORR landfill WAC
 - On-Site disposal as first priority
 - Support ORR waste generators with utilizing ORR landfill

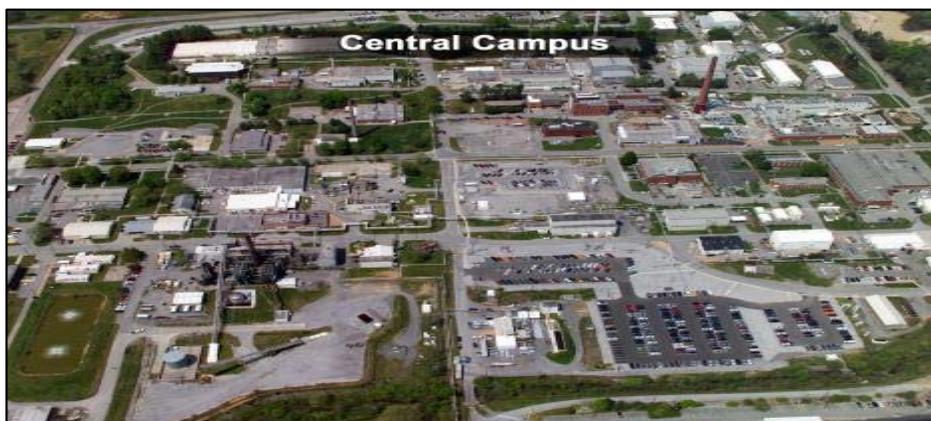


Waste Management Initiatives



– Support End State

- Y-12
 - D&D un-needed facilities and disposition waste
 - Address mercury contamination
- ORNL
 - D&D un-needed facilities and disposition waste allowing for lab modernization
- ETPP
 - Future Unrestricted Industrial End-State
 - Reindustrialization



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Waste Management Initiatives

- **Characterize waste to meet disposal WAC with minimal sampling required.**
 - Utilize K-25 data and apply to K-27 if relevant
 - Use process knowledge whenever possible
 - Approach characterization/waste generation in a strategic manner
 - Separate or combine waste streams to minimize sampling while meeting disposal WAC
 - If process knowledge is sound, default to most conservative characterization w/o sampling to achieve cost savings



Waste Management Initiatives



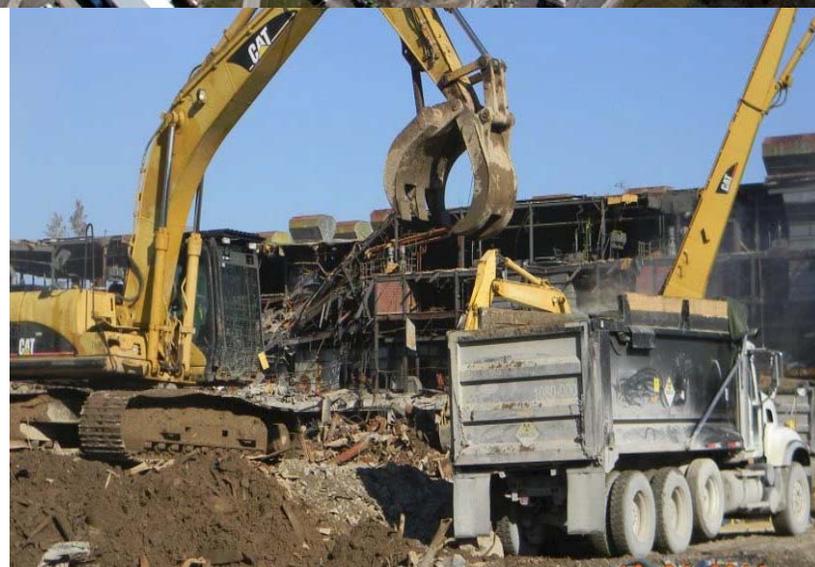
- **Utilize on-site disposal capabilities**
 - EMWWMF
 - ~2.3M yd³ capacity
 - ~1.2M yd³ disposed
 - Current capacity should last until ~2016
 - Accepts LLW, TSCA, Haz. and mixed waste
 - Streamline profile and waste acceptance process
 - ORR Landfills
 - >2M yd³ in capacity
 - RCRA Subtitle D permit
 - Utilize to full extent



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Waste Management Initiatives

- Streamlined profiles for EMWMF
- Direct disposal of generated waste
- Successful testing of reusable packages for volutes
- Qualify converters as own package (IP-1)
- Utilization of commercial TSDF to process legacy waste
- Evaluation of waste acceptability at EMWMF



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