

70 YEARS OF CREATING TOMORROW



**Los Alamos**  
NATIONAL LABORATORY

**LANL Enduring Waste Management  
Program Updates, Goals, and Challenges  
LA-UR-14-21171**

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# LANL Enduring Waste Management Program Transformation FY2010-FY2013

- What is the LANL Enduring Mission Waste Management Program?



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# LANL Enduring Waste Management Program Transformation FY2010-FY2013

- The LANL Enduring Mission Program is the responsible organization that manages all newly generated waste types.
  - LLRW
  - MLRW
  - Newly Generated (NewGen) TRU
  - Hazardous/Chemical (Haz/chem)
  - Industrial waste

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# LANL Enduring Waste Management Program Transformation FY2010-FY2013

- What did the LANL Enduring Mission Waste Management Program look like before FY2010?



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# LANL Enduring Waste Management Program Transformation FY2010-FY2013

- The LANL Waste Management Program was controlled by three separate Associate Directorates.
- Each of the nine Facility Operations Directorates (FODs) owned its own waste management program.
- 95% of all LLRW was disposed of on-site at the Technical Area 54 disposal cell.



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# LANL Enduring Waste Management Program Transformation FY2010-FY2013

- LANL had three waste tracking and data management software programs that did not interface with each other.
- In short, the LANL Enduring Waste Management Program was inwardly focused, decentralized, and running below its maximum operational efficiency.



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# LANL Enduring Waste Management Program Transformation FY2010-FY2013

- What changed at LANL?
- Closure of Area G for on site LLW waste disposal
  - Increased regulatory requirements to meet off-site TSDF WAC.
  - Implementation of RCRA Permit
  - Implementation of Site Treatment Plan





# LANL Enduring Waste Management Program Transformation FY2010-FY2013

- In FY 2010, LANL began site wide, Waste Management Program cultural and operational shift.
- The LANL Enduring Waste Management Program is now managed by one Associate Directorate, the Associate Directorate of Environmental Safety and Health (ADESH).
- ADESH certifies, manages, and supports single, site wide Enduring Mission Waste Management Program.

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# LANL Enduring Waste Management Program Transformation FY2010-FY2013

- LANL has significantly reduced the generation of all routine waste types by implementing innovative waste reduction, reuses, reclassification, and other waste minimization strategies.
- LANL now has one master waste tracking and data management software program call WCATS.
- 99% of all LLRW is disposed of off-site at TSDFs.
- At the end of FY2013, the LANL Enduring Waste Management Program has now become outwardly focused and centralized, and has vastly improved its operational efficiency.

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# LANL Enduring Waste Management Program Accomplishments in FY2013

- Saved LANL \$2.2 million dollars via waste minimization, reuse, and recycling programs.
- Reduced LANL waste volumes by 13,698 m<sup>3</sup> through recycling, waste minimization, and the LANL Green is Clean Program.
- Performed (4,011) waste certification, verification, and other assessments to support the LANL RWMB, RCRA Permit, and DOE Order 435.1.

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# LANL Enduring Waste Management Program Transformation FY2010-FY2013

- Inspected and shipped over (1,300) DOT complaint shipments of waste.
- Processed over 800 LLRW and 600 TRU Non Destructive Analysis requests.
- Reclassified over 1000 m<sup>3</sup> of TRU to LLRW at a tremendous cost savings to LANL.
- Shipped over 200 m<sup>3</sup> of STP waste, more than the previous six years combined.

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# LANL Enduring Waste Management Program Accomplishments in FY2013

- Vastly expanded the LANL Green is Clean Program.
- Fully implemented the LANL SCO Reclassification Program.
- Fully implemented the LANL Indirect Analysis Program.
- Implemented the use of OREX PPE programs in over 80% of the LANL FODs.

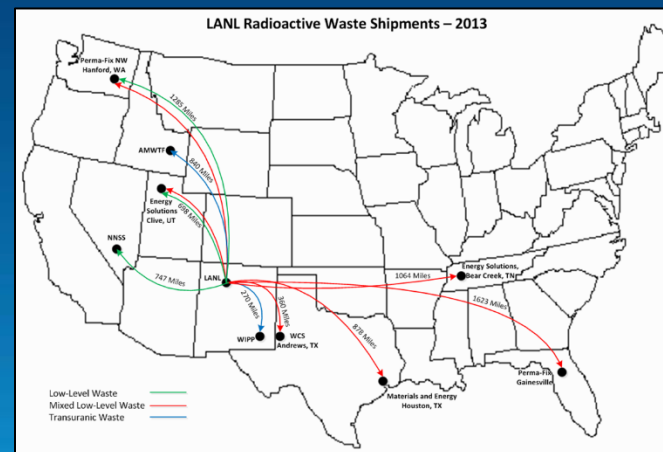
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# LANL Enduring Waste Management Program Accomplishments in FY2013

- Initiated the LANL Pilot Waste Consolidation Facility.
- Maximized the use of off site TSD/F facilities to support the LANL goal of shipping 99% of all waste generated off site.



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# LANL Enduring Waste Management Program Goals for FY2014

- Save LANL \$5 million dollars via waste minimization, reuse, and recycling programs.
- Reduce LANL waste volumes by 15,000 m<sup>3</sup> through recycling, waste minimization, the LANL Green is Clean Program, and other waste minimization programs.
- Complete FY2014 with zero compliance findings in the LANL Department of Transportation shipping program.
- Complete FY2014 with zero compliance findings in the LANL RWMB, RCRA Permit, and DOE Order 435.1 compliance programs.

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# LANL Enduring Waste Management Program Goals for FY2014

- Ship over (1,500) DOT complaint shipments of waste offsite.
- Process over 1500 LLRW and 1000 TRU Non Destructive Analysis requests.
- Reclassify 1500 m3 of TRU to LLRW.
- Ship 500 m3 of STP waste.
- Ship over 99.5% of all waste to off-site TSDFs.

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# LANL Enduring Waste Management Program Goals for FY2015

- Save LANL over \$10 million dollars via waste minimization, reuse, and recycling programs
- Complete construction of the Transuranic Waste Facility by end of FY2016.
- Complete Decay in Storage Shaft and Laydown Areas for Isotope Production Facility waste and LANSCE accelerator large component waste.
- Complete Consolidated Waste Facility.
- Complete Re-Use and Re-Purpose Evaluation of all former TRU Facilities at TA-54.

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# LANL Enduring Waste Management Program Endpoint

- All waste types are minimized to the maximum extent practicable. LANL institutional goal is Zero Waste effluent.
- All waste types are generated, sorted, characterized, and packaged in accordance with disposal site WAC and DOT Regulations.
- Reduced residence time
  - Reduce the period between waste generation and disposal
- Increased transportation efficiency
  - Shorter routes, fuller trucks
- Decreased treatment costs
- Automated compliance reporting

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# LANL Enduring Waste Management Program Goals Challenges

- Top Three Challenges
  - Aging workforce
    - Median age of the LANL Waste Management worker is 48.
    - Our youngest Waste Management Coordinator is 30.
  - Bow wave of retirements in FY2014 and FY2015
    - The WM Division will lose ~30% of our senior staff between FY14-15.
  - Hiring and Training Replacements
    - Of a staff of 100, we have (6) students.
    - Difficult to recruit people to LANL.

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# Questions or Comments?



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