

3706 TRANSURANIC WASTE CAMPAIGN

**Realigning TRU Disposal
Priorities in the Aftermath of One
of New Mexico's Worst Wildfires**

UNCLASSIFIED
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Realigning TRU Disposal Priorities in the Aftermath of One of New Mexico's Worst Wildfires



Regulatory Partnership: The Framework Agreement
F. David Martin, New Mexico Environment Department



Integrating Community Involvement
Ralph Phelps, Northern New Mexico Citizens Advisory Board



Realignment of Priorities
David Nickless, DOE NNSA Los Alamos Field Office



Supporting the Mission in Los Alamos
Joe Franco, DOE Carlsbad Field Office



Rapid Realignment: Executing the 3706 Campaign
Dan Cox, Los Alamos National Laboratory

3706 TRANSURANIC WASTE CAMPAIGN

Regulatory Partnership: The Framework Agreement



F. David Martin
Secretary
New Mexico Environment Department

NMED Priority Projects: WIPP and LANL

- **Two of NMED's priority projects**
 - The Waste Isolation Pilot Plant (WIPP)
 - Environmental cleanup at Los Alamos National Laboratory (LANL)



NMED Priority Projects: WIPP and LANL

WIPP

- Only deep geologic repository in the U.S. for disposal of nuclear waste from defense sites across the DOE complex
- Model offered by the President's Blue Ribbon Commission on America's Nuclear Future

LANL

- R&D and testing related to nuclear arms have resulted in contamination at various sites over the past 70 years
- Corrective actions to address investigation and cleanup of legacy contamination have been conducted under a Consent Order issued in March 2005



Letter to DOE Secretary Steven Chu*

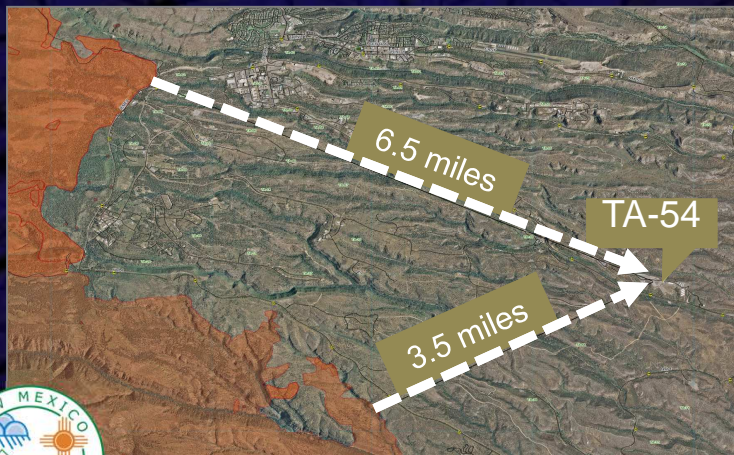
- **Governor Martinez urged DOE to provide sufficient funding for:**
 - Cleanup of defense legacy wastes from LANL and
 - TRU waste disposal at WIPP



*April 19, 2011



The Catalyst: Las Conchas Fire



- June 2011
- Burned more than 150,000 acres
- Came to within 3.5 miles of Area G



During and After the 2011 Fire



- Governor Martinez visited Los Alamos almost daily during the fire
- Recognized that TRU waste on the surface at LANL has been stored for many years and was also there during the Cerro Grande fire 11 years earlier—WHY?
- Increased sense of urgency to remove the TRU waste became evident



Letter to DOE Secretary Steven Chu*

In discussing the WIPP project:

“New Mexico insists removal of these defense legacy wastes from LANL must remain the highest priority to DOE at WIPP.”



*September 1, 2011



State/DOE/LANL Meeting



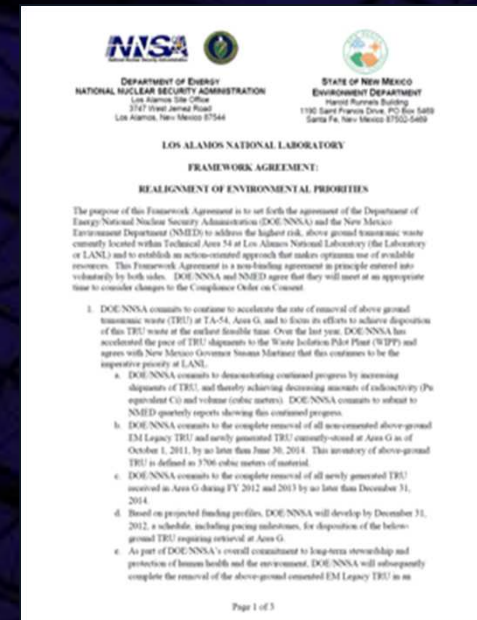
On September 13, 2011, Governor Susana Martinez and NMED met with senior U.S. Department of Energy officials to discuss high priority issues for the ongoing environmental clean-up efforts at LANL.

- **Governor Martinez tasked NMED to work with DOE and LANL to re-prioritize and address greatest risk:**
 - Disposal of above-ground transuranic (TRU) legacy waste at Technical Area 54 Area G
 - Groundwater protection near the site and protection of regional water resources
 - Surface water runoff: drinking water protection



Framework Agreement

- **Reschedule activities based on risk: focus on TRU**
 - Combustible/dispersible waste (~3700 cubic meters)
 - New-gen waste
 - Below-grade waste
 - Stable-form waste
- **3706 campaign: Above-ground TRU waste to WIPP by June 30, 2014 and new-gen waste to WIPP by December 31, 2014**
- **Develop plan for below-ground TRU waste by December 31, 2012**
- **Milestones and quarterly progress review**
- **Annual evaluation of plans (six-month planning for FY 13)**



• Working to reduce the volume of paperwork required under the Consent Order.

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Conclusions

- **Accelerating the removal of the highest risk waste is critical to reducing threats to the public health and environment associated with natural disasters, such as the Las Conchas fire.**
- **At the direction of Governor Martinez, NMED worked with officials from the DOE, NNSA and LANS to develop a revised schedule for the ongoing environmental cleanup efforts at Los Alamos National Laboratory.**
 - The parties reached agreement on near-term priorities.
 - Re-prioritized to shift from lower-risk activities to address highest-risk above-ground TRU waste.
 - NMED approved revisions in the cleanup activities in a way to allow the highest risk projects to be completed first.
 - Framework agreement between NMED and the DOE parties.



Conclusions (continued)

- **The partnership and increased cooperation between the National Nuclear Security Administration's Los Alamos Field Office, DOE Carlsbad Field Office, New Mexico Environment Department and Los Alamos National Laboratory has enabled unprecedented cleanup progress.**
- **NMED takes the position that we are willing to make adjustments in the schedule on the condition that adequate future funding will be forthcoming.**
- **Results to date for the 3706 TRU campaign are encouraging.**



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Integrating Community Involvement



Ralph Phelps
Chair
Northern New Mexico
Citizens Advisory Board

Northern New Mexico Citizens Advisory Board

Topic/accomplishment/activity: Acceleration of removal of TRU waste from MDA-G, Los Alamos National Laboratory

- Three NNM CAB recommendations
- Las Conchas Fire
- Governor Susana Martinez
- Framework Agreement negotiated between DOE and NMED, made public at special NNM CAB meeting on Jan. 5, 2012



3706 TRANSURANIC WASTE CAMPAIGN

Realignment of Priorities



David Nickless

Legacy Waste Manager for
Environmental Projects
Los Alamos Field Office

Realignment of Priorities

- **Framework Agreement**
 - **Accelerate removal of TRU waste**
 - By June 2014: Removal of non-cemented above-ground TRU currently stored at Area G (3,706 m³)
 - By December 2014: Removal of all newly generated TRU waste received in Area G during FY12/FY13
 - By December 2012: Develop schedule for disposition of the below-ground TRU at Area G
 - **Groundwater and surface water protection**
 - Continue to perform groundwater monitoring under the annual interim facility-wide groundwater monitoring plan
 - Continue to conduct storm water monitoring as required by the Laboratory's NPDES individual storm water permit
 - Continue protection of surface water quality, including source water utilized by the City of Santa Fe's Buckman direct diversion project

Key Elements

- **“Core Team” Approach**

- New Mexico Environment Department
- DOE Environmental Management headquarters
- DOE National Nuclear Security Agency
- Los Alamos Field Office
- Los Alamos National Security



- **Sub-teams formed by steering committee to work on specific issues:**

- Core Team - Develop Framework Agreement
- Tiger Team - Solve environmental cleanup technical issues
- FY12 Team - Reprioritize FY12 work based on new risk reduction approach

Key Elements

- **Annual Planning Process**
 - Collaboration between NMED, DOE and LANL on priorities within budget/funding availability
 - Fund the 3706 Campaign to meet annual deliverables
 - Fund to ensure surface and groundwater protection



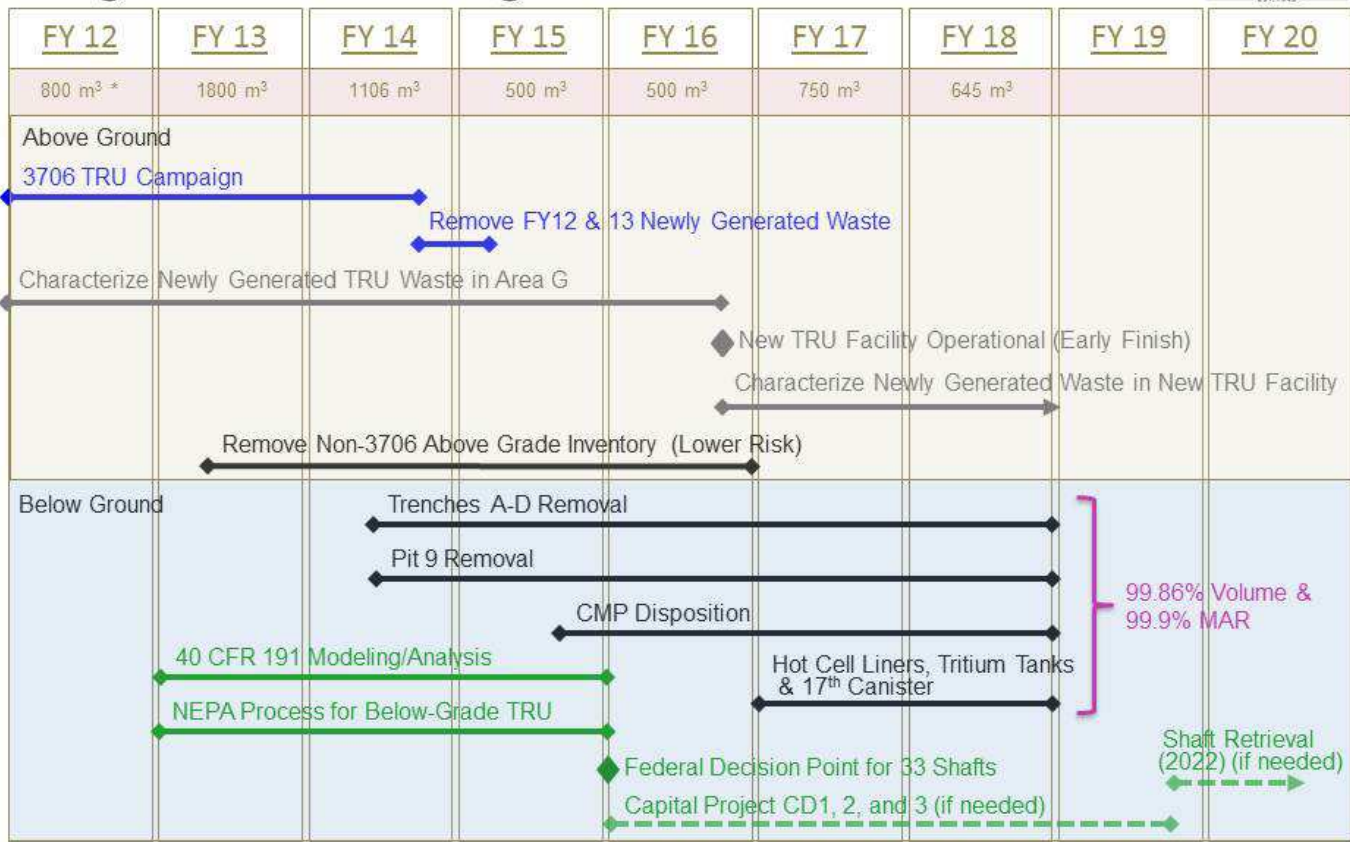
Progress to Date

- **Key Accomplishments**
 - Partnership has led to unprecedented cleanup progress
 - Public engagement
 - Budget advocacy
 - Lower risk environmental projects rescheduled or re-scoped
 - Shift in contractor priorities in minimal time
 - On or ahead of schedule on all 3706 TRU Campaign deliverables
 - Best relationship to date with New Mexico Environment Department
 - Highlighted regulator importance for future missions and sustainability



Path Forward

Integrated LANL TRU Program Timeline



* Annual Targets: FY12-FY14 "3706 Campaign"; FY15-FY16 "Below-Ground" (6 waste streams).

LA-UR 12-10294



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Supporting the Mission in
Los Alamos



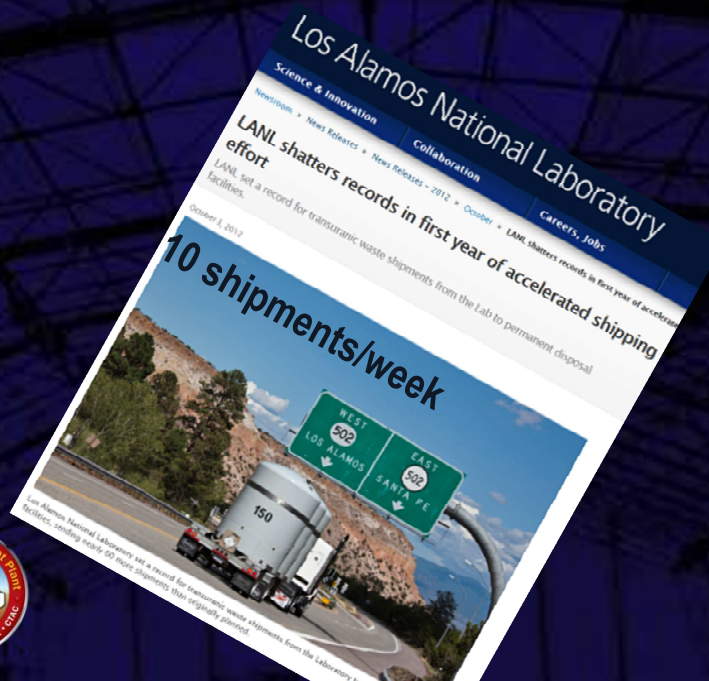
Joe Franco
Manager
Carlsbad Field Office

LANL 3706 m³ TRU Waste Framework Agreement

WIPP

- Indispensable component
- Realigned priorities
- Established necessary capabilities

Complete removal of 3,706 m³ of above-ground TRU waste from Los Alamos National Laboratory by June 2014



LANL 3706 m³ TRU Waste Framework Agreement

WIPP Support to LANL Includes:

- Priority shipping resources (MLU & TRUPACT)
- Expanded characterization capability
 - Redundant NDA (HENC and SuperHENC)
 - ISOCS NDA for boxes (SLB2+SWB)
- High Energy RTR
 - High density waste
 - Lead-lined drums



TA-54



Initiatives for Newly Generated TRU Waste at LANL

- VE personnel assigned full time to TA-55 to facilitate 100% VE of TRU debris waste
- Progress towards characterization, certification and shipping classified TRU waste from TA-55
- Planned move of dedicated HENC unit to TA-55 for NDA of newly generated TRU at point of generation
- Process for cleanout of confinement vessels at CMR (100% VE of TRU debris generated – spheres)

New TRU waste facility in final design status



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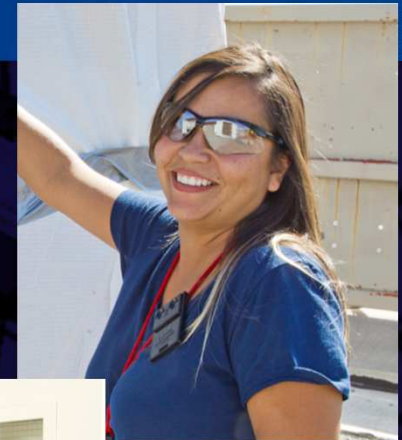
Rapid Realignment: Executing the 3706 Campaign



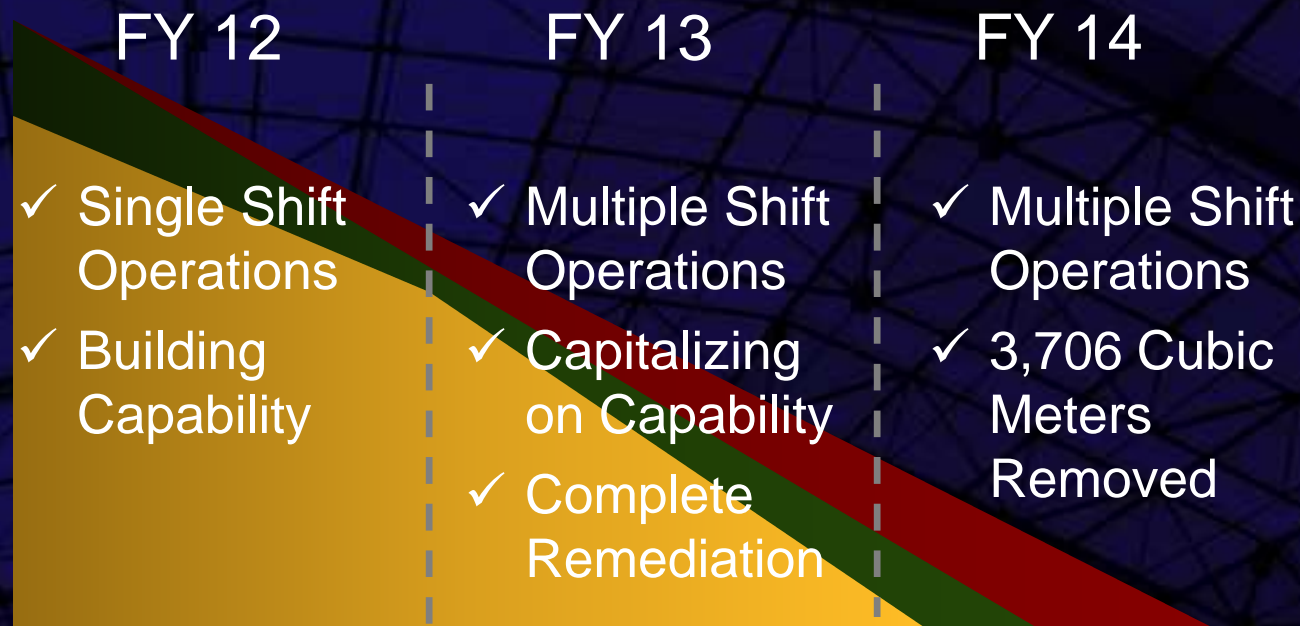
Dan Cox
Deputy Associate Director
Los Alamos National Laboratory

Safety

- Workers Embracing Safety



3706 Campaign Operational Plan



- Remediation and Repackaging
- Characterization and Certification
- Shipping

Mid-Campaign Status

Pre-3706

- ✓ 1st box line/single shift (radiological operations)
- ✓ 1st drum line/single shift (hazard category 2 operations)
- ✓ Single crane TRU loading (hazard category 2 operations)
- ✓ 1 real time radiography
- ✓ 2 high efficiency neutron counters

0 cubic meters removed

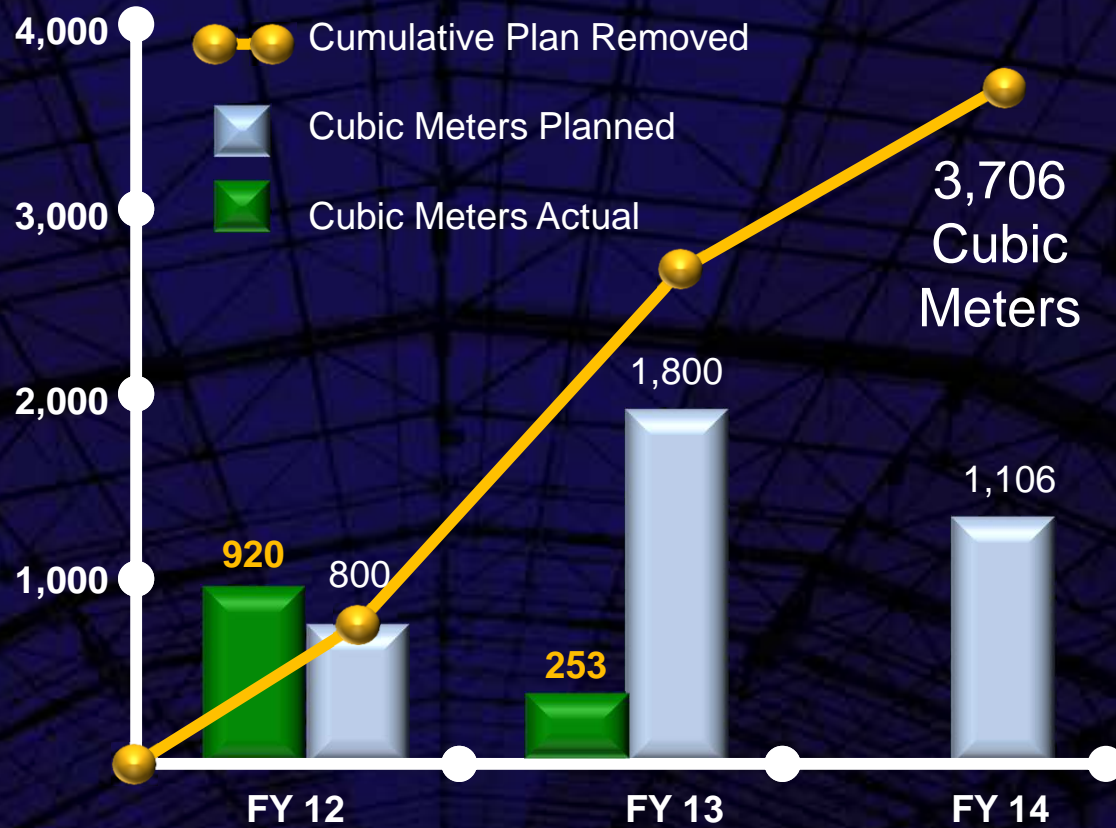
Now

- ✓ 1st box line/double shifts (hazard category 3 operations)
- ✓ 2nd box line/three shifts (hazard category 3 operations)
- ✓ 3rd box line/single shift (radiological operations)
- ✓ 1st drum line/double shifts (hazard category 2 operations)
- ✓ Drum venting/single shift (hazard category 2 operations)
- ✓ Redundant crane TRU loading (hazard category 2 operations)
- ✓ 1 real time radiography
- ✓ 2 high efficiency neutron counters
- ✓ High energy real time radiography
- ✓ 1 super high efficiency neutron counter

1,173 cubic meters removed

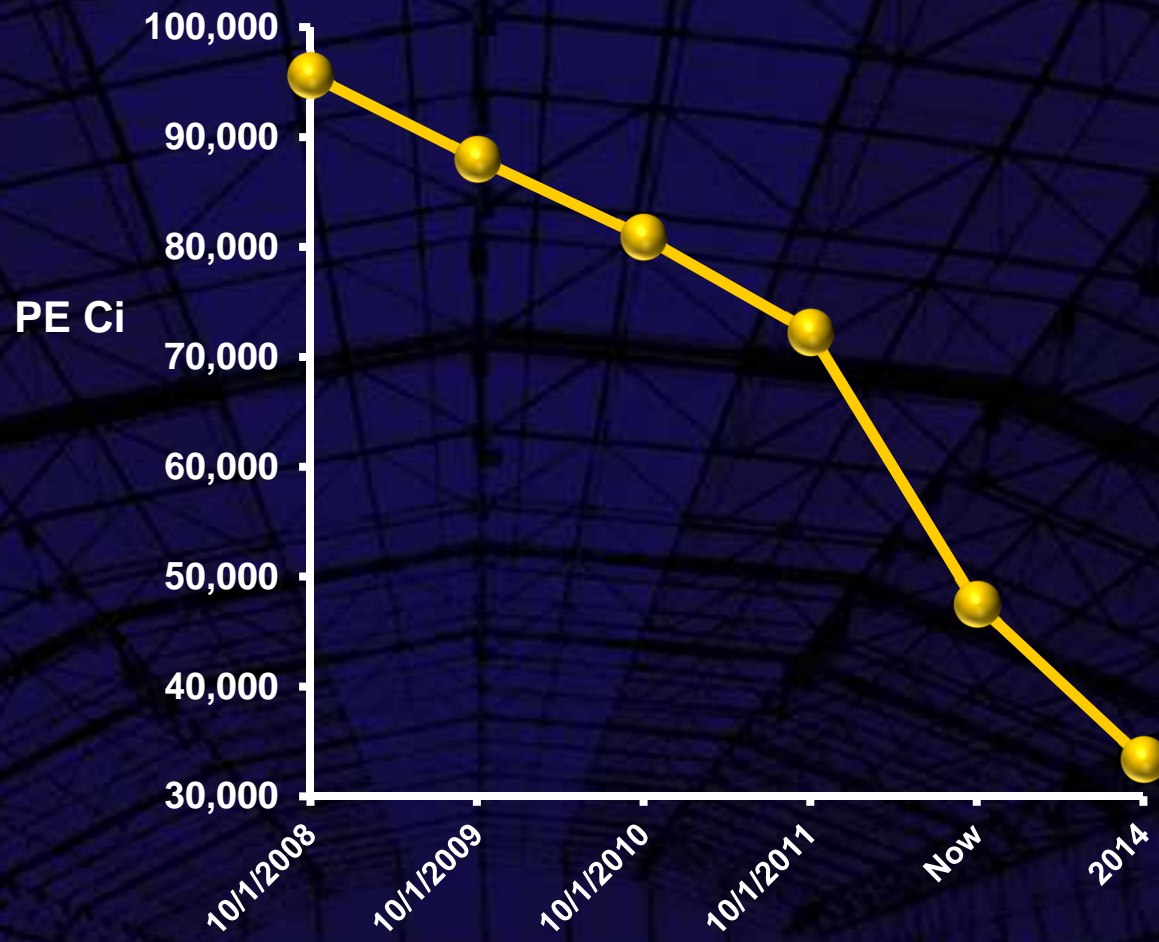
Removal Strategy

Annual Production Plan



Risk Reduction

LANL annual MAR reduction through 6/30/14



Innovations

- Project approach
- Solution package concept
- Graded approach for readiness
- Production modeling



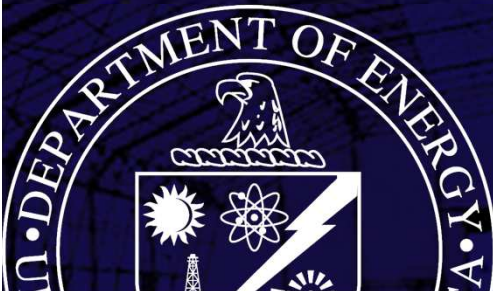
Summary

- Collaborative partnership
- Public involvement
- Realignment of priorities
- Recognition of WIPP as an indispensable component
- We're on track to meet the goal



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Questions?





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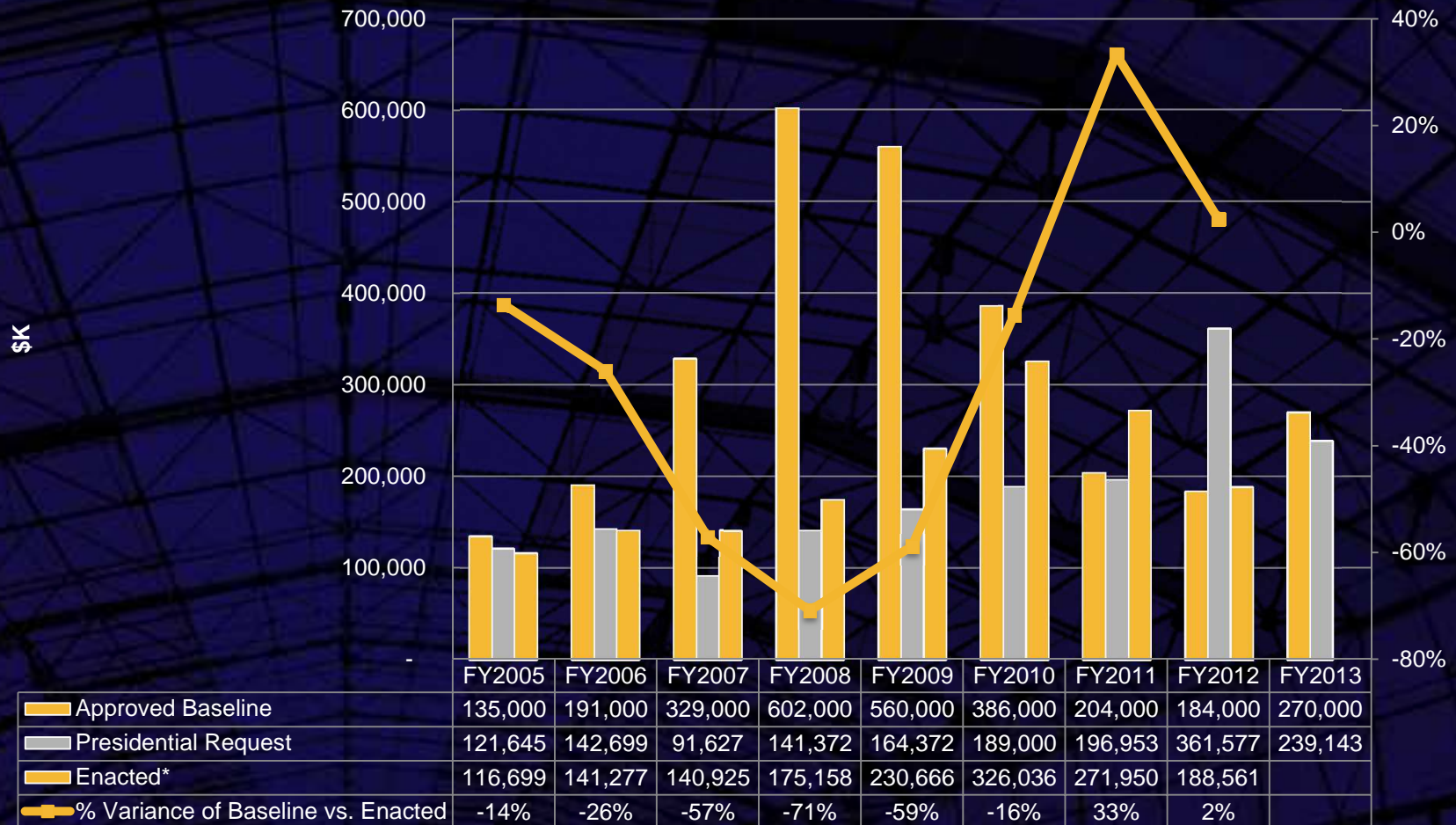
New Mexicans working together to meet a national environmental challenge



Back up Slides



LANL Environmental Programs Appropriation Variance



* Enacted includes ARRA spread over FY09 - FY11

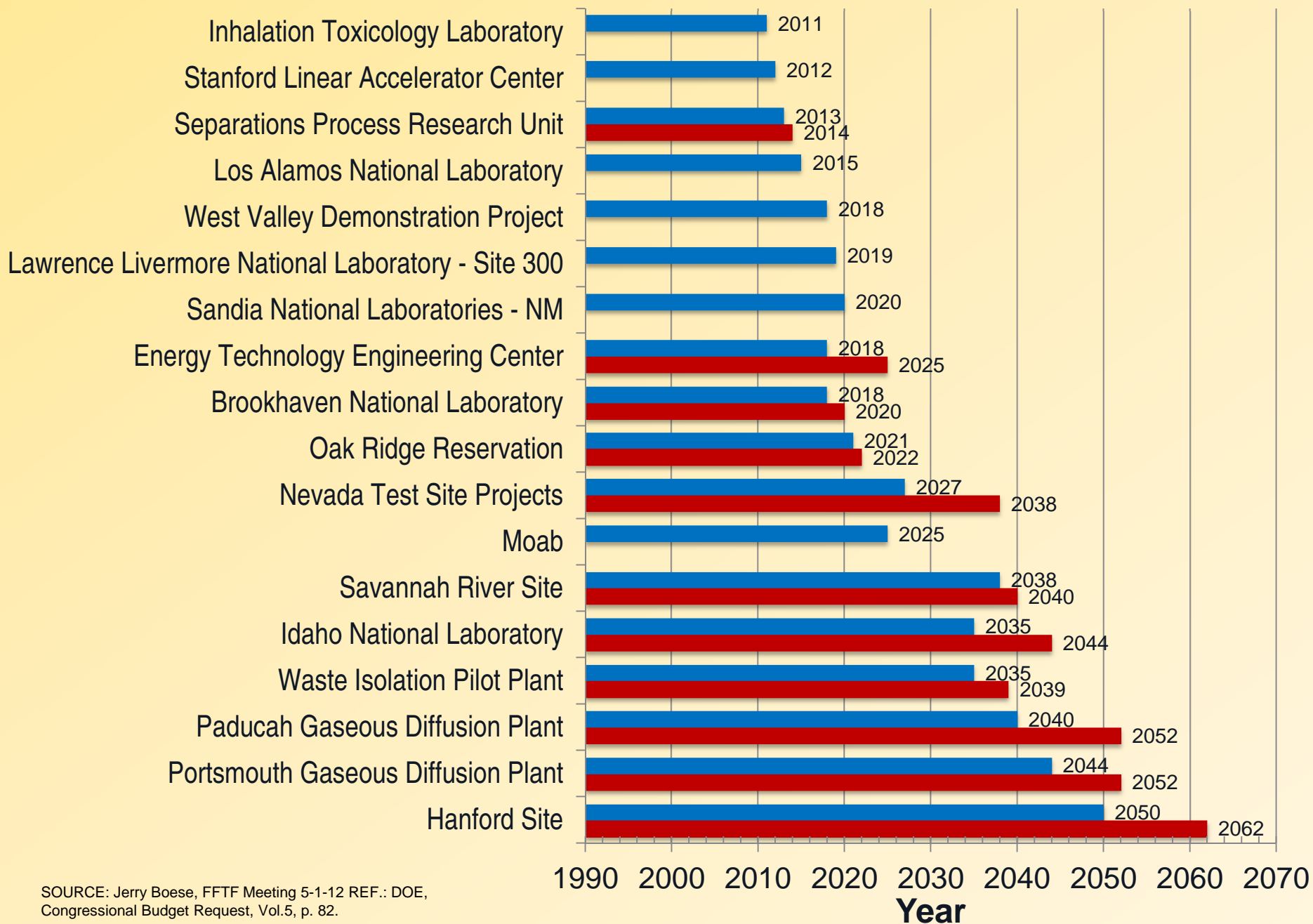
Realigning Transuranic Waste Priorities at Los Alamos National Laboratory

Backup Slides

F. DAVID MARTIN, SECRETARY
NEW MEXICO ENVIRONMENT DEPARTMENT

WM 2013 Symposia
Session: 038
Phoenix, AZ
February 26, 2013

EM Cleanup Completion Date Schedule Range



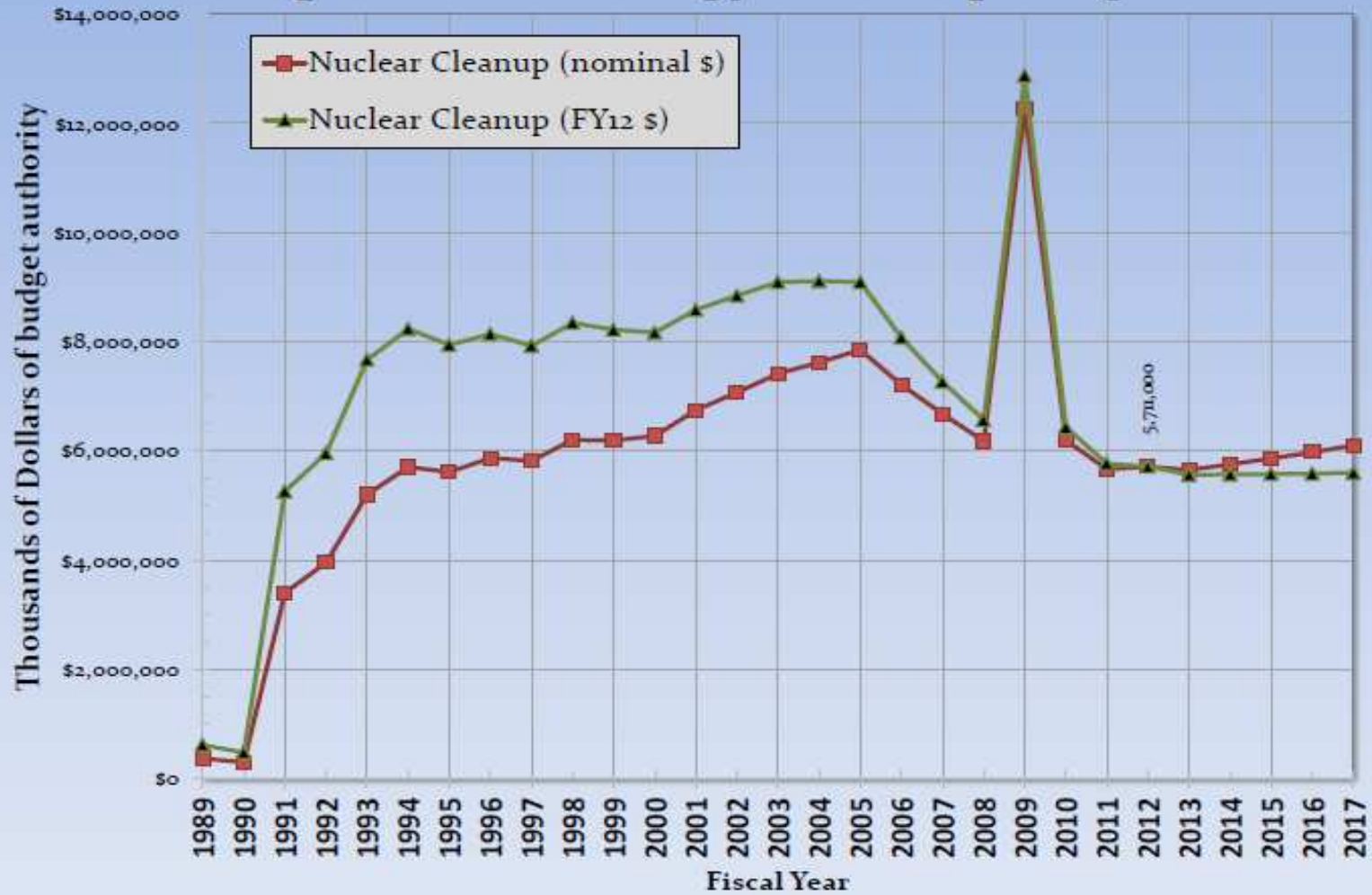
SOURCE: Jerry Boese, FFTF Meeting 5-1-12 REF.: DOE, Congressional Budget Request, Vol.5, p. 82.

DOE EM Funding by Site

	<u>FY12 Budget</u>	<u>FY13 Request</u>	<u>% of Total FY13</u>
Savannah River (SC)	\$1.32B	\$1.30B	23.1%
River Protection (WA)	\$1.18B	\$1.17B	20.7%
Hanford (WA)	\$1.02B	\$1.04B	18.4%
Oak Ridge (TN)	\$420M	\$421M	7.5%
Idaho (ID)	\$390M	\$405M	7.1%
LANL (NM)	\$189M	\$239M	4.2%
WIPP (NM)*	\$218M	\$203M	3.6%
DOE-EM	\$5.71B	\$5.65B	

*Not a cleanup site, but a disposal site for TRU waste

Department of Energy - Cleanup budget



SOURCE: DOE, Office of the CFO, 2012.

Historical LANL EM Funding

Dollars in thousands

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
Base Funding	116,699	141,277	140,925	175,158	224,639	200,438	191,800	188,561
ARRA Funding*	0	0	0	0	211,775	0	0	0
Los Alamos Total	116,699	141,277	140,925	175,158	436,414	200,438	191,800	188,561

*ARRA funding received in FY 2009. ARRA program executed FY 2009 – FY 2011.