Los Alamos National Laboratory Environmental Programs Overview

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Los Alamos National Laboratory

July 17, 2013

Operated by Los Alamos National Security, LLC for the U.S. Department of Energy's NNSA
LA-UR-13-25370

Agenda

I. Environmental Programs Overview

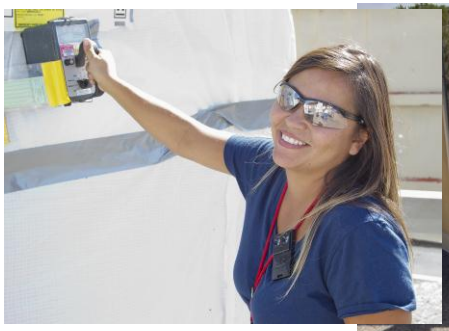
II. 3706 TRU Waste Campaign Status and Other Framework Agreement Milestones

III. Water Protection and Legacy Cleanup

IV. Groundwater Protection: Chromium

V. Path Forward and Conclusion



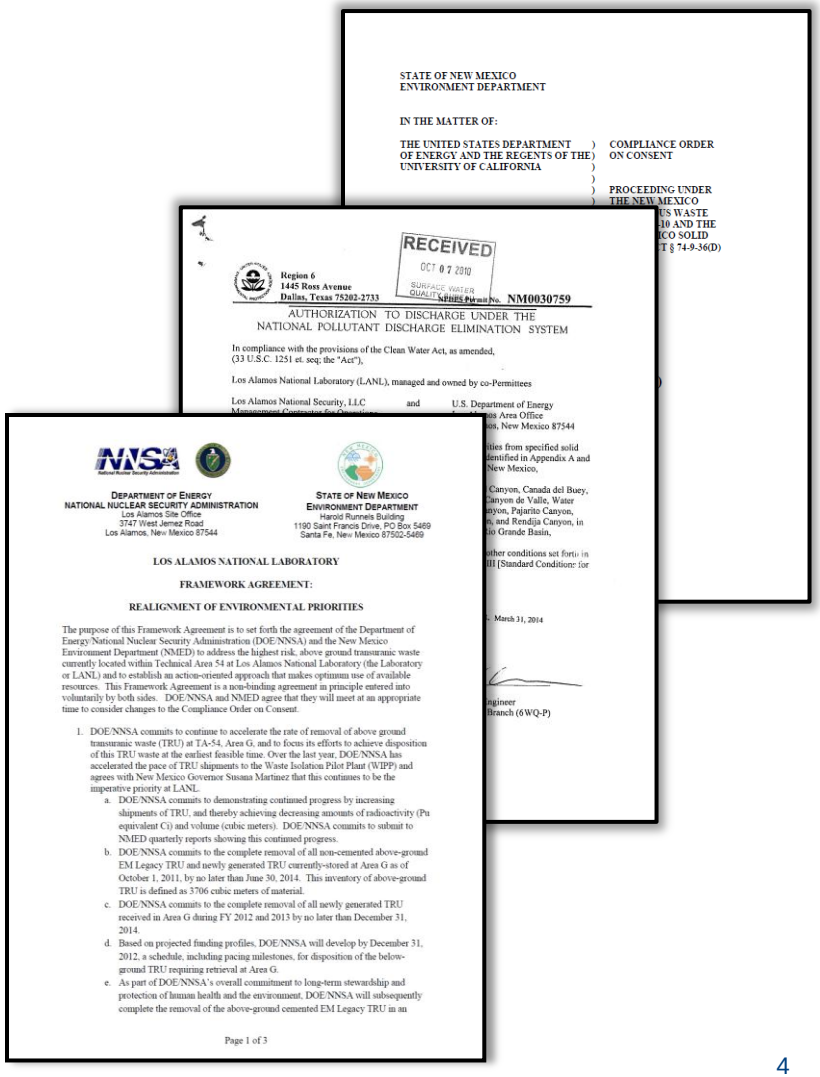


Overview - Environmental Programs Mission

- Process and ship hazardous and radioactive waste to permanent disposal facilities
- Clean up legacy waste sites and monitor and protect northern New Mexico's water resources

Overview – Environmental Programs Key Documents

- Order on Consent with the State of New Mexico (2005)
- Stormwater Individual Permit with the Environmental Protection Agency (2010)
- Framework Agreement with the State of New Mexico (2012)



STATE OF NEW MEXICO
ENVIRONMENT DEPARTMENT

IN THE MATTER OF:

THE UNITED STATES DEPARTMENT OF ENERGY AND THE REGENTS OF THE UNIVERSITY OF CALIFORNIA) COMPLIANCE ORDER ON CONSENT

PROCEEDING UNDER THE NEW MEXICO US WASTE -10 AND THE CO SOLID T § 74-9-36(D)

RECEIVED
OCT 07 2010
SURFACE WATER QUALITY

Region 6
1445 Ross Avenue
Dallas, Texas 75202-2733

NPDES Permit No. NM0030759

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Los Alamos National Laboratory (LANL), managed and owned by co-Permittees

Los Alamos National Security, LLC and U.S. Department of Energy

os Area Office os, New Mexico 87544

ities from specified solid dentified in Appendix A and New Mexico,

Canyon, Canada del Buey, anyon de Valle, Water ayon, Pajarito Canyon, , and Rendija Canyon, in io Grande Basin,

ther conditions set forth in III [Standard Conditions for

March 31, 2014

ngineer Branch (6WQ-P)

DEPARTMENT OF ENERGY
NATIONAL NUCLEAR SECURITY ADMINISTRATION
Los Alamos Site Office
3747 West Jemez Road
Los Alamos, New Mexico 87544

STATE OF NEW MEXICO
ENVIRONMENT DEPARTMENT
Harold Runnels Building
1190 Saint Francis Drive, PO Box 5469
Santa Fe, New Mexico 87502-5469

LOS ALAMOS NATIONAL LABORATORY

FRAMEWORK AGREEMENT:

REALIGNMENT OF ENVIRONMENTAL PRIORITIES

The purpose of this Framework Agreement is to set forth the agreement of the Department of Energy/National Nuclear Security Administration (DOE/NNSA) and the New Mexico Environment Department (NMED) to address the highest risk, above ground transuranic waste currently located within Technical Area 54 at Los Alamos National Laboratory (the Laboratory or LANL) and to establish an action-oriented approach that makes optimum use of available resources. This Framework Agreement is a non-binding agreement in principle entered into voluntarily by both sides. DOE/NNSA and NMED agree that they will meet at an appropriate time to consider changes to the Compliance Order on Consent.

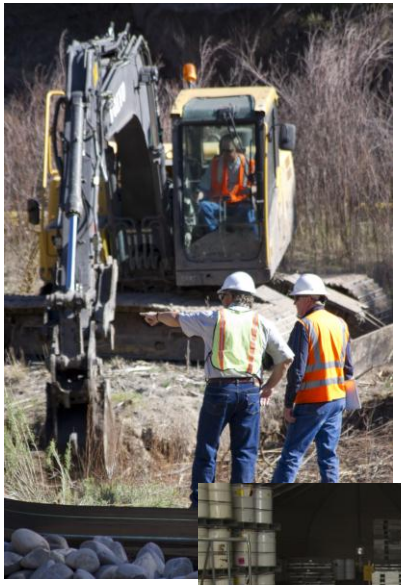
1. DOE/NNSA commits to continue to accelerate the rate of removal of above ground transuranic waste (TRU) at TA-54, Area G, and to focus its efforts to achieve disposition of this TRU waste at the earliest feasible time. Over the last year, DOE/NNSA has accelerated the pace of TRU shipments to the Waste Isolation Pilot Plant (WIPP) and agrees with New Mexico Governor Susana Martinez that this continues to be the imperative priority at LANL.
   a. DOE/NNSA commits to demonstrating continued progress by increasing shipments of TRU, and thereby achieving decreasing amounts of radioactivity (Pu equivalent Ci) and volume (cubic meters). DOE/NNSA commits to submit to NMED quarterly reports showing this continued progress.
   b. DOE/NNSA commits to the complete removal of all non-cemented above-ground EM Legacy TRU and newly generated TRU currently-stored at Area G as of October 1, 2011, by no later than June 30, 2014. This inventory of above-ground TRU is defined as 3706 cubic meters of material.
   c. DOE/NNSA commits to the complete removal of all newly generated TRU received in Area G during FY 2012 and 2013 by no later than December 31, 2014.
   d. Based on projected funding profiles, DOE/NNSA will develop by December 31, 2012, a schedule, including pacing milestones, for disposition of the below-ground TRU requiring retrieval at Area G.
   e. As part of DOE/NNSA's overall commitment to long-term stewardship and protection of human health and the environment, DOE/NNSA will subsequently complete the removal of the above-ground cemented EM Legacy TRU in an

Page 1 of 3

Overview - Environmental Programs Budget

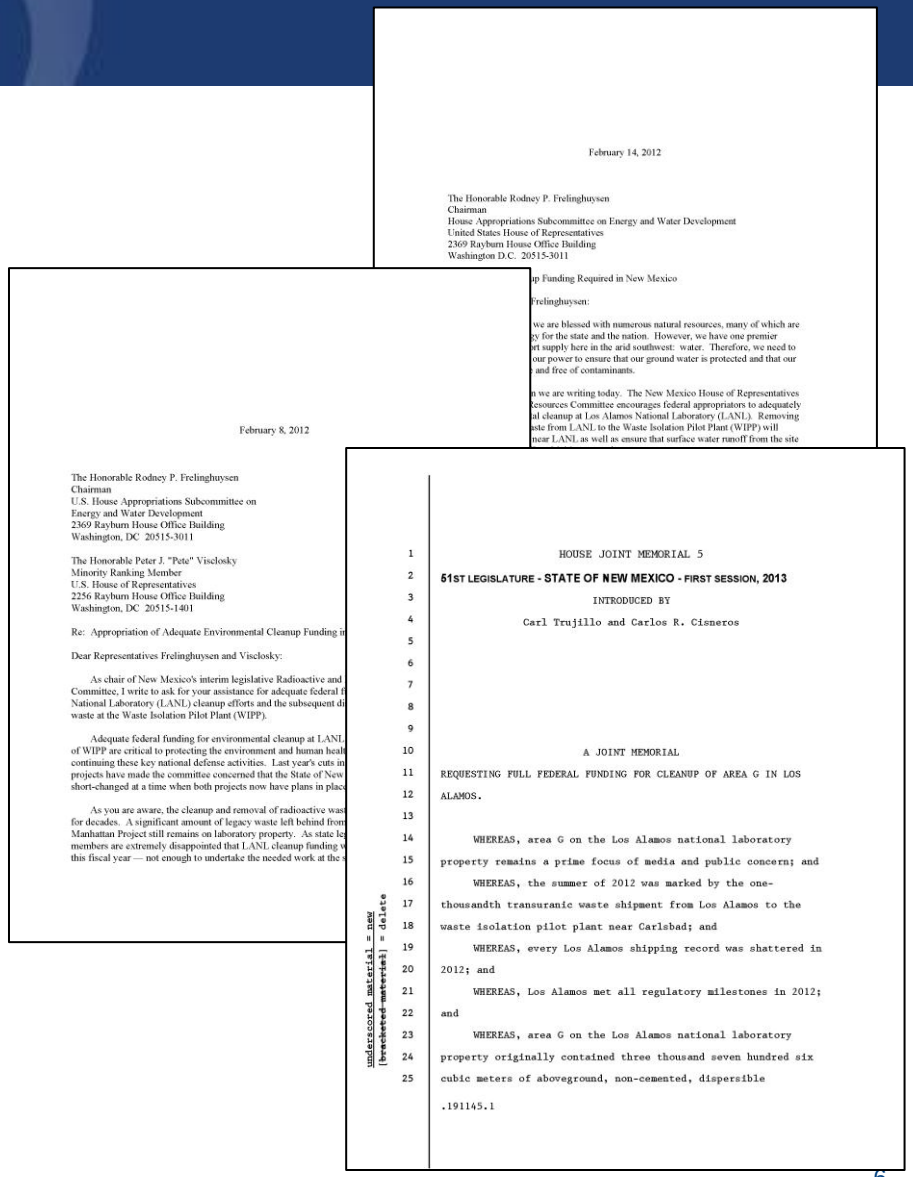
FY13 Budget Status

- FY13 Presidential Request $239M
- FY13 Sequestration Level $173M
- Reprogramming of $40M which consists of:
  - $19M in EM funding
  - $21M in NNSA funding for newly generated TRU waste inventory/future disposition of newly generated TRU waste, both of which are generator obligations associated with DP activities



Overview - Environmental Programs Budget

- Thanks to support from the state, the congressional delegation, local officials and the community, received $40 million in reprogramming funding
  - Letters from the Radioactive and Hazardous Materials Committee and the Energy and Natural Resources Committee;
  - HJM 005 sponsored by Reps. Carl Trujillo and Carlos Cisneros; and
  - Petition with more than 60 New Mexico legislator signatures taken to Washington.



February 14, 2012

The Honorable Rodney P. Frelinghuysen
Chairman
House Appropriations Subcommittee on Energy and Water Development
United States House of Representatives
2369 Rayburn House Office Building
Washington D.C. 20515-3011

...p Funding Required in New Mexico

...Frelinghuysen:

...we are blessed with numerous natural resources, many of which are ...gy for the state and the nation. However, we have one premier ...rt supply here in the arid southwest: water. Therefore, we need to ...our power to ensure that our ground water is protected and that our ... and free of contaminants.

...n we are writing today. The New Mexico House of Representatives ...esources Committee encourages federal appropriators to adequately ...al cleanup at Los Alamos National Laboratory (LANL). Removing ...ste from LANL to the Waste Isolation Pilot Plant (WIPP) will ...near LANL as well as ensure that surface water runoff from the site

February 8, 2012

The Honorable Rodney P. Frelinghuysen
Chairman
U.S. House Appropriations Subcommittee on
Energy and Water Development
2369 Rayburn House Office Building
Washington, DC 20515-3011

The Honorable Peter J. "Pete" Visclosky
Minority Ranking Member
U.S. House of Representatives
2256 Rayburn House Office Building
Washington, DC 20515-1401

Re: Appropriation of Adequate Environmental Cleanup Funding i...

Dear Representatives Frelinghuysen and Visclosky:

As chair of New Mexico's interim legislative Radioactive and ... Committee, I write to ask for your assistance for adequate federal f... National Laboratory (LANL) cleanup efforts and the subsequent di... waste at the Waste Isolation Pilot Plant (WIPP).

Adequate federal funding for environmental cleanup at LANL ... of WIPP are critical to protecting the environment and human healt... continuing these key national defense activities. Last year's cuts in... projects have made the committee concerned that the State of New ... short-changed at a time when both projects now have plans in place...

As you are aware, the cleanup and removal of radioactive wast... for decades. A significant amount of legacy waste left behind from ... Manhattan Project still remains on laboratory property. As state le... members are extremely disappointed that LANL cleanup funding w... this fiscal year — not enough to undertake the needed work at the ...

HOUSE JOINT MEMORIAL 5

51ST LEGISLATURE - STATE OF NEW MEXICO - FIRST SESSION, 2013

INTRODUCED BY

Carl Trujillo and Carlos R. Cisneros

underscored material = new
[bracketed material] = delete

A JOINT MEMORIAL

REQUESTING FULL FEDERAL FUNDING FOR CLEANUP OF AREA G IN LOS ALAMOS.

WHEREAS, area G on the Los Alamos national laboratory property remains a prime focus of media and public concern; and

WHEREAS, the summer of 2012 was marked by the one-thousandth transuranic waste shipment from Los Alamos to the waste isolation pilot plant near Carlsbad; and

WHEREAS, every Los Alamos shipping record was shattered in 2012; and

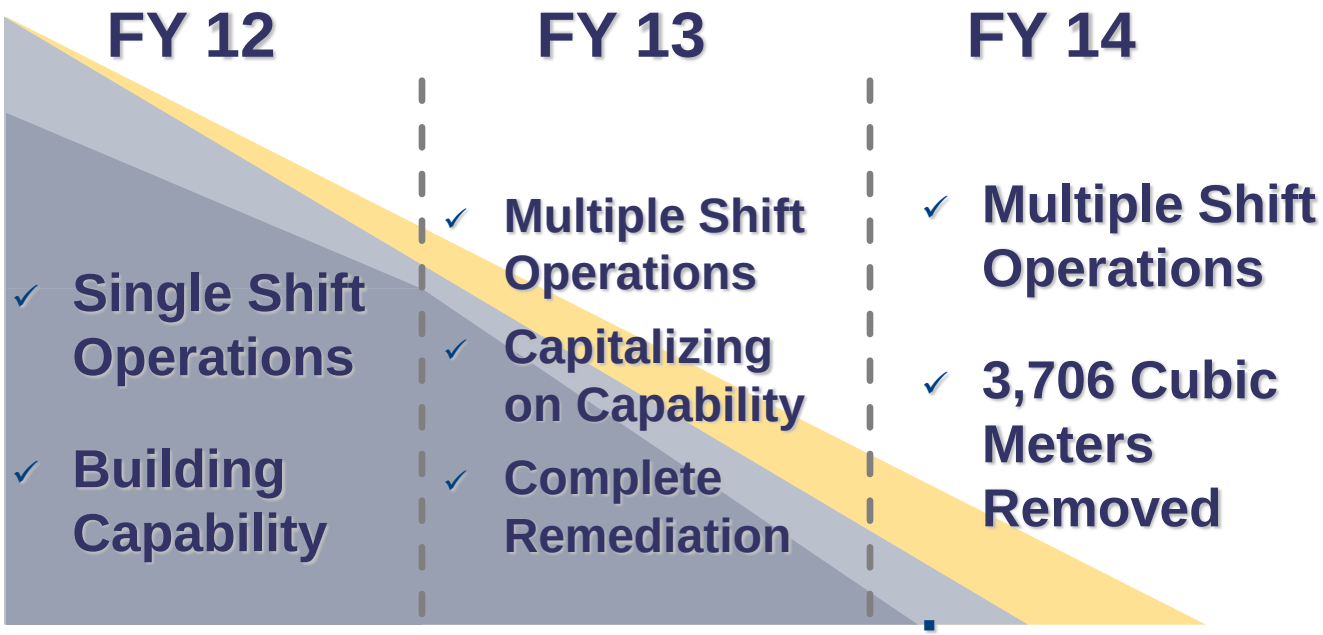
WHEREAS, Los Alamos met all regulatory milestones in 2012; and

WHEREAS, area G on the Los Alamos national laboratory property originally contained three thousand seven hundred six cubic meters of aboveground, non-cemented, dispersible

.191145.1

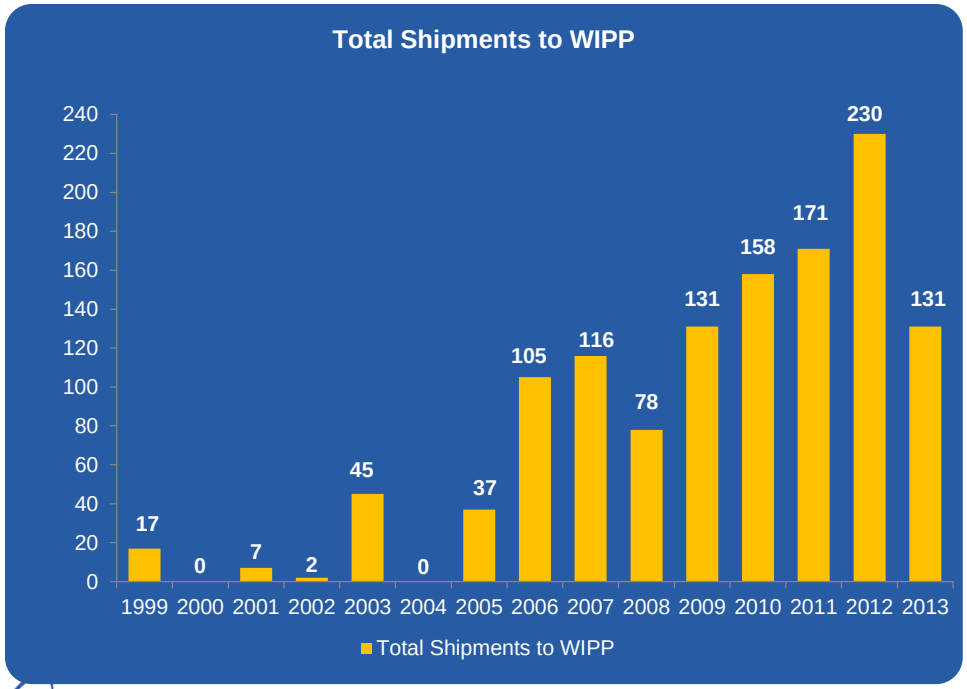
Waste – TA-54 Overview

3706 Campaign Operational Plan



Waste – 3706 Campaign Status

- 3706 TRU Waste Campaign ahead of schedule
- Sent total of 361shipments to WIPP (as of 7/14/13) and reduced radiological inventory by 40%
- Shipped 2,002 m^3 (as of 7/14/13)



Waste – 3706 Campaign Status

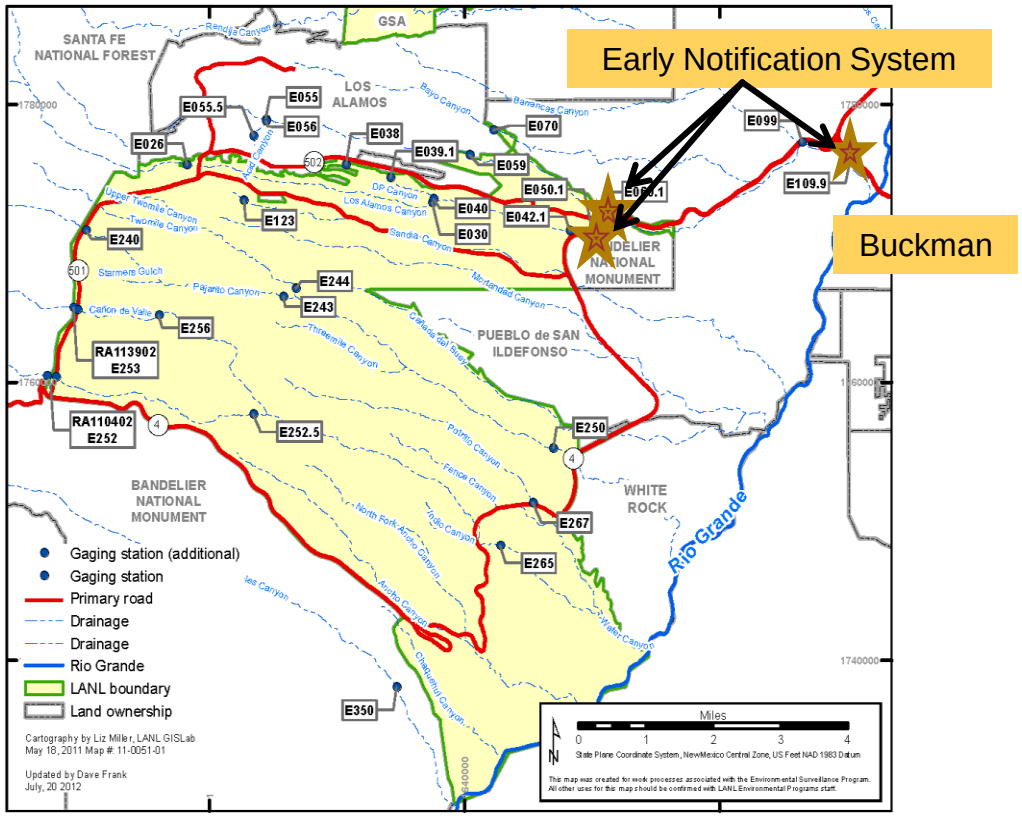
- Processing waste in four facilities 7 days per week
- 425 workers onsite
- Shipping TRU waste to WIPP and MLLW to permitted facilities
  - MLLW shipments go out of state
- Have worked closely with NMED and WIPP and other stakeholders, including pueblos and local representatives
- Conversion to master task order agreements with small business based contracts following the 3706 TRU Waste Campaign
- An estimated 200 more WIPP shipments to finish 3706

Waste – Other Framework Agreement Milestones

- Schedule for disposition of below-ground TRU requiring retrieval
- Non-cemented above-ground EM legacy TRU
- FY12 and FY13 newly generated TRU received at Area G

Other Work – Water Protection and Legacy Cleanup

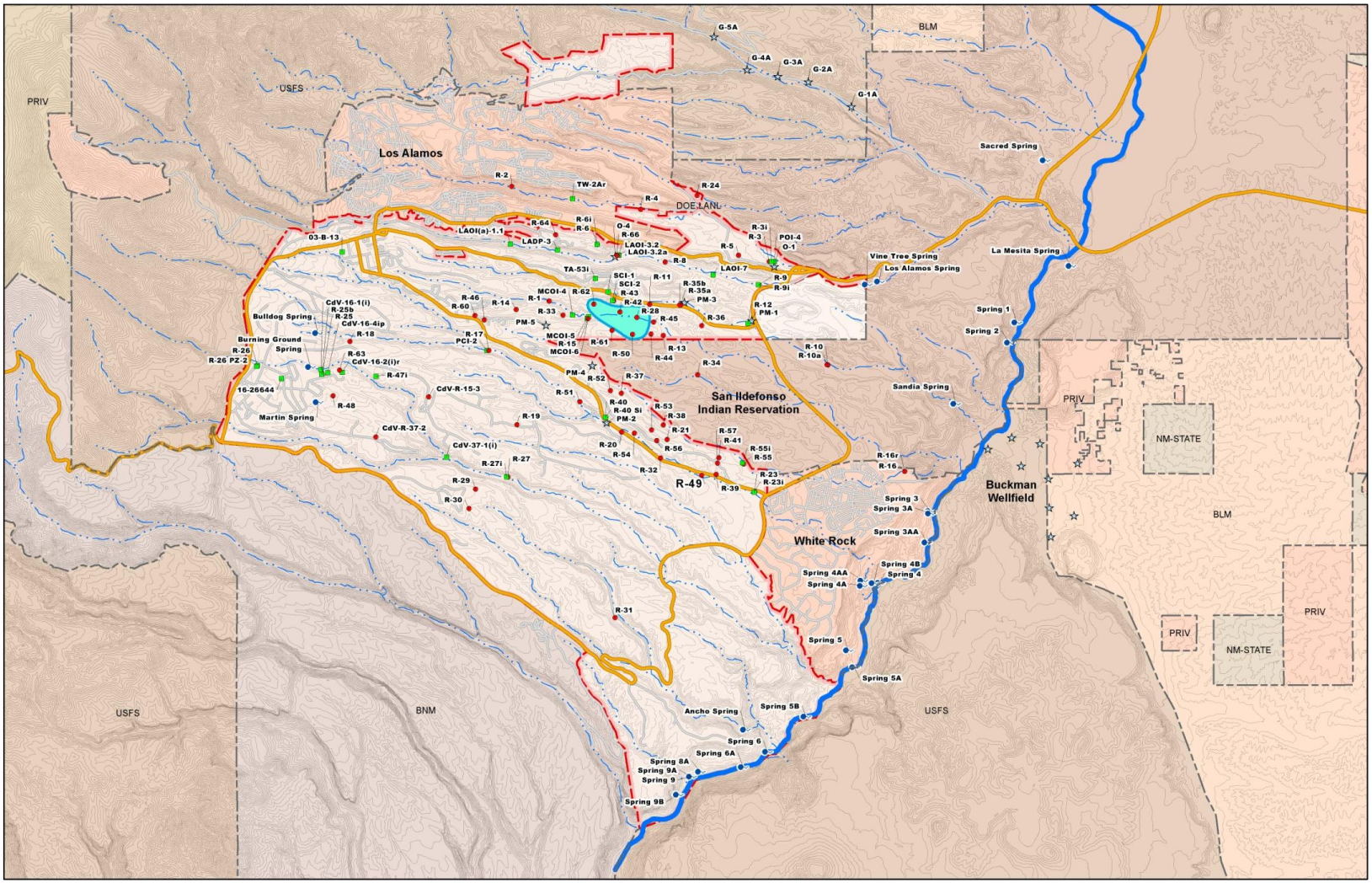
- **Ground and Surface Water Monitoring and Protection**
  - More than 140 groundwater monitoring wells
  - Sample surface water at more than 175 locations
- **Consent Order Cleanup**
  - 2,139 sites in Consent Order; 933 administratively complete, 125 delayed/deferred, 75 pending administrative action and 1,006 in progress
- **Buckman Direct Diversion Project**
  - Extensive monitoring
  - Early notification system



Groundwater Protection - Chromium

- Chromium came from cooling towers at Laboratory power plant
- Up to 160,000 pounds released from 1956-72 in hexavalent, Cr(VI) form
- Commonly used in industry at that time as a corrosion inhibitor

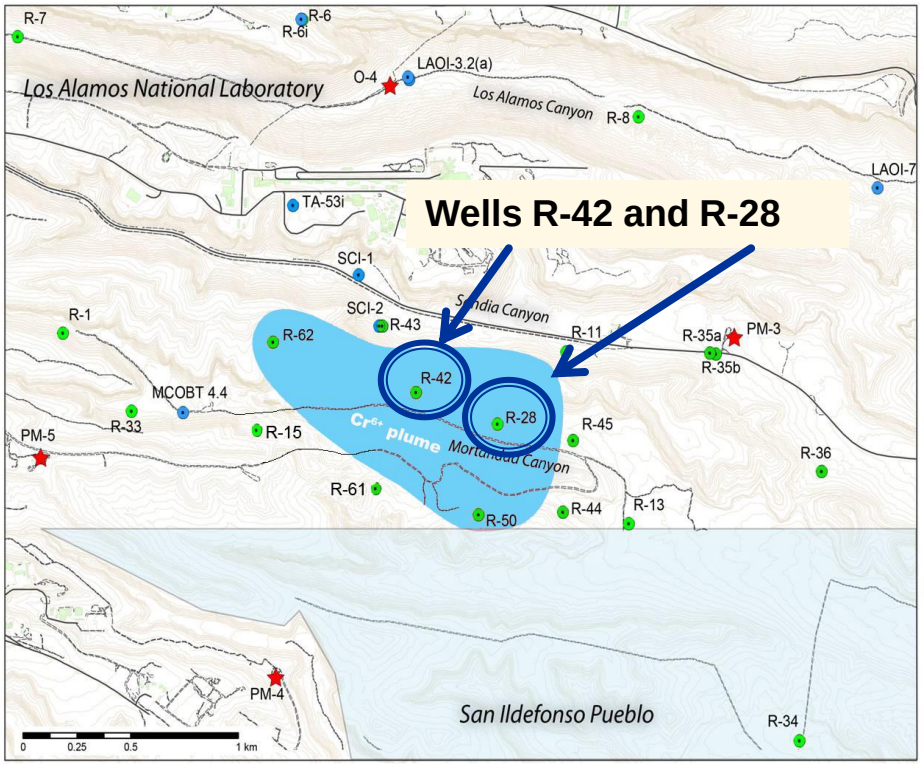
Groundwater Protection - Chromium



Groundwater Protection - Chromium

- Grade control structure nearly complete
  - Stabilizes and immobilizes contaminants in place

- Interim measure pumping tests performed on wells R-42, R-28 and SCI-2
  - Collect data to evaluate the feasibility of pump and treat for source removal
  - Expect to pump and treat 5 million gallons this calendar year



Path Forward

FY14 Scope

- Complete 3706 project
- Continue other TRU waste disposition
- Continue interim measures for groundwater chromium contamination
- Groundwater and surface water monitoring
- Investigation and cleanup of additional high risk areas

FY14 Budget

- New Mexico administration and Congressional delegation request: $255M
- President's request: $220M
- Senate appropriation mark: $250M
- House appropriation mark: $195M

Conclusion

- Making real progress addressing the highest environmental risks
- Spending wisely and providing good value
- Work being performed safely
- NMED continues to hold us accountable for performance