Los Alamos National Laboratory
Environmental Management Los Alamos Field Office
Los Alamos National Laboratory (LANL) is the oldest, most complex, and second largest National Nuclear Security Administration site

- ~ 40 square miles
- 11,171 federal employees and contractors
- 1,169 buildings
- 9 million gross square feet
- 268 miles of roads (100 paved)
- 128 radiological facilities
Established in 1943 as Site Y of the Manhattan Project to design/build the atomic bomb

- Formerly owned by the Federal Department of War, then the Atomic Energy Commission, then the Energy R&D Administration (ERDA), now the U.S. Department of Energy (DOE)

Operated by the University of California from 1943 through 2005

- NNSA was established by Congress in 2000 as a separately organized agency within DOE focused on Defense Programs; DOE transitioned oversight of 8 sites to the NNSA, including LANL

Los Alamos National Security LLC (LANS) won the Management and Operating (M&O) contract in 2005 to present

- Responsible for implementation of NNSA mission and environmental cleanup activities at LANL
- LANS = Bechtel National Inc., Babcock & Wilcox Technical Services Group Inc., University of California, and AECOM (formerly URS)
Los Alamos National Laboratory: Unique Facilities

- Nuclear facilities address critical stockpile stewardship challenges
- Supercomputing facilities
- DARHT allows researchers to study weapons performance
- Nanotechnology center drives critical research programs
- LANSCE draws international scientists studying materials
LANL FY16 Programmatic Funding Portfolio

FY16 LANL Budget Authority = $2.5B
Los Alamos National Laboratory
Organizational Structure

National Nuclear Security Administration Los Alamos Field Office

Los Alamos National Laboratory
- Weapons Programs
- Global Security
- Science, Technology & Engineering
- Operations & Business
- Capital Projects

Institutional Programs and Business Systems

Management & Operating Contract

Los Alamos National Security, LLC

Environmental Management Los Alamos Field Office

NNSA/EM/LANS Management Steering Committee

Associate Directorate Environmental Management
- Waste Disposition PBS 13
- Soil and Water & D&D PBS 30

Bridge Contract
DOE elected to transition legacy environmental cleanup and waste management activities from NNSA Los Alamos Field Office (NA-LA) to EM

**October 2014**

Los Alamos National Security (LANS) contract separation between EM-LA and NA-LA. LANS Bridge Contractor performs EM scope at LANL for EM-LA.

**October 2015**

EM-LA pursuing a dedicated cleanup contractor to perform the EM scope at LANL. Estimated to start **October 2017**

March 2015
Environmental Management Los Alamos Field Office (EM-LA) established

**October 2016**
Completion of first year of Bridge Contract
The EM-LA mission is to safely, efficiently, and with full transparency complete the cleanup of legacy contamination and waste (pre-1999) resulting from nuclear weapons development and government-sponsored nuclear research at the Los Alamos National Laboratory.

- Legacy waste is primarily located in Area G at Technical Area 54 (TA-54)
- Most of the remaining legacy waste is below-grade
60 Remediated Nitrate Salt (RNS) Drums Are Stored at Area G

Fiscal Year 2017 Activities

- Treatment started May 18, 2017
- As of October 17, treatment has completed on 50 of the 60 RNS drums
- The safety of the workers is our top priority

Workers inside WCRRF operate different phases of the treatment process

Material inside the glove box at WCRRF
Chromium Interim Measures and Characterization Campaign

Fiscal Year 2017 Activities

- Infrastructure necessary to implement the Interim Measure (IM) was completed
  - IM involves pumping and injection to control plume advancement and shrink footprint
  - Accomplishments include:
    - Drilling angled injection wells to meet injection objectives while avoiding sensitive cultural sites
    - Installing pumps, pipelines and treatment systems.
    - Well pads and pipelines are located to avoid sensitive cultural sites
    - Significant advancements in site conceptual model and modeling in support of remedy evaluation
    - Deployment of amendments for field pilot-scale testing of potential in situ remedy
    - Installed over 3 miles of pipeline, booster pump station, concrete well-head vaults, instrumentation and controls
    - Installed centralized water treatment system

Workers use an angled drilling rig at the CrIN-4 site

The closed vault at injection well CrIN-5
Fiscal Year 2017 Activities

- Drilled well R-68 to refine conceptual model for RDX pathways into regional aquifer
- Closed out Surface CMI with submittal of Remedy Completion Report
  - Completed removal of permeable reactive barrier and springs treatment units
  - Establish long-term monitoring network
- Completed report on aquifer and tracer testing

The monitoring well R-68 was drilled in FY 2017.
Fiscal Year 2017 Activities

- Completed the removal of contaminated soil from two remaining legacy sites in Upper Los Alamos Canyon
  - Collected over 260 samples; removed 135 cubic yards of soil
- No further cleanup is planned or anticipated in the Los Alamos Townsite
  - Campaign site cleanup totals (FY15-FY17): 8 legacy sites; over 1,200 samples; removed over 625 cubic yards of soil
Fiscal Year 2017 Activities

- Continued monitoring and soil investigation work
- Characterized legacy waste containers

Building 286, one of the last facilities at Technical Area 21, prior to being demolished

Building 286 being demolished