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### ***Environmental Governing Policy for Triad National Security, LLC***

*We are committed to act as stewards of our environment to achieve our mission in accordance with all applicable environmental requirements. We set continual improvement objectives and targets, measure and document our progress, and share our results with our workforce, sponsors, and public. We reduce our environmental risk through legacy cleanup, pollution prevention, and long-term sustainability.*

## **LANL Environmental Briefing**

DOE Under Secretary of Energy, Mark W. Menezes

Michael Hazen, Associate Laboratory Director for  
Environment, Safety, Health, Quality, Safeguards, and Security



July 7, 2020  
During transport  
4:25 - 4:45 pm



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# LANL Environmental Programs

## OVERVIEW

### 55 Lab-wide Environmental Protection and Compliance Programs

complex and unique DOE site - aged, remote, and geographically spread out - presents distinct challenges not found elsewhere

#### Unique Characteristics:

- 37 historic buildings
- 2,000 archeological sites
- 5 threat/endanger species
- 8 Pueblos
- 3 Counties
- Multiple mesas

#### LANL Site:

- Roughly the size of Paris - 42 square miles
- 47 Technical areas with 1,280 bldgs (42 yr av age)
- 13 nuclear facilities
- 268 miles - roads
- 198 miles - electrical lines
- 57 miles - gas lines
- 1 power plant
- Flagship research facilities (plutonium, explosives, simulations, chemistry, and more)

## COMPLIANCE PARTNERS

- 8 Regulatory agencies - 5 Federal (DOE, EPA, DOI, DOA, USACE) and 3 State (NMED, State Engineer, Administrative Code)
- 3 DOE Field Offices - NA-LA, EM-LA, and APM
- 2 Contracts - TRIAD and N3B
- Waste Isolation Pilot Plant in Carlsbad, NM (WIPP)

## FY20 HIGH PROFILE ACTIVITIES

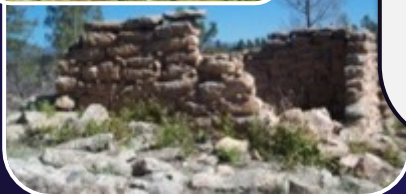
- Five of 20 environmental permits are slated for renewal in FY20
- Consolidation of site-wide waste management services under one organization - wall-to-wall inventory - disposal of unused/unspent chemicals - improve chemical management inventory
- National Environmental Policy Act (NEPA) preparation for LANL and NNSA HQ (pit production and metal from SRS)
- Pollution Prevention - Green is Clean (GIC) - reduces low-level waste generation through segregation and verification using Non-Destructive Assay (NDA) - once verified disposed of as municipal waste
- Middle DP Road Recovery Effort - February 2020 to present - support to Los Alamos County to install utilities - coordination with NA-LA, EM-LA, Los Alamos County, and the New Mexico Environment Department (NMED) to do the right thing
- Cultural and Biological Resources Management Plans and Wildland Fire and Forest Health Management Plan implemented - streamline and improve compliance (six Mexican spotted owlets in 2020)
- Manhattan Project National Historical Park (MOA between DOE and Department of Interior) with National Park Service
- Environmental Management System has been ISO 14001 certified since 2006
- Annual Site Environmental Report and Summary (ASER) informs the public, tribal governments, and stakeholders of environmental monitoring (one ASER for LANL - Triad and N3B). Natural background radiation is ~400 millirem/year; LANL contribution is ~1 millirem
- Completion of the Watershed Enhancement Supplemental Environmental Project

**Environmental programs provide support for a complex and uncommon DOE site that is aged, remote, and geographically spread out - complexities that present distinct challenges not found at other Labs**



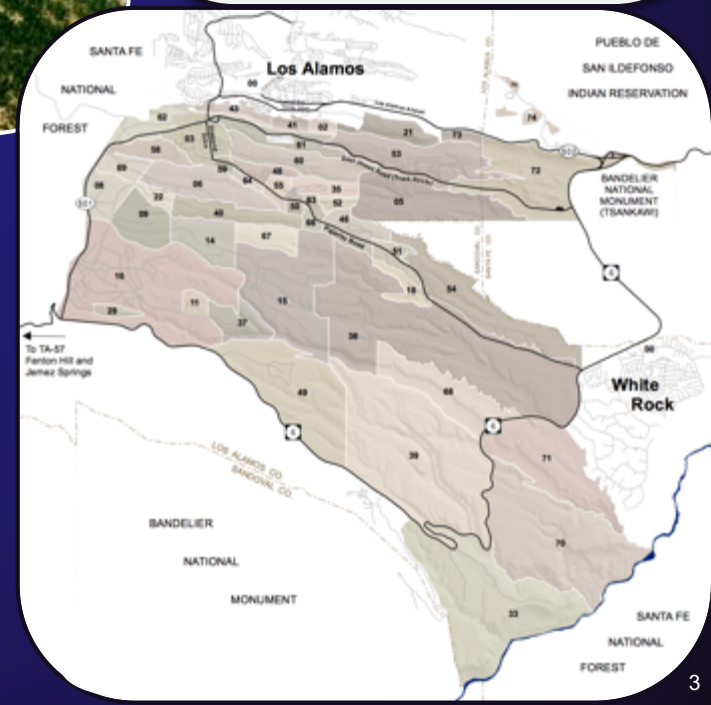
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(plutonium, explosives, simulations, chemistry . . .)



### Unique Characteristics:

- 37 historic buildings
- 2,000 archeological sites
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## SITE WIDE PROTECTION SERVICES



ENVIRONMENT SAFETY HEALTH QUALITY SAFEGUARDS SECURITY

## ENVIRONMENTAL SERVICES & WASTE MANAGEMENT



Compliance – NEPA, SWEIS, NESHAP, NPDES

Stewardship tools and policies

Management System for ISO 14001 Certification

Meteorology

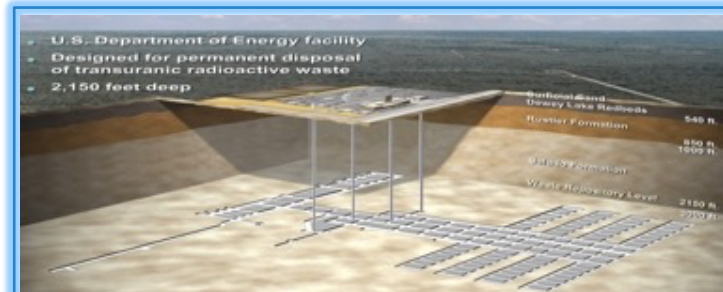
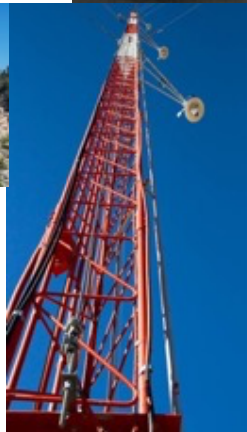
Pollution prevention

Trails management

Biological, cultural, & archeological resources

Manhattan Project National Historic Park

Air, water, soil permitting and compliance



Repository Science Operations at the Waste Isolation Pilot Plant (WIPP)



Enduring Waste Management Plan  
Radioactive and hazardous waste  
Handling/characterization/disposition  
Transportation  
Waste tools and policies



Certified since 2006 **ISO 14001:2015** CERTIFIED

# 2020 – The Year of the Environmental Permit!

## Five of 20 site-wide permits are slated for renewal this year



### Program Success:

- Partnership between LANL Legal and Environmental Protection and Compliance programs
- Timely and quality delivery of >900 compliance documents on behalf of LANL each year
- Dedicated and passionate Environmental subject matter experts who believe mission work and environmental stewardship can go hand-in-hand to achieve simultaneous excellence

### Program Challenges:

- Early involvement of compliance specialists in program/project plans, so environmental factors can be built into the process - use of Integrated Project Review tools (PRID/EXID)



	September 19, 2019	March 25, 2020	June 4, 2020	July, 2020	October 25, 2020
PERMIT	Clean Water Act Permit for NPDES – Outfalls	DP 1132 for the Radiological Liquid Waste Treatment Facility (RLWTF)	NPDES MSGP	RCRA Permit	Clean Air Act-Title V Air Permit
ACTION	Expired permit administratively continued until new permit issued by EPA; expecting permit to be issued in FY 2020	Remanded back to the Commission in June 2020; Awaiting NMED Secretary's final decision to issue or deny	Expired permit administratively continued until new permit issued by EPA; delayed by Covid-19 (Public Meetings required)	Application due – submitted 07/01/2020	NMED Secretary final decision to issue or deny
RISK	Clean water act prohibits discharge of “pollutants” within set limits into surface waters without the permit	Temporary permit expires 06/27/2020; Without a final DP 1132, LANL will have to continue to operate under temporary permits	Clean water act prohibits discharge of “pollutants” within set limits into surface waters without the permit	NMED holds an annual inspection to ensure compliance to the permit for operations of hazardous waste generation, storage, treatment, and transportation	LANL considered major source of regulated air pollutants and has an Operating Permit that must be renewed every 5 years to document operation within limits, emissions, and monitoring

EPA – Environmental Protection Agency  
 DP – Discharge Permit  
 MSGP – Multi-Sector General Permit  
 NMED – New Mexico Environmental Department

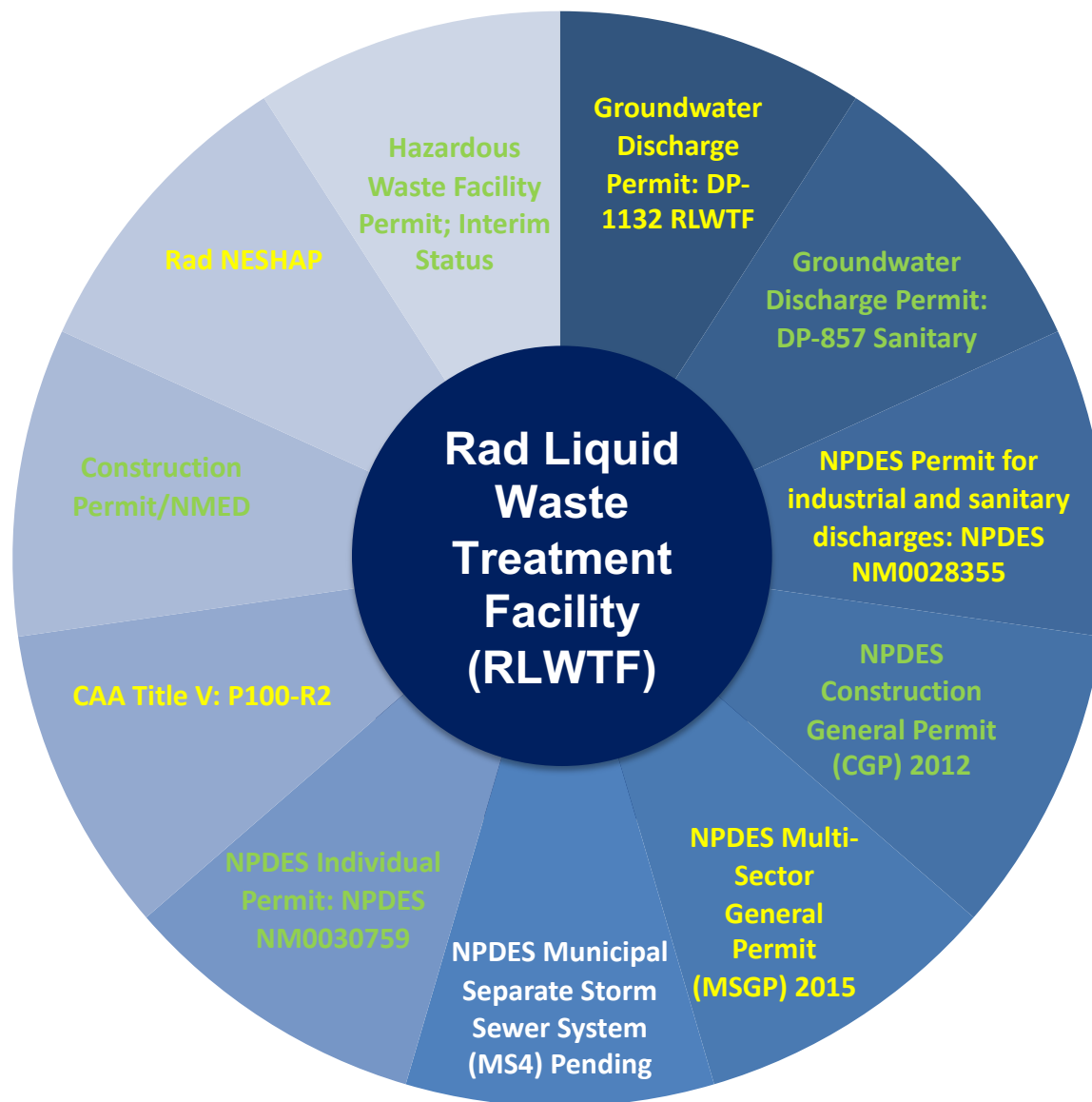
NPDES – National Pollutant Discharge Elimination System  
 RCRA – Resource Conservation and Recovery Act  
 RLWTF – Radiation Liquid Waste Treatment Facility

# Example of complexity of environmental permitting at just one LANL site



## TA-55 Permit complexity example

- DOE Safety Basis Envelope
- DOE Security Envelope
- National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP)
- Clean Air Act – Title V
- Radionuclides-National Emission Standards for Hazardous Air Pollutants (RAD NESHAP) Permit
- NMED RCRA Permit
- NPDES Outfall
- NPDES Multi Sector General Permit (MSGP)
- ☆ Above Ground Storage Tanks Spill Prevention, Control, and Countermeasure (AST/SPCC) for Ops
- ☆ AST/SPCC for Security



# Environmental Protection and Compliance Programs and Functions

## SITE WIDE PROTECTION SERVICES

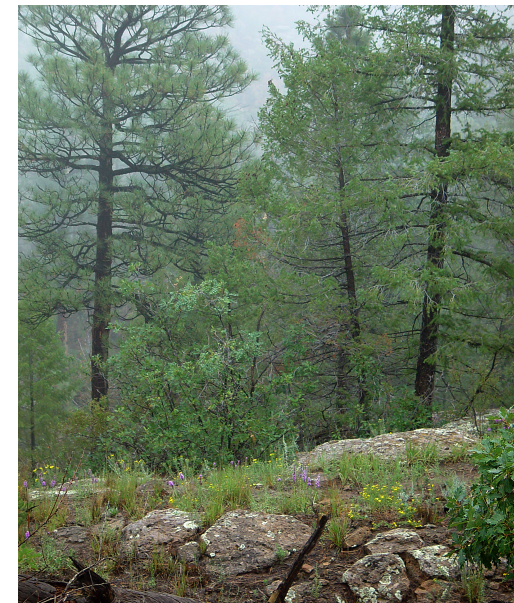


**Vision:** The vision is to sustain the best in class environmental protection and compliance programs by applying science and technology to meet the needs of our customers to support the Laboratory's vital national security mission.

**Mission:** Our primary mission is to provide the best and the brightest environmental subject matter experts to achieve long term environmental stewardship and sustainability to clean the past, protect the present, and create a sustainable future.

**Integrated Project Review Program:** This program provides streamlined and coordinated environmental subject matter expertise to project managers and program owners. More than 1000 reviews are conducted annually through the use of the web-based **Integrated Review Tool** [Permit and Requirements Identification (PRID) and Excavation Permits (EXID)], and subject matter experts from all EPC compliance programs participate.

**Compliance Programs:** manages implementation for **Clean Air and Clean Water Act** compliance and manages the Laboratory's **Sample Management Office**, the **Institutional Meteorology Program**, and the **Environmental Information Management** database. Clean Water Act compliance with applicable permits and water quality regulations includes the National Pollutant Discharge Elimination System and other discharge permits. Under the Clean Air Act at LANL there is one shared Title V operating permit and one shared Radioactive Air Emissions Management program. The **Sample Management Office** manages and processes 100s of samples a week from across LANL.



# Environmental Stewardship and Waste Programs and Functions



**Environmental Stewardship** - supports LANL implementation of State and Federal requirements for biological and cultural resources and the National Environmental Policy Act, manages the institution's Environmental Management System, the Pollution Prevention program, the Land Conveyance and Transfer project, implementation of DOE Order 458.1, Green is Clean, Non-Destructive Assay, the institutional chemical management program, and the Laboratory's sampling and monitoring program. LANL has one shared Site Wide Environmental Impact Statement, providing NEPA coverage for mission critical work.



**Waste Management Programs** - provides institutional waste management support to LANL mission, separate from waste operations, for independence. Support includes Resource Conservation and Recovery Act (RCRA) permitting and compliance, waste policy development, DOE Order 435.1 *Radioactive Waste Management* implementation, and internal waste oversight and assessments. The group's scope encompasses review of Waste Stream Profiles and Waste Disposition Requests, implementation of the waste certification program for disposal at the Nevada National Security Site, compliance assistance to generators, waste forecasts, and generator support and maintenance of the Waste Compliance and Tracking System (WCATS).

# Tsirege Pueblo – one of 1800 cultural resources on DOE/LANL property

## Ancestral Pueblo village of San Ildefonso peoples

- Constructed and inhabited 700-400 years ago (1325-1600)
  - A multi-story ~800 room village
  - Site includes associated kivas, cavates, trails, petroglyphs/rock art, fields/gardens, water control features (reservoir/check dams), and artifacts
  - Droughts near 1580 resulted in people moving away from the village
- Visited, surveyed, and excavated by anthropologists and archaeologists since the 1880s (major excavations in early 1900s and 1950s)



Aerial View of Tsirege

**Required under Public Law 105-119**

**Santa Fe National Forest**

**Los Alamos**

**Los Alamos National Laboratory**

**Bandelier National Monument**

**Pueblo de San Ildefonso**

**White Rock**

**Los Alamos National Laboratory Land Conveyance and Transfer**

**LA-UR-06-3860**

**Legend:**

- Paved Road
- Structure
- LANL Boundary
- Land Transfer Tracts**
- RECIPIENT**
- BIA, Transferred
- County, Conveyed
- County, To be Conveyed
- DOE, Withheld
- NMDOT, To be Conveyed

**Scale:**

0 0.5 1 1.5 2 Miles

0 1 2 3 4 Kilometers

**State Plane Coordinate System**  
New Mexico, Central Zone, US Feet  
NAD 1983 Datum

**Date:** 10/10/2006

**Author:** Los Alamos National Laboratory

**Project:** Los Alamos National Laboratory Land Conveyance and Transfer

**Project Number:** LA-UR-06-3860

**Project Title:** Los Alamos National Laboratory Land Conveyance and Transfer

**Project Description:** This map shows the land transfer tracts for the Los Alamos National Laboratory Land Conveyance and Transfer Project. The tracts are color-coded by recipient: yellow for BIA, Transferred; blue for County, Conveyed; orange for County, To be Conveyed; grey for DOE, Withheld; and green for NMDOT, To be Conveyed. The map also shows paved roads, structures, and the LANL boundary.

Government entities include:

- Los Alamos National Laboratory | 11