LA-UR-12-23200
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Title:	Transuranic Waste Program Framework Agreement - December Deliverable July 2012
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Intended for:	Core team briefing

Los Alamos National Laboratory

Transuranic Waste Program

Framework Agreement – December Deliverable
Dan Cox
July 2012

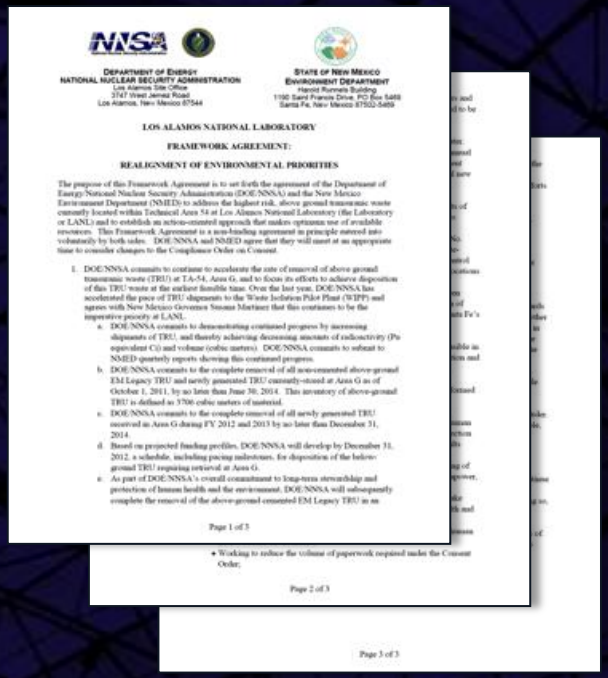
Los Alamos
NATIONAL LABORATORY
EST. 1943

Next Framework Agreement Deliverable

- Framework Agreement Deliverables
  - "DOE/NNSA commits to 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."
  - "DOE 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."
  - "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."

Objectives

- Restore the “Core Team” to develop the December, 2012 deliverable
  - Charter
  - Membership
- Obtain agreement on the Strategy for below ground waste disposition
- Establish timeline for completion of the deliverable


NNSA

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

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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 as an

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

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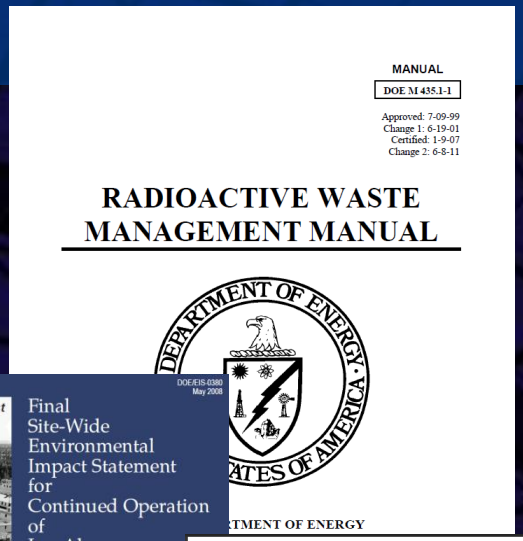
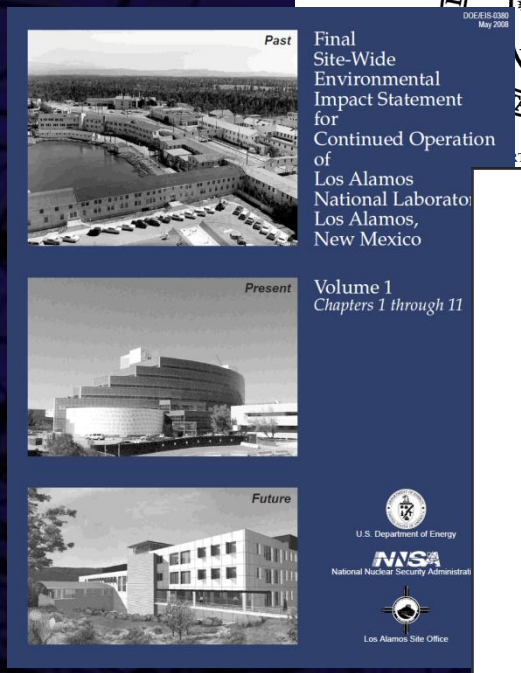
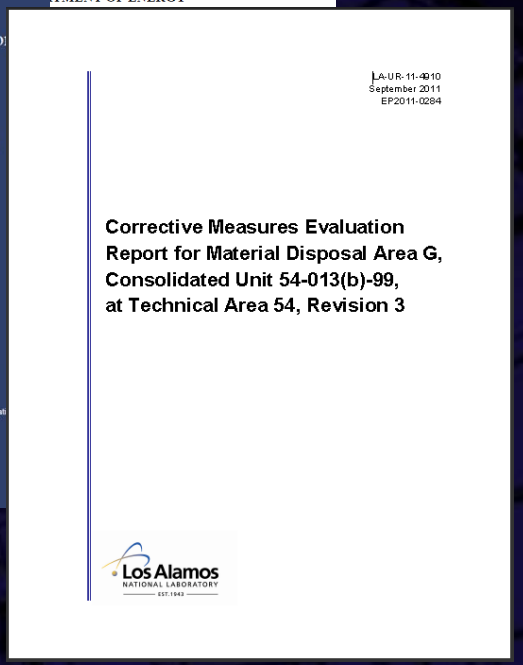
Below Grade Waste Strategy

- Perform an evaluation on below grade waste currently considered retrievable TRU
- Only commit to retrieve waste that must be retrieved
- Develop the Deliverable including Pacing Milestones based on planned commitments
- Align all Regulatory Documents for Consistency


MANUAL
DOE M 435.1-1
Approved: 7-09-99
Change 1: 6-19-01
Certified: 1-9-07
Change 2: 6-8-11
RADIOACTIVE WASTE MANAGEMENT MANUAL
DEPARTMENT OF ENERGY


DOE/EIS-0380
May 2008
Past
Present
Future
Final Site-Wide Environmental Impact Statement for Continued Operation of Los Alamos National Laboratory Los Alamos, New Mexico
Volume 1
Chapters 1 through 11
U.S. Department of Energy
National Nuclear Security Administration
Los Alamos Site Office


LA-UR-11-4910
September 2011
EP2011-0284
Corrective Measures Evaluation Report for Material Disposal Area G, Consolidated Unit 54-013(b)-99, at Technical Area 54, Revision 3
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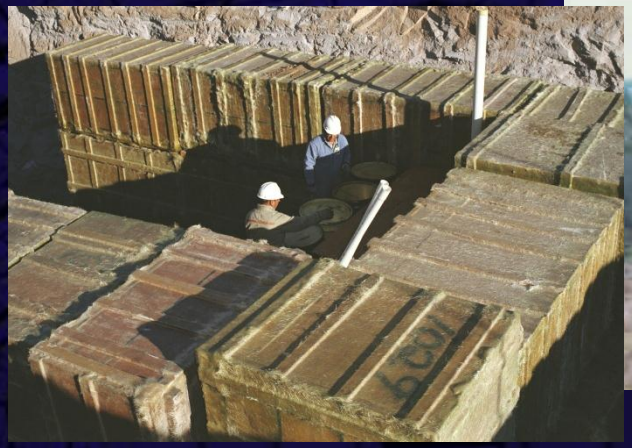
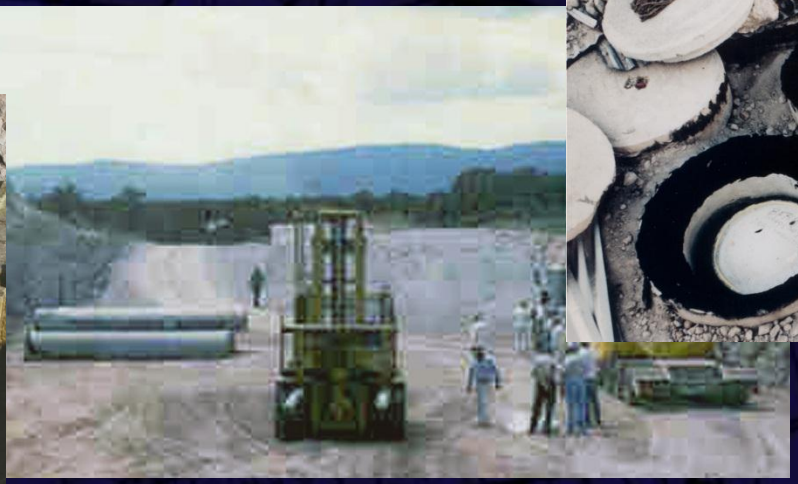
Below Grade Waste Disposition Evaluation

- Answer 3 Primary Questions:
  - Is the waste TRU?
  - Is the waste retrievable?
  - Can retrieval cause more harm than benefit?





Commitment

- ✓ Perform due diligence on …
  - Historical records and data reviews,
  - Interviews with personnel, and
  - Existing physical conditions

- ✓ Calculate current activity level with decay for each waste package
- ✓ Determine current configuration and weight of each waste package

TRU ? — Yes → Retrievable ? — Yes → More Benefit Than Harm ? — Yes → Commit To Retrieve

TRU ? — No → Do **NOT** Commit to Retrieve

Retrievable ? — No → Do **NOT** Commit to Retrieve

More Benefit Than Harm ? — No → Do **NOT** Commit to Retrieve

Do **NOT** Commit to Retrieve → Perform Supplemental Analysis → Align Documents to New End State

Retrieve waste outside of the NMED Commitment, if necessary

Scope

Waste Category	Description	Legacy Containers	Volume (m^3)	MAR (PE-Ci)	Retrievable	TRU/LLW
Trenches A-D	720 Drums at 30 Gallons Each	720	335	93,870	Yes	TRU
Pit 9	3,881 Drums and 197 Boxes	4078	1,560	6,019	Yes	Both
Corrugated Metal Pipes (CMPs)	158 CMPs at 30" in Diameter by 20' Long	158	442	10,755	Yes	TBD
33 Lined Shafts	32 Shafts w/ RH hot cell debris; 1 shaft contains reactor vessel	33	3.4	97	TBD	TBD
Hot Cell Liners	5 shafts with RH hot cell lines	5	51	0.5	Yes	TBD
TRU with Tritium Packages	5 Tritium Tanks	5	6.7	8	Yes	TBD
RH Canisters	1 Canister	1	1.0	1.5	Yes	TBD
TOTAL		**5000**	**2,400**	**110,751**		

Schedule

Plan for the Plan
December Deliverable

Most likely timeframe for NMED to issue
Material Disposal Area G
Statement of Basis

April 17-19 Workshop

May 14 Executive Review

June 27 INP Workshop*

April | May | June | July | Aug | Sept | Oct | Nov | Dec

Restore the Core Team
Agree on Strategy and Decision Process
Prepare for initial meeting with NMED

Initial meeting with NMED

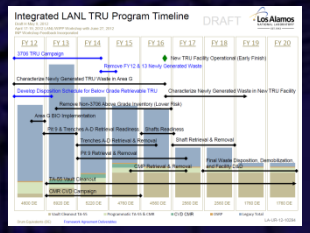
DRAFT Pacing Milestones provided to Core Team

Initial DRAFT of Deliverable

TRU Corporate Board (Santa Fe)

Nov 28 CAB – Final Deliverable

* Agreement reached on integrated logic at June 27 INP Workshop



Considerations:
- NMED Membership on the Core Team
- Stakeholder Involvement in Development of the Deliverable
- Simple Deliverable

Regulatory Alignment

- Align all Decision/Analysis Documents including…
  - MDA G Corrective Measures Evaluation,
  - 2009 Site Wide Environmental Impact Statement and Record of Decision, and
  - Performance Assessment / Composite Analysis

Table 3–17 Waste Management Operations: Solid Radioactive and Chemical Waste Facilities Capabilities and Activity Levels

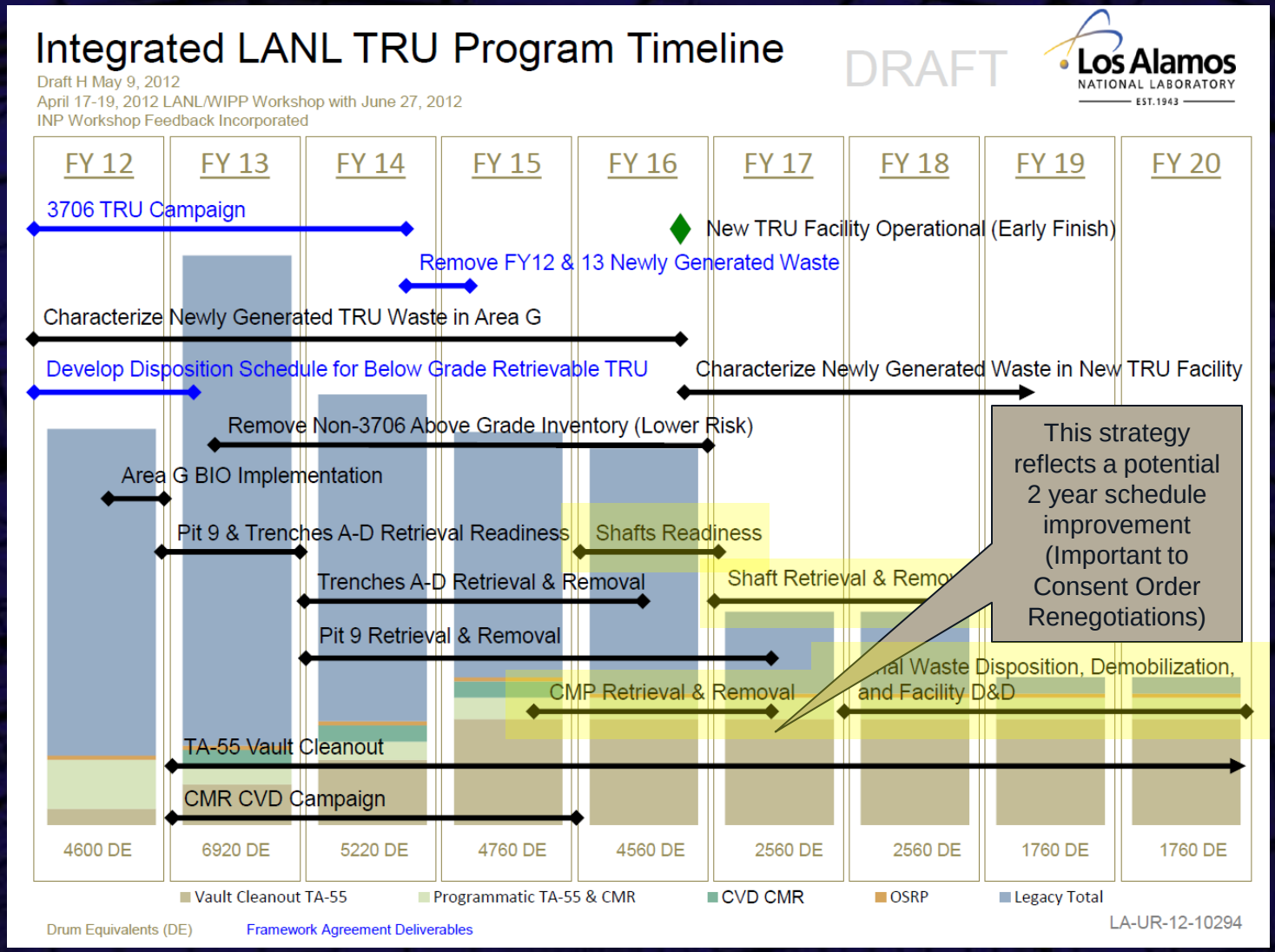
Capability	*No Action Alternative* [a, b]	*Reduced Operations Alternative*	*Expanded Operations Alternative* [b]
Waste Characterization, Packaging, and Labeling	Characterize 420 cubic yards (320 cubic meters) of newly generated transuranic waste annually. Characterize 11,000 cubic yards (8,400 cubic meters) of legacy transuranic waste. Characterize low-level radioactive, mixed low-level radioactive, and chemical waste, including waste from DD&D and remediation activities. Ventilate transuranic waste retrieved from belowground storage. Perform coring and visual inspection of a percentage of transuranic waste packages. Overpack and bulk small waste items as required. Support, certify, and audit generator characterization programs. Maintain waste acceptance criteria for LANL waste management facilities. Maintain waste acceptance criteria for offsite	Same as No Action Alternative	Same as No Action Alternative, plus: - Characterize an additional 290 cubic yards (220 cubic meters) of newly generated transuranic waste annually. - Characterize approximately 3,100 cubic yards (2,400 cubic meters) of contact-handled and 130 cubic yards (100 cubic meters) of remote-handled legacy transuranic waste retrieved from belowground storage. - Characterize additional low-level radioactive, mixed low-level radioactive, and chemical waste, including waste from DD&D and remediation activities.

Section 7.1 identifies activities that will be undertaken before corrective measures begin. Section 7.2 presents the threshold screening criteria that are listed in Section VII.D.4.a of the Consent Order. Section 7.3 presents the screening of alternatives against the threshold criteria. The alternatives that satisfy all four of the threshold criteria are carried forward into section 8, where they are evaluated against the remedial alternative evaluation criteria (also referred to as balancing criteria) defined in Section VII.D.4.b of the Consent Order.

7.1 Activities Undertaken before Implementation of Corrective Measures

The Laboratory's TRU Waste Disposition Project will retrieve, characterize, package, and ship both the aboveground TRU and the retrievable belowground TRU waste. The aboveground TRU includes the waste in drums and fiberglass-reinforced plywood boxes that are currently stored throughout Area G in domes. The retrievable belowground TRU waste is located in: Pit 29 (corrugated metal pipes); Pit 9; Trenches A–D; Shafts 200–232 (33 shafts); Shafts 262–266 (tritium torpedoes); and Shafts 302–306 (hot cell liners). All waste operations are required to be completed before implementing the final remedy for MDA G.

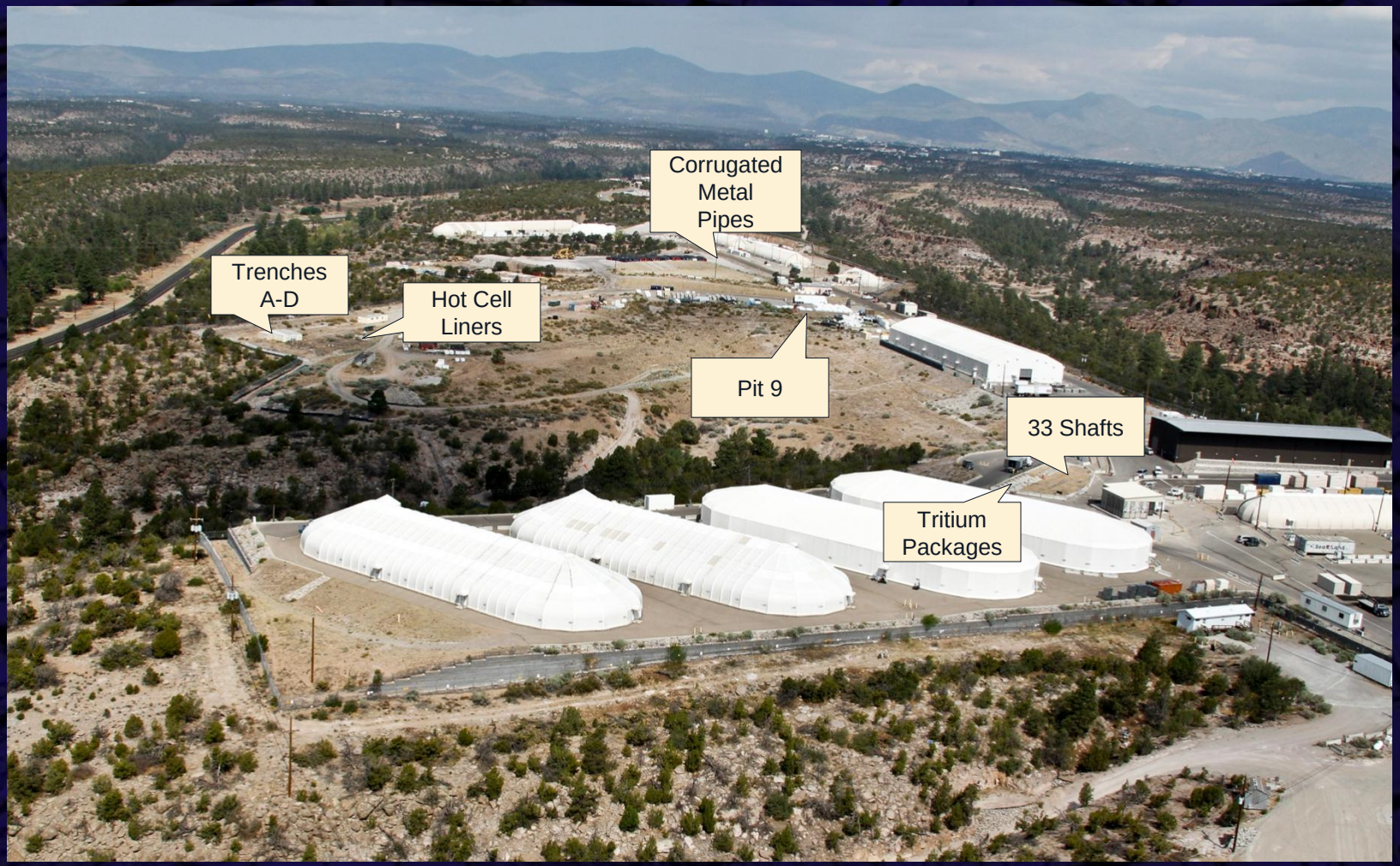
Integrated Waste Removal Plan



Integrated Waste Removal Plan

Back-up Information

Retrieval Campaigns



Retrieval Campaigns

Retrieval Campaigns

Retrieval Campaigns

Retrieval Campaigns

33 Shafts
Approximately 97 PE Ci

3706 TRANSURANIC WASTE CAMPAIGN

New Mexicans working together to meet a national environmental challenge

Los Alamos NATIONAL LABORATORY EST. 1943

NMED LANL WIPP

WIPP