

Expanded Operations Alternative - Example Projects

Future Supercomputing Infrastructure

- 100,000-square-foot facility with a 25,000-square-foot staging area.
- Evaporative cooling could require up to 162 million gallons of cooling water per year.
- 60 megavolt-amperes (MVA) load by 2030, with a future demand of up to 100 MVA.

Wildland Fire

- Wildland fire risk reduction and forest health objectives would be accomplished through treatments for forest thinning, life safety actions, open space forest health, and the implementation of new treatment practices.
- Desired conditions for each project would be approximately 60–80 stems (mature trees) per acre to create a mosaic landscape.

Surplus Plutonium Disposition Program (SPDP)

- The Final SPDP EIS analyzed the implementation of the dilute and dispose strategy to dispose of 34 metric tons of surplus plutonium made up of both pit and non-pit plutonium. As a result of the announced delay in implementation of the SPDP project, the SWEIS analyzes the potential limited enhancement of operations of the ARIES processing line in PF-4 and would increase the amount of actinides processed from the current limit of 400 kilograms per year to 700 kilograms per year.
- Construction proposed in TA-52 and TA-55 with 221,700 square feet of facilities.

Microreactor(s)

- Factory manufactured, easily transported, and designed to produce approximately 1–5 MW of electrical power for at least 3 years in full operation.
- Classified as HC-2 nuclear facilities.
- Self-regulating and not reliant on engineered systems to ensure safe shutdown and removal of decay heat.

Open Burning/Open Detonation (OB/OD)

- Under current federal regulation, OB/OD of hazardous wastes is prohibited except for the OB/OD of waste explosives. Waste explosives include: (a) waste, which has the potential to detonate and (b) bulk military propellants, which cannot be safely disposed of through other modes of treatment.
- Current status: except for thermal treatment at the TA-16-388 Flash Pad, all OB treatment units are undergoing closure or have been closed. LANL maintains two OD units for waste treatment in TA-36 and TA-39.
- Three types of proposed technologies:
 - (1) contained detonation;
 - (2) flashing furnace; and
 - (3) rotary kiln incinerator.

Dynamic Mesoscale Materials Science Capability

- 192,000-square-foot facility, also referred to as the “Matter Radiation Interactions in Extremes.”
- New x-ray-free electron laser facility focused on the control of performance and production of materials at the mesoscale.
- The mesoscale covers spatial dimensions bridging the nano- and macroscopic scales.

Transuranic (TRU) Waste Staging

- The total estimated footprint of the TRU waste staging areas would be approximately 240,000 square feet.
- Proposed construction and operation of up to four additional staging locations for TRU waste generated from PF-4, primarily associated with pit production operations.
- Possible locations include developed areas in TA-16, TA-54, TA-55, and TA-60.

Feral Cattle

- Proposed management strategies for addressing the issues across NNSA property: (1) Live trapping and relocation and (2) Lethal control for reduction or elimination.

