



Presentation to the Radioactive and Hazardous Materials Committee
on
Discussion Topics Concerning LANL

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Short bio: I worked with Concerned Citizens for Nuclear Safety (CCNS) 1992 – 1999. I have been Executive Director of Nuclear Watch New Mexico since 1999. I have worked successfully against radioactive incineration at the Los Alamos Lab and in Clean Air Act, Freedom of Information Act and National Environmental Policy Act lawsuits against the Department of Energy (that said, I am not an attorney). Among other things, I prompted a 2006 independent study that concluded that plutonium pits (the fissile “triggers” of nuclear weapons) last at least a century, at the time leading to congressional rejections of new-design nuclear weapons and their production; and initiated litigation that resulted in a \$6.25 million settlement that funded citizen and tribal studies of DOE cleanup programs. A recent successful lawsuit by Nuclear Watch over the slow pace of cleanup at LANL stipulated the resumption of storm water monitoring in Los Alamos Canyon (which the Buckman Direct Diversion Project had been asking for since 2013), the acceleration of major cleanup projects, and a pending study on genuine, comprehensive cleanup of a major radioactive waste pit instead of “cap and cover” of existing wastes. Contact: jay@nukewatch.org

Questionable Department of Energy benefits to New Mexico:

- DOE plans to spend \$9.4 billion in New Mexico during this fiscal year 2023, 71% for nuclear weapons research and production while much of the rest is for related radioactive waste disposal. This is 10% more than the State’s entire operating budget of \$8.5 billion. Forty-one percent of the National Nuclear Security Administration’s nation-wide FY 2023 nuclear weapons research and production budget will be spent in the Land of Enchantment alone.¹
- How does this really benefit New Mexicans when the Land of Enchantment:
 - Has the third highest rate of poverty (18.2%) after Mississippi and Louisiana;²
 - Is fourth lowest in per capita income in 2022,³ down from 37th in 1959; and
 - Is ranked 46th in best states to live in, according to five criteria (affordability, economy, education and health, quality of life, and safety),⁴ dead last in quality of education⁵ and dead last in quality of life for children?⁶
- At the same time, Los Alamos County is the 11th richest county in the USA,⁷ has the most millionaires per capita (11.6%),⁸ and has been ranked the best county to live in.⁹ Clearly the economic benefits are for a privileged minority of the New Mexican population.

- In contrast, in a study which LANL reportedly tried to suppress,¹⁰ the seven county governments surrounding Los Alamos County suffer a net economic loss from the presence of the Lab.¹¹
- Finally, New Mexico is saddled with environmental and groundwater contamination from uranium mining and nuclear weapons research and production, with at best incomplete plans for cleanup, and has the nation's only permanent dump for radioactive wastes.

LANL is not to be trusted:

- In the past LANL claimed that groundwater contamination was impossible. Yes, volcanic tuff is impermeable, but the Lab knew that the Parajito Plateau is highly fractured by seismic faults. LANL went so far as to ask the New Mexico Environment Department for a waiver from monitoring groundwater contamination. That was fortunately denied, and we now know of serious chromium contamination. Further, more groundwater contamination is inevitable given Lab plans to “cap and cover” more than 200,000 cubic yards of radioactive and toxic wastes. As a LANL study concluded: “Future contamination at additional locations is expected over a period of decades to centuries as more of the contaminant inventory reaches the water table.”¹²
- Up until the mid 1990's LANL used an unapproved “building shielding factor” in order to evade the Clean Air Act's limit of a 10 millirem annual radioactive air dose to the public. Concerned Citizens for Nuclear Safety successfully sued and a federal judge ruled that LANL was in major violation at 30 radioactive air emissions stacks. A mere four months later LANL issued a press release claiming that it had come into compliance when compliance was originally estimated to take at least three years at much greater cost. A whistleblower came forth who successfully rebutted the Lab's false claim of compliance with the Clean Air Act.
- Today cleanup at LANL is governed by a weak 2016 Consent Order that was negotiated with the New Mexico Environment Department behind closed doors, with arguably blatant conflicts of interest (see more below).

Plutonium pit production:

- The National Nuclear Security Administration (NNSA) had an aggressive plan to produce at least 30 pits per year at LANL and at least 50 at the Savannah River Site (SRS) in South Carolina by 2030. Production at SRS is now delayed until ~2035. The cost of its pit facility has exploded to around \$20 billion¹³ (by comparison the new World Trade Center cost \$4 billion). This could prompt LANL into “surge” production of 80 pits per year.
- The U.S. has up to 20,000 pits already stored at the Pantex Plant near Amarillo, TX. Independent experts have concluded that pits have service lifetimes of at least a century¹⁴ (their average age now is around 40).
- The reputed aim of expanded pit production is to maintain the safety and reliability of the stockpile in order to maintain our nuclear “deterrence.” But the fact is that the United States and the USSR (now Russia) never possessed their huge stockpiles for the sole purpose of deterrence anyway. Instead, their nuclear weapons policies were always a hybrid of deterrence and nuclear war fighting,¹⁵ which threatens global annihilation to this very day. This means nuclear war-fighting should deterrence fail, or even possible pre-emptive first strike. That is why we have

thousands of nuclear weapons instead of just the few hundred needed for only deterrence. That is why we have a \$1.7 trillion “modernization” program to keep nuclear weapons forever.

- Moreover, future pit production is not to maintain the safety and reliability of the existing stockpile but rather for speculative new designs (the future W87-1 and W93 warheads). Additionally, these future pits may substantially deviate from original designs and the legacy database of more than 1,000 full-scale tests.¹⁶ The import of all this is that confidence in stockpile reliability could be eroded, thereby possibly degrading national security, or even prompt the U.S. to resume testing, which would have severe international proliferation consequences.
- For the purposes of complying with the National Environmental Policy Act on expanded plutonium pit production, NNSA relies upon a 2008 nation-wide programmatic environmental impact statement and a 2008 LANL Site-Wide Environmental Impact Statement (SWEIS), which are inherently outdated and never considered simultaneous production at two sites. NNSA refuses to prepare a new PEIS. Similarly, the new LANL SWEIS treats expanded pit production as a done deal under a “No Action Alternative.”
- LANL Site-Wide Environmental Impact Statements have tangible benefits. For example, citizen comments in a 1999 draft SWEIS prompted DOE to undertake wildfire mitigation measures. That helped to avert potential catastrophe when the 2000 Cerro Grande Fire came within a mile of some 40,000 barrels of plutonium wastes at Area G.
- LANL’s chronic history of nuclear safety incidences need analysis and resolution before expanding plutonium pit production. These concerns are serious enough that major operations at LANL’s main plutonium facility (PF-4) were halted for more than three years, yet nuclear safety incidences still occur.
- It is also not clear how expanded pit production can safely operate concurrently with other major plutonium programs at the aging PF-4 facility. This very much includes the emerging issue of pre-processing more than 40 metrics tons of excess plutonium for eventual disposal at the Waste Isolation Pilot Plant (WIPP). The Government Accountability Office raised this issue years ago with no apparent resolution.¹⁷

Defense Nuclear Facilities Safety Board (DNFSB):

- “Congress established the Board in September 1988 in response to growing concerns about the level of health and safety protection that DOE was providing the public and workers at defense nuclear facilities. In so doing, Congress sought to provide the general public with added assurance that DOE’s defense nuclear facilities are being safely designed, constructed, operated, and decommissioned.”¹⁸
- DOE tried to seriously restrict DNFSB access to nuclear facilities through its Order 140.1 *Interface with the Defense Nuclear Facilities Safety Board*. That Order was overturned by public and congressional opposition.
- The Safety Board has recommended since 2004 that DOE/NNSA provide active confinement safety systems at PF-4, LANL’s main plutonium facility. In the Safety Board’s words, “NNSA and the Board have agreed for more than a decade on the need to improve the credited safety

systems at PF-4; however, these improvements have been delayed. The concerns detailed in this report further emphasize the need for timely upgrades to PF-4's deficient safety systems.”¹⁹

Further, “Given the magnitude of the potential consequences to the public, the Board believes DOE must develop expeditiously a defensible safety strategy for seismically induced events at the Plutonium Facility and a credible plan for implementing this strategy. DOE's response must include definite, measurable, and immediate means to substantially reduce the potential consequences at the site boundary. Implementation of a sound safety strategy must be pursued on an urgent basis.”²⁰

- The Safety Board has calculated potential radioactive doses to workers of up to 750 rems²¹ (500 rems are considered lethal) from incompatibly mixed radioactive wastes similar to the errant waste drum from LANL that closed the Waste Isolation Pilot Plant in 2014 for three years. This is in contrast to the small radioactive doses that NNSA always calculates in its National Environmental Policy Act documents.
- The Safety Board is holding a public hearing in Santa Fe this Wednesday November 16 on “Nuclear Safety at Area G” and “National Security Missions and Nuclear Safety Posture.”²²

Future plutonium pit production is reliant upon the Waste Isolation Pilot Plant:

- NNSA claims that half of WIPP's future capacity will be reserved for radioactive plutonium wastes from future pit production and that those wastes will be given priority.²³ That fundamentally changes WIPP's mission from cleanup to enabling expanded production of nuclear weapons.
- The National Academy of Sciences has reported that WIPP does not have sufficient capacity for all the wastes that DOE contemplates dumping there.²⁴ In addition to continuing disposal of Cold War legacy wastes and future pit production wastes, this can include more than 40 tons of “excess” plutonium, “Greater than Class C Wastes” (e.g., from decommissioned commercial nuclear reactors) and reclassified high-level radioactive wastes from the Hanford Nuclear Reservation.
- The Waste Isolation Pilot Plant is currently permitted by NMED only through 2024. DOE seeks to extend it indefinitely. DOE is not looking for another site elsewhere, even the name itself denotes that WIPP was meant to be a “Pilot Plant.”

Tritium releases:

- LANL plans to intentionally release up to 100,000 curies of radioactive gaseous tritium and possibly more over time. The Lab claims tritium “getters” will absorb much of the release, but this method is not approved by the EPA. Tritium is an isotope of hydrogen and hence can form tritiated water which enters the biosphere. Tritium can cause defects in human ova and cross the placenta leading to possible mutagenic harm. The go ahead on these tritium releases depends upon NMED granting a “temporary authorization” to proceed.

A NMED policy is needed on resigning employees:

- The New Mexico Environment Department is often plagued by hi-level vacancies. The Deputy Cabinet Secretary for Operations recently resigned (now temporarily filled by an “Acting” Deputy Director). Before leaving, she was to make decisions and/or be central to NMED decisions on:
 - Extending the permit for the Waste Isolation Pilot Plant;
 - Allowing or not LANL to release up to 100,000 curies of gaseous radioactive tritium;
 - Allowing or not LANL’s request to “cap and cover” and thereby leave buried radioactive and toxic wastes as a permanent threat to groundwater; and
 - NMED’s lawsuit against the Department of Energy (DOE) to terminate the ineffective 2016 Consent Order governing cleanup at LANL. NMED is dissatisfied with the Lab’s slow pace of cleanup.
- Nuclear Watch New Mexico’s concern is that her predecessor resigned to go to work as a public communications specialist for Longenecker and Associates, a DOE contractor. Prior to working at NMED, that person had worked at LANL for four years as Group Leader for Regulatory Support and Performance. At Longenecker she joined the former interim manager of the DOE Environmental Management field office at the Los Alamos Lab. The two of them were principals in negotiating the 2016 Consent Order to replace the original enforceable 2015 Order. The new Order allowed the Lab to “settle any outstanding violations of the 2005 Consent Order” and waived any existing violations. New Mexico could have collected more than \$300 million in stipulated penalties had NMED vigorously enforced the 2005 Consent Order. At the time, the Land of Enchantment was facing a budget crisis with a projected \$600 million deficit. In effect, NMED gave away half of that deficit to a polluting nuclear weapons site that now has an annual budget of \$4.5 billion.
- Another example is a former NMED Secretary who resigned to become Executive Director of the New Mexico Oil and Gas Association. Nuclear Watch New Mexico believes that there should be an enforceable NMED policy that resigning employees cannot go to work for entities that they were regulating, at least for a substantial “cooling off” period.

In the interest of protecting New Mexicans and their environment, Nuclear Watch New Mexico respectfully makes the following recommendations to the Radioactive and Hazardous Materials Committee.

The Committee should advocate that:

- NNSA provide active safety class systems for plutonium operations at LANL’s PF-4.
- NNSA must analyze plutonium pit production in the new LANL Site-Wide Environmental Impact Statement.
- NNSA should resolve all Defense Nuclear Facilities Safety Board concerns before expanding plutonium pit production.
- NMED not grant a temporary authorization for LANL’s planned tritium releases.
- DOE should analyze planned tritium releases in the new LANL Site-Wide Environmental Impact Statement.
- DOE and NNSA should reconcile potential dose calculations with those of the Defense Nuclear Facilities Safety Board in the new LANL SWEIS.
- NMED should permit the Waste Isolation Pilot Plant (WIPP) for only the next decade, which is standard practice.
- DOE should formally begin a search for a replacement for WIPP outside of New Mexico.

- NMED should develop a policy that ex-employees must observe a “cooling off” policy of at least two years before working for DOE, NNSA or its contractors.

- ¹ Data from *State Tables*, DOE FY 2023 Congressional Budget Request, <https://www.energy.gov/sites/default/files/2022-04/doe-fy-23-budget-state-table.pdf>
- ² *Poverty Rate by State 2022*, <https://worldpopulationreview.com/state-rankings/poverty-rate-by-state>.
- ³ *Per Capita Income by State 2022*, <https://worldpopulationreview.com/state-rankings/per-capita-income-by-state>
- ⁴ *Best States to Live in, 2022*, <https://wallethub.com/edu/best-states-to-live-in/62617>
- ⁵ *Best States for Education 2022*, <https://worldpopulationreview.com/state-rankings/best-states-for-education>
- ⁶ *2022 KIDS COUNT Data Book*, Annie E. Casey Foundation, <https://assets.aecf.org/m/resourcedoc/aecf-2022kidscountdatabook-2022.pdf>, page 19.
- ⁷ <https://www.usnews.com/news/healthiest-communities/slideshows/richest-counties-in-america?slide=6>
- ⁸ <https://www.wisebread.com/10-small-towns-with-the-most-millionaires-per-capita>
- ⁹ <https://www.niche.com/places-to-live/c/los-alamos-county-nm/>
- ¹⁰ http://www.riograndesun.com/news/inequities-edited-out-of-los-alamos-national-lab-study/article_ea042414-b7f8-11ea-ada6-a7134ccaff97.html
- Inequities Edited Out of Los Alamos National Lab Study*, Molly Montgomery, Rio Grande Sun, Jun 26, 2020, http://www.riograndesun.com/news/inequities-edited-out-of-los-alamos-national-lab-study/article_ea042414-b7f8-11ea-ada6-a7134ccaff97.html
- ¹¹ *The Economic and Fiscal Impact of the Los Alamos National Laboratory*, Jeffrey Mitchell, UNM Bureau of Business and Economic Research, August 2020, <https://nukewatch.org/newsite/wp-content/uploads/2021/02/LANL-Economic-Impact-Presentation-08-17-20.pdf?x68309>
- ¹² LANL’s Hydrogeological Studies of the Parajito Plateau (1998-2004), p. 5-15, <http://www.worldcat.org/title/los-alamos-national-laboratorys-hydrogeologic-studies-of-the-pajarito-plateau-a-synthesis-of-hydrogeologic-workplan-activities-1998-2004/oclc/316318363>
- ¹³ Includes sunk costs of \$7-8 billion for the failed MOX Fuel Fabrication Facility that NNSA is now “repurposing” for pit production. No one has been held accountable for the MOX debacle.
- ¹⁴ *Pit Lifetime*, JASONS, 2016, https://www.nukewatch.org/facts/nwd/JASON_ReportPuAging.pdf
- ¹⁵ For example, after the Obama Administration concluded its high-level Nuclear Posture Review in 2010, the Defense Department declared that, “[t]he new guidance requires the United States to maintain significant counterforce capabilities against potential adversaries. The new guidance does not rely on a ‘counter-value’ or ‘minimum deterrence’ strategy.” Report on Nuclear Employment Strategy of the United States Specified in Section 491 of 10. U.S.C., Department of Defense, June 2013, page 4 (quotation marks in the original) <https://www.globalsecurity.org/wmd/library/policy/dod/us-nuclear-employment-strategy.pdf>
- ¹⁶ NNSA’s FY 2020 Congressional Budget Request has a half-dozen references to future “W87-like” pits that could leave a lot of wiggle room for changes. Subsequent budget requests note how “The stockpile is inherently moving away from the nuclear explosive test database through aggregate influences of aging, modern manufacturing techniques, modern materials, and *evolving design philosophies*.” (Emphasis added.)
- ¹⁷ *SURPLUS PLUTONIUM DISPOSITION – NNSA’s Long-Term Plutonium Oxide Production Plans Are Uncertain*, GAO, 2019, <https://www.gao.gov/assets/710/705783.pdf>
- ¹⁸ *About us – Mission*, DNFSB, <https://www.dnfsb.gov/about/mission>
- ¹⁹ Staff Report August 16, 2019, *Safety Basis for the Plutonium Facility at Los Alamos National Laboratory*, DNFSB, [https://www.dnfsb.gov/sites/default/files/document/19376/PF-4%20Safety%20Basis%20\[2020-100-001\].pdf](https://www.dnfsb.gov/sites/default/files/document/19376/PF-4%20Safety%20Basis%20[2020-100-001].pdf)
- ²⁰ *RECOMMENDATION 2009-2 TO THE SECRETARY OF ENERGY Los Alamos National Laboratory Plutonium Facility Seismic Safety*, DNFSB, October 2009, <https://ehss.energy.gov/deprep/2009/FB09O26A.PDF>
- ²¹ See Table 1, page 10 of the Defense Nuclear Facilities Safety Board’s report *Potential Energetic Chemical Reaction Events Involving Transuranic Waste at Los Alamos National Laboratory* at <https://www.dnfsb.gov/documents/reports/technical-reports/potential-energetic-chemical-reaction-events-involving>
- ²² Agenda and information at <https://www.dnfsb.gov/public-hearings-meetings/november-16-2022-public-hearing>. Live streamed at <https://www.dnfsb.gov/public-hearings-meetings/november-16-2022-public-hearing>
- ²³ Complex Transformation Programmatic Environmental Impact Statement, Supplement Analysis, NNSA, 2019, p. 65, <https://www.energy.gov/sites/default/files/2020/01/f70/final-supplement-analysis-eis-0236-s4-sa-02-complex-transformation-12-2019.pdf>
- ²⁴ *Review of the Department of Energy’s Plans for Disposal of Surplus Plutonium in the Waste Isolation Pilot Plant*, National Academy of Sciences, 2020, p. 6, <https://nap.nationalacademies.org/catalog/25593/review-of-the-department-of-energy-s-plans-for-disposal-of-surplus-plutonium-in-the-waste-isolation-pilot-plant>