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Expanded Plutonium "Pit" Bomb Production Rules Over Genuine Cleanup Los Alamos Lab Plans to Make Existing Nuclear Waste Dumps Permanent Without Eliminating Threat to Groundwater

The Department of Energy (DOE) has submitted a report to the New Mexico Environment Department (NMED) declaring its preferred plan to "cap and cover" radioactive and toxic wastes at one of the Los Alamos National Laboratory's (LANL's) oldest dumps. DOE's \$12 million cleanup-on-the-cheap plan for Material Disposal Area C will create a permanent nuclear waste dump above our regional groundwater. In contrast, DOE has asked Congress for one billion dollars for expanded plutonium "pit" bomb core production at LANL for fiscal year 2022 alone.

LANL used to falsely claim that groundwater contamination was impossible and even asked NMED for a waiver from even having to monitor for it. We now know that there is extensive groundwater contamination from hexavalent chromium (the carcinogen in the *Erin Brockovich* movie) and high explosives. Traces of plutonium have been detected 1,300 feet under Area C in regional groundwater monitoring wells. The dump also has a large toxic gaseous plume of industrial solvents known as volatile organic compounds (VOCs) which threatens nearby facilities. LANL is banking on a cap of less than five feet of soil and gravel to protect northern New Mexico from these wastes for a thousand years. But bomb-making plutonium has a half-life of 24,000 years and is generally considered dangerous for 100,000 years. Finally, as an internal Lab document 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." ¹

The Lab claims that the cap and cover will be protective for 1,000 years. However, Area C is loaded with radioactive transuranic (TRU) wastes, defined as wastes that contain manmade elements heavier than uranium on the periodic table (e.g. plutonium). Therefore, Area C should be required to meet DOE regulations for TRU wastes containment for 10,000 years. The Waste Isolation Pilot Plant (WIPP), which was built to dispose of transuranic wastes, meets DOE's requirement of a reasonable expectation of containment for 10,000 years and is 2,150 feet deep. Area C is 25 feet deep at the deepest and should not be allowed to become a permanent dump for plutonium and other dangerous transuranic bomb-making materials.

LANL has an even shorter-term view when it comes to physically protecting Area C. Institutional controls (such as fences) are planned to limit the potential for future exposure to buried waste and contaminated soil. These controls are assumed to remain in place for only 100 years. A meaningless restrictive covenant will be placed on the deed and recorded locally and in

an institutional controls database. Active monitoring and maintenance will be performed for a mere 100 years. But what happens for the next 9,900 years?

Area C received wastes from 1948 to 1974. The pits are unlined and without leachate collection systems, which is no longer allowed in state-regulated landfills (LANL is exempted as a federal facility). The estimated 240,465 cubic yards of waste at Area C contain both hazardous constituents such as solvents regulated by NMED and radionuclides such as plutonium regulated by DOE. While proposing a cleanup remedy for Area C, DOE claims that it is acting in accordance with a 2016 Compliance Order on Consent governing cleanup at the Lab. However, NMED is so unhappy with that Consent Order that it sued DOE in February 2021 to terminate it. Moreover, cap and cover as proposed by LANL could actually hinder progress on controlling the VOC plume.

Of the many radioactive and toxic waste dumps at LANL, Area C is the best suited for comprehensive cleanup, which would provide an important model for larger, more complex dumps. It is relatively shallow with wastes not deeper than 25 feet. That cleanup at Area C can be safely done has already been demonstrated by cleanup of an earlier waste dump called Area B, which used a mobile enclosure to contain air-borne contamination while digging and remote controlled excavators to protect workers. But the difference is that the Area B waste dump was on land slated for economic development by Los Alamos County, which is already the fourth wealthiest county in the USA because of its nuclear weapons programs. In contrast, Area C is in the general area that the Lab will use for expanded production of plutonium "pit" bomb cores, hence LANL looks to "clean" it up on the cheap. No human institution, including LANL, lasts forever. On the other hand, without genuine cleanup it is virtually certain that existing contaminants will hit our common groundwater over time in this increasingly arid state when that irreplaceable resource should be protected for posterity for all time.

The good news is that DOE's submittal to NMED of a "Corrective Measures Evaluation" report for Area C is only the first step in a long process. After reviewing DOE's report the New Mexico Environment Department will provisionally select a cleanup method that may or may not agree with cap and cover. This will start a public comment period that could include a formal hearing. Substantial public participation will be required to convince NMED to reject cleanup on the cheap for Area C and order the comprehensive cleanup that New Mexicans and their environment deserve. This is of particular importance because the example of Area C's cleanup will likely determine genuine cleanup or not at the Lab's largest waste dump, Area G.

Related to all this, DOE last completed a site-wide environmental impact statement (SWEIS) for LANL in 2008 which repeatedly stated that an original 2005 Consent Order was central to its environmental analysis.² That SWEIS analyzed in detail two options: the relatively cheap method of cap and cover of the Lab's waste dumps or the very expensive option of full exhumation with offsite disposal. However, that is a false choice with no middle ground. A new SWEIS should examine digging up and fully characterizing the wastes, recycling what materials that can be safely recycled, shipping any transuranic radioactive wastes to the Waste Isolation Pilot Plant, and reburying the remaining low-level radioactive wastes in a modern landfill. The safe reburial

of low-level wastes would cut down costs while minimizing transportation risks and offsite disposal impacts on other communities.

Scott Kovac, Research Director, commented, "DOE must take comprehensive cleanup at Los Alamos seriously. This upcoming public process is where the public can draw the line and stop the Lab from permanently contaminating northern New Mexico by refusing to provide the necessary resources for genuine cleanup. DOE's plans to cap and cover Area C without updating LANL's 2008 site-wide environmental impact statement will leave many questions unanswered, including what the cumulative impacts will be of permanently leaving Area C's radioactive and toxic wastes in the ground. A new LANL SWEIS with a range of credible scenarios for genuine cleanup must be completed before an informed decision can be made on Area C."

Jay Coghlan, director of Nuclear Watch, added, "Genuine cleanup at LANL would be a real winwin for northern New Mexicans, permanently protecting our environment and precious water resources while providing hundreds of high paying jobs."

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This press release is available at https://nukewatch.org/area-c-press-release-7-21-21/

LANL's MDA C Corrective Measures Evaluation can be found here (100MB): https://ext.em-la.doe.gov/eprr/repo-file.aspx?oid=0902e3a6800f5f53&n=EMID-701508-01.zip

The Northern New Mexico Citizens Advisory Board (CAB) meets to discuss cleanup at Area C on Wednesday July 21, nominally at 3:00 pm. The CAB meeting can be accessed via Webex at https://doe.webex.com/doe/j.php?MTID=me86e99034b26ac67810aa05483a01290
Meeting number (access code): 199 531 1229
Meeting password: eRabJEkH364
or by phone at +1-415-527-5035 US Toll

- ¹ Los Alamos National Laboratory's Hydrogeologic Studies of the Pajarito Plateau: A Synthesis of Hydrogeologic Workplan Activities (1998–2004), LANL, December 2005, Page 5-15, http://www.worldcat.org/title/los-alamosnational-laboratorys-hydrogeologic-studies-of-the-pajarito-plateau-a-synthesis-of-hydrogeologic-workplanactivities-1998-2004/oclc/316318363
- ² A 2018 "Supplement Analysis" to the SWEIS claimed that the revised 2016 Consent Order essentially changed nothing. That is false because the new Consent Order subordinated cleanup to the budget that DOE wants which prioritizes nuclear weapons production instead of cleanup needs driving the cleanup budget. As previously stated, the New Mexico Environment Department is so unhappy with the 2016 Consent Order that it has sued DOE to terminate it.