

**Sandia National Laboratories Site-Wide Environmental Impact  
Statement (SWEIS) Citizen Action June 1, 2023 Revised Scoping  
Comments Submitted  
From September 7, 2011**

The SWEIS is important for the public to understand Sandia Lab's environmental role as a key facility in the Department of Energy (DOE) nuclear weapons complex. Sandia Labs generates and stores extremely large amounts of hazardous and radioactive wastes. Sandia should present a plan for reducing the more than 120,000 pounds of hazardous waste produced annually just at the Albuquerque New Mexico site along with its other locations. Sandia should explain why it is exceeding prior estimates of radioactive waste at NM. Sandia should describe current tritium and other radioactive inventories at NM.

The SWEIS should consider the potential impacts of climate change especially with respect to fate and transport for buried wastes.

Sandia operations are combined with operations in Hawaii, California, New Mexico, the Nevada Test Site and other locations. The cumulative environmental impacts of Sandia Labs' combined operations at all these locations must be set forth by Sandia National Laboratories under the National Environmental Policy Act. Ongoing operations with Kirtland Air Force Base and contamination resulting therefrom must be described. Sandia should explain why it has grossly exceeded requirements for over two decades to provide a competent EIS. The public has not had an opportunity to provide scoping comments or had opportunity for public presentation about Sandia Labs total operational project impacts on the environment since 1999 and with only a narrow Supplement provided circa 2005. For this reason, DOE must provide cumulative environmental impacts from overall Sandia operations with KAFB and Los Alamos National Laboratory..

The toxic and radioactive wastes from prior Sandia operations are contaminating the soil and groundwater that serves Albuquerque drinking water wells and pose great threats to public health and the environment. This is true for operations at TA-V, the Tijeras Arroyo, the Mixed Waste Landfill, The Chemical Waste Landfill and other locations which Sandia must fully identify.

Sandia ambient air monitoring for radionuclides is far less than provided for at other DOE sites even though emissions at those sites may be far less than emissions from Sandia. Sandia must provide a complete inventory of all radioactive releases from all Sandia facilities. Specific isotope analysis for strontium-90, americium-241 and plutonium-238/239/240 should be provided.

Air monitoring by Sandia at 11 Albuquerque facilities are not reported based on actual air releases. Ambient air monitoring of alpha and beta activity is too limited with only four locations. Maximum concentrations have exceeded levels for environmental compliance set forth in 40 CFR 61 App. E, Table 2. Air monitoring based on Sandia modeling does not provide results that are consistent with actual releases. A February 9, 2004 NMED summary of a DOE Oversight Bureau report concludes:

“The Oversight Bureau’s tritium based dose values ranged approximately 14 to 56 times greater than Sandia’s modeled dose values at the same locations using the CAP-88 computer code for a variety of radionuclides.”

Sandia should provide a comprehensive air monitoring system to accurately measure radionuclide and other hazardous waste concentrations. Recommendations for comprehensive monitoring of the June 2007 *Review of Environmental Monitoring for Radionuclides in Air at the Sandia National Laboratory*, Bernd Franke should be followed. See, [http://www.clarku.edu/mtafund/prodlib/albuquerque/IFEU\\_Review.pdf](http://www.clarku.edu/mtafund/prodlib/albuquerque/IFEU_Review.pdf)

Sandia workers are dying at an early age from sickness and high levels of cancer. Sandia Worker compensation and medical costs total more than \$42,000,000 even with the denial of many claims. The SWEIS must set forth current levels and provide policies for reduction.

Sandia has increased its consumption of groundwater in a time of drought and should present efforts to reduce that consumption. Sandia Labs is currently disposing of more than 1 million gallons per day waste water into the Albuquerque city sewer system. Sandia should identify the sources and quantities of the wastewater and whether reclamation and reuse of the wastewater is possible by Sandia.

Sandia must identify how it will dispose of the waste streams generated by the decommissioning and decontamination of toxic and radioactively contaminated buildings. Supplement estimates were that Sandia is producing more than 2 million pounds of solid waste annually. Sandia should inform the public about the wastes generated from biohazardous operations and nanotechnology operations at Sandia. The annual production and disposal pathways for radioactive and hazardous waste should be described for the public.

Open burning of Sandia wastes must be discussed along with the disposal alternatives for halting that barbaric practice.

The Sandia operation of the Annular Core Research Reactor (ACRR) that is in a building that cannot survive the large earthquake that can occur for this region was not discussed. The operation of the nuclear reactor in the absence of any ventilation containment and no containment vessel should be explained. There exists a possible large release of radiation to 20,000 personnel at SNL and Kirtland Air Force Base (KAFB) and surrounding Albuquerque residents. An emergency plan for the public should be set forth by Sandia. The latent cancer deaths of 7 persons per thousand people that would occur in a 50 mile radius are unacceptably high.

The public needs to be fully informed about the extent of SNL contamination to groundwater, air and soil. SNL has not provided the public with a comprehensive review of groundwater contamination and the effects on Albuquerque’s aquifer. A comprehensive SWEIS is essential to the safe operation of SNL and the protection of the public and the environment.

Provide DOE plans for the future nuclear weapons complex for new and expanded SNL missions. Include neutron tube production involving large amounts of tritium and release of tritium gas to the Albuquerque air pathway. Is greater presence for Plutonium planned? Other SNL facilities release radionuclides to the environment as well. The uptake of these radionuclides in plants, animals and humans at Sandia should be adequately investigated.

It is essential that SNL has adequate safeguards for, and limitations on, the types and amounts of wastes that are generated and stored. SNL has deposited large amounts of hazardous and mixed radioactive waste at various unit locations at SNL that need to be described and included for cleanup in the SWEIS.

Water, air and soil are threatened by the lack of a comprehensive Resource Conservation and Recovery Permit (RCRA) permit at SNL. The current SNL RCRA permit dates back to 1992, is incomplete and some facilities such as the Mixed Waste Landfill is operating illegally without a RCRA permit, Closure and Post Closure Plans. There are no liners and extraction system beneath the cover or for the wastes. PCE, TCE and PCBs are leaking to the aquifer with inadequate monitoring. Sandia has no TSCA permit for the PCBs.

SNL operations have created a “substantial adverse environmental impact,” as defined in the Hazardous Waste Act (HWA). Hazardous and radioactive contamination has been transported, both on-site and off-site, through air, surface water and to ground water. Sandia workers have experienced high cancer rates and many early mortalities that Sandia should explain or investigate as part of the SWEIS.

SNL poses an “imminent and substantial endangerment” to human health and the environment due to operations that have unidentified uncharacterized RCRA generation, storage, treatment and disposal waste operations, some of which may be conducted without being on a RCRA Part B permit. “Imminent and substantial endangerment” exists from SNL operations because:

- Contaminants have been found in ground water, including PCBs, PCE, TCE, chromium and nickel at times exceeding state and federal drinking water standards;

SNL has failed to establish effective monitoring for groundwater, soil and air as required by DOE Orders, the Resource Conservation and Recovery Act (RCRA) and standard industry practice. Sandia should identify to the public a scheduling plan for the replacement of the many defective groundwater monitoring wells.

1. Each operation conducted in all facilities and buildings at Sandia must provide the amount, type of radioactive and chemical wastes produced and the disposal pathways for those wastes.
2. Provide a full exposition of all ongoing and past contamination to the regional groundwater and the relationship of the contamination to groundwater contamination from Kirtland Air Force Base (KAFB). Provide a remediation analysis.

3. Provide an analysis of current water consumption, waste water production by Sandia and how Sandia can reduce water consumption.
4. Provide an analysis of how Sandia intends to protect the aquifer for use as a drought reserve and what is the number of gallons of groundwater that can be contaminated by the current levels of contaminants that can be identified for Sandia and KAFB combined operations.
5. Provide the current and projected aquifer usage by the City of Albuquerque and compare the current and projected use of the aquifer by Sandia/KAFB. The draw down on the aquifer from SNL water usage should be provided. Provide the water usage that Sandia currently obtains from the City of Albuquerque municipal supply wells. Provide the projected amounts of water that Sandia may obtain from Albuquerque's municipal sources. Describe environmental and economic impacts from Sandia water usage and contamination of groundwater.
6. Factor into the analysis for Sandia drawdown rate of the aquifer the recurrences of fires and other events that may limit the availability of San-Juan-Chama drinking water supplies.
7. Provide an analysis of the cumulative impacts on water supplies from continued growth, contamination of the aquifer, increased usage of the aquifer by Sandia and KAFB.
8. Provide an analysis of how Sandia intends to provide clean up for the regional aquifer.
9. Provide a timely plan for the excavation of the up to 1,500,000 cu ft of radioactive and hazardous waste contained in the Mixed Waste Landfill (MWL).
10. Sandia must continue to perform the 5 year study of the MWL called for in the 2005 and 2016 NMED Final Orders.
11. Provide a reliable network of groundwater monitoring wells across Sandia that are in compliance with requirements of the Resource Conservation and Recovery Act.
12. Set forth emergency notification and evacuation plans for KAFB/Sandia and surrounding Albuquerque for chemical and radiological accidents caused by airplane accidents, seismic events and equipment malfunctions.
13. Terminate operations of the Annular Core Research Reactor that operates without containment, operates in a building that cannot be made safe for an earthquake, and has no ventilation system that can contain radionuclide release during an accident. The doses that can cause latent cancer fatalities up to 50 miles from the ACRR is unacceptable.
14. Does Sandia plan to add new or yet-to-be-designed nuclear reactors or research fuels for such reactors? Are reactor meltdown experiments planned at Sandia?
15. What quantities of RCRA hazardous waste are expected for the Hazardous Waste Management Facility to handle? Are increases from historic and current levels expected?
16. Describe the existing and projected amounts of rocket fuel to be used. How will the wastes from rocket motors, nuclear reactor operations and other facilities be disposed of and transported. Describe the various forms of rocket fuel in use and the potential for releases to the environment. Consider the cumulative effects of past, current and projected future releases of rocket fuel to the environment and pathways for contamination of air, water and soil.

17. Describe all its existing buildings/facilities at Sandia and Kirtland listing their year of construction and ability of each to withstand the maximum seismic event and accidents postulated for Sandia. Include the plans and the timeline for demolition and decommissioning of each building and facility.
18. Provide the inventories being maintained of explosives materials and the projected amounts and potential for accidents and consequences involving the explosive materials.
19. Provide information on HERMES III material inventories, consumption, air emissions and process requirements. Provide levels of gamma radiation exposures to workers and the public from HERMES III operations.
20. Provide information on Radiographic Integrated Test Stand (RITS) material inventories, consumption, air emissions and process requirements.
21. Describe any releases of beryllium and radioactive wastes from Saturn accelerator operations in TA-IV, Bldg. 981.
22. Describe the potential and consequences for fires involving oil and gas inventories at all locations where such inventories are kept. Describe the inventories being kept and the potential for cascading events from fires or explosions of those inventories.
23. Describe the material inventories, consumption, emissions and hazardous and radioactive wastes from Z-Machine operations.
24. Describe the level of protection (if any) from the sheet metal roof that is at the Annular Core Research Reactor for accidental radiation releases or deliberate acts.
25. Provide information on GIF material inventories, consumption, air emissions and process requirements. Provide accident scenarios such as from overhead traveling cranes, etc.
26. Provide plans for D&D of the Sandia Pulsed Reactor (SPR).
27. Provide information on Explosives Applications Laboratory (EAL) material inventories, consumption, air emissions and process requirements.
28. Provide information on ground water and air contamination from rocket propellant fires at the Lurance Canyon Burn Site. Provide information for contamination from past operations and monitoring operations for contamination. Provide information regarding tanks in operation and leakage of prior tank operations.
29. Describe emissions from the Hazardous Waste Management Facility. Have the operations of the HWMF been combined or planned for combination with the RMWMF? Describe all emissions and monitoring from the RMWMF. Describe the locations and amount of storage at the facilities. Describe the length of time that the various inventories of materials have been in storage at these facilities. Describe the various inventories that currently lack any pathway for disposal. Describe any history of radioactive emissions that have exceeded projections of the 1999 SWEIS.
30. Why does Sandia not have an approved RCRA permit for hazardous waste operations that is more recent than 1992?
31. Describe the status of the Steam Plant and potential for accidents. Describe all emissions. Describe plans for shut down and decommissioning of the Steam Plant.
32. Provide a plan for eliminating open burning and detonation.
33. Provide the various sources and amounts of materials from Sandia buildings and operations that will be disposed of at the Thermal Treatment Facility (TTF). Describe the current emissions from the TTU and future projection for emissions.

34. Conduct geologic studies to determine the full extent of damage that can be caused to all facilities and the cumulative contamination from radiological and chemical sources that can be released in a “chemical cloud” as described in the 1999 Environmental Impact Statement (EIS).
35. Paying more than \$42 million compensation to contaminated workers and their medical bills is a major expenditure and shows that there are serious worker health issues.  
[http://www.dol.gov/owcp/energy/regs/compliance/statistics/WebPages/SANDIA\\_NA\\_TL\\_LAB.htm](http://www.dol.gov/owcp/energy/regs/compliance/statistics/WebPages/SANDIA_NA_TL_LAB.htm)  
Present the death rate and sickness statistics for Sandia workers for various Sandia operations. For worker safety issues, discuss which facilities have caused the contamination for workers compensated under EEOICP. What are the estimated ongoing medical payments for those sick workers? What actions have been/will be taken to avoid future contamination?
36. Provide a plan to study the health effects of Sandia operations on the Albuquerque population. What baseline exists?
37. Provide the future expected impacts on groundwater from operations at Sandia from all sources identified as having resulted in contamination.
38. Provide a reasonable air monitoring plan for chemical and nuclear operations located at the site of the operations.
39. Describe the relation of any Sandia facilities that will support research, development or other operations for the proposed Chemical Metallurgical Research Replacement (CMRR) and Plutonium pit production at Los Alamos National Laboratories (LANL).
40. Describe the role that Sandia will play in certifying new plutonium pits produced at the Los Alamos National Laboratory.
41. How much tritium production will be necessary in relation to the planned production of 80 plutonium pits per year at LANL? Describe any plans for the increased production of tritium. How much tritium production will be necessary for nuclear weapons maintenance? Provide the current stockpile inventory of tritium at SNL and the maximum allowable inventory. Provide the data for accidental or planned releases of tritium to the environment from SNL operations.
42. Describe how SNL will meet the requirements of international law for achieving disarmament and non-proliferation goals.
43. The Defense Nuclear Facilities Safety Board found in its report of Mar 18, 2005 that Sandia did not have adequate safety bases in place for managing SNM. Sandia must describe the continued transporting and providing of Special Nuclear Material (SNM) to Sandia for experiments and testing. The reasons should be set forth for the continued use of SNM and the environmental impacts that will be associated with SNM testing and experiments at Sandia. The potential for human exposure and environmental accidents, waste disposal and terrorist activities associated with continued use of SNM at Sandia must be described.
44. Describe the potential for accidents from liquid natural gas. Include inventories, emissions from natural gas at Sandia and KAFB.
45. Provide the amounts of plutonium that will be present at each of the SNL facilities.
46. Provide a Summary of Activity Levels for all Facilities and Facility Groups that presents the Category, Description, Activity Type or Material, Units (per yr) for

- Nuclear material inventory, Nuclear material consumption (including types of radionuclides), Solid Waste generation, Low Level waste, Mixed Waste, Hazardous Waste, Radioactive Air Emissions, **Transuranic Waste**, Open Burn/Open Detonation emissions, Explosives consumption and emissions, Waste water effluent, Water consumption, Electricity consumption, Boiler Energy, Facility personnel.
47. Provide a summary table of the cumulative amounts from all facilities and facility groups for item 22. Provide a table showing the estimated increase or decrease of hazardous, mixed waste generation and transuranic waste for operations planned during the 10 year period of the EIS. List alternatives for reduction of waste.
  48. Provide facility changes planned for the next decade.
  49. Provide the maximum accidents possible for all nuclear facilities at Sandia.
  50. Describe the time frame and plans for decommissioning and decontamination for any unused or closed nuclear facilities at SNL.
  51. Describe the groundwater monitoring network, air monitoring and contamination at the Lurance Canyon Burn Site from JP-8 jet fuel and other contaminants that may be present.
  52. Provide the sampling and monitoring program and results for all springs located at SNL and near SNL facilities at KAFB.
  53. Provide the KAFB water infrastructure capacity and the amount of that capacity used by SNL. Describe any reductions to the water infrastructure capacity that may occur as a result of the KAFB aviation and jet fuel spill. Provide the amount of water that SNL receives from the Water Utility Authority (WUA) for Bernalillo County/City of Albuquerque. Provide the data for what portion of the WUA water supplies is subsequently contaminated with effluent by SNL.
  54. Describe any closures of on-site water production wells at KAFB and SNL.
  55. Describe all groundwater contaminants exceeding regulatory concentrations. Provide any studies made to determine that chromium and uranium contaminants are not anthropogenic in origin. Describe plans to remediate the groundwater contamination.
  56. Provide current and estimated future utilization of natural gas.
  57. Provide current and estimated future utilization of electricity.
  58. Provide all analyses of radiation in plant and animal tissues, including humans at KAFB/SNL.
  59. Describe all lands on KAFB/SNL that were for tribal use for cultural, religious ceremonies, or as resource lands for hunting and or food gathering.
  60. For all of the above issues, provide the impacts for reduced operations, no action, and expanded operations.
  61. Analyze the impacts of reduced operations based on the new budget bill that requires cuts in discretionary spending (including at Sandia).
  62. Provide description of the SNL role for oversight, inspection, maintenance, transportation or decommissioning of nuclear weapons stored at KAFB.

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