NEGATIVE DECLARATION

Submitting: ☒ **Draft**
☐ **Final**
☐ **Mitigated Negative Declaration**

Project Title: RENEWAL OF HAZARDOUS WASTE FACILITY PERMIT FOR U..S. DEPARTMENT OF ENERGY/SANDIA NATIONAL LABORATORIES

State Clearinghouse Number: _____

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Project Location (*Include County*):

U.S. Department of Energy/Sandia National Laboratories
7011 East Avenue
Alameda County
Livermore, California 94538-6502

Project Description:

The project consists of issuing a proposed negative declaration for the renewal of Hazardous Waste Facility Permit (Permit) for the U.S. Department of Energy/Sandia National Laboratories (Sandia), Livermore, California. In accordance with California Health and Safety Code (H&SC), section 25200, the Department of Toxic Substances Control (DTSC) is proposing to renew Sandia's Permit authorizing the continued operation of on-site storage and treatment of hazardous wastes including mixed waste and combined waste. Mixed waste is a Resource and Conservation and Recovery Act (RCRA) hazardous waste contaminated with low levels of radioactivity whereas combined waste is a non-RCRA hazardous waste contaminated with low levels of radioactivity. The Permit is based on the Part A and Part B application submitted by Sandia in September, 2003. The Part A application identifies all possible waste codes or waste types, the estimated annual generation rate, and the number of storage and treatment units. A detailed description of Sandia's waste characterization procedures, emergency plan, training plan and closure plan are provided in the Part B application. The Permit identifies the storage and treatment areas and their associated capacities.

Sandia was granted a permit to operate its hazardous waste treatment and storage facility on January 4, 1993; the permit expired on January 4, 2003. Sandia submitted to DTSC a renewal application dated December 20, 2001 and subsequently revised in September 2003. The renewal of the permit would impose the requirements of Chapters 14 and 20, Title 22, Division 4.5, California Code of Regulations (CCR) upon Sandia's operations.

Project Activities:

If approved, the permit would authorize the following activities:

1. Manage hazardous waste in Building 9611 which replaces previously permitted Building 9622 and nine storage sheds
2. Storage of low level mixed waste in containers in Building 961 for up to one year. Mixed waste may be stored for greater than one-year with DTSC approval.
3. Storage of hazardous waste in containers in Building 9611 for up to one year
4. Storage of contaminated debris from demolition activities in two roll-off bins for up to one year
5. Storage of contaminated empty drums in one Conex for up to one year
6. Consolidation and commingling of similar wastes in containers in Building 961 and Building 9611
7. Compaction of empty drums in Building 961 and Building 9611
8. Compaction of contaminated solid wastes such as rags in Building 961 and 9611

Project Location:

The Sandia facility is located at 7011 East Avenue, Livermore, California at latitude 37º 40' 30" and longitude 121º 42' 001" It lies at the base of Altamont Hills, 45 miles east of San Francisco at the southeast end of the Livermore Valley in southern Alameda County (see Figure 1, Location Map). It occupies 413 acres of Section 13, T3S, and R2E of the USGS Altamont Quadrangle, California. Sandia can be accessed from Highway I-580 through south Vasco Road. It is bordered by East Avenue in the north, Tesla Road in the south, Greenville Road in the east and Vasco Road in the West (see Figure 2, Facility Map). The real property is situated in the unincorporated area of the Township of Murray, County of Alameda, State of California. The site's legal description is as follows: a portion of Section 13, Township 3 South, Range 2 East, Mount Diablo Base and Meridian, also being a portion of Plot K of the map of Rancho Las Positas, a copy of the said map was filed for record on June 16, 1873 in Lieber 95 of Deeds, page 205, Alameda County Record.

The whole site is surrounded on all sides by undeveloped land which serves as buffer zone. Across the street to the north of Sandia is Lawrence Livermore National Laboratory, and further north is an expanding business park and commercial development. The property to the south and east of Sandia beyond the buffer zone is made up of agricultural and low density residential areas. The area to the west is principally residential and encompasses a wide range of uses, which include a business park, grazing lands, vineyards and other small agricultural and industrial developments.

Background:

Sandia National Laboratories (Sandia) is the prime contractor to the U.S. Department of Energy (U.S. DOE). The U.S. DOE and Sandia are joint operators of the hazardous waste storage and treatment facility (HWSTF). Sandia specializes in research and development of advanced military technology, energy and environmental research, arms control/proliferation, and advanced manufacturing technology. Sandia is responsible for the day-to-day operations such as waste analysis and handling, monitoring, record keeping, reporting and contingency planning of the HWSTF.

U.S. DOE is responsible for policy, programmatic, funding and scheduling decisions as well as general oversight of the HWSTF which is the subject of the initial study.

Hazardous wastes and mixed/combined waste generated at different locations throughout Sandia's research laboratories and maintenance facilities are taken to the HWSTF for treatment and storage before they are shipped off-site for further treatment or disposal. Hazardous wastes being handled include coolants, aerosols, asbestos, batteries, acids, caustics, low level mixed wastes and combined wastes, scintillation cocktail, wastewater, solvents, photochemical waste, polychlorobiphenyl (PCB) waste from clean-up operations, oil wastes, lab packs consisting of off-specification chemicals and empty drums. Detailed information on these wastes can be found in Section III of Sandia's Part B application dated September 2003.

Low level mixed wastes and combined wastes are hazardous wastes that typically exhibit ignitability, reactivity and/or toxicity characteristics, as well as have low level radioactive properties. The dual nature of these wastes poses additional safety concerns and requirements. DTSC regulates the hazardous components of mixed waste and combined waste. The radioactive component of mixed waste and combined waste is regulated by the Nuclear Regulatory Commission (NRC), the U.S. DOE, or the California State Department of Health Services. Regulation of nuclear materials is excluded from Title 22, California Code of Regulations and Resource Conservation and Recovery Act (RCRA). Storage and treatment of low level mixed waste became regulated by the U.S. EPA on March 23, 1989, under RCRA.

The Hazardous Waste Storage and Treatment Facility (HWSTF) is located in the middle of the Sandia Facility in between 7th Street and 8th Street as shown in Figure 3, Site Map. The HWSTF is bordered by "A" Street in the east, 7th Street in the north and "C" Street in the west, and is approximately 40 feet from the Arroyo Seco Creek.

Sandia in 1993 was permitted to store and compact mixed waste in Building 961. Sandia was also permitted to store hazardous waste in Building 9622, nine outdoor storage bays and one magazette. In addition, Sandia was permitted to compact and segregate small quantities of miscellaneous chemicals for lab packs in Building 9622. Building 961 has an area of 3,452 square feet; Building 9622 was about 24' x24'. Bays 1 through 9 were temporary metal sheds with tarps serving as front cover to protect the containers stored inside from natural elements such as rain. These metal sheds were used for storing different kinds of hazardous wastes. The magazete is a small reinforced concrete box used for storing small quantities of oxidizing acids mixed with solvents. Treatment of hazardous wastes consists of consolidation and commingling of similar wastes in containers, and compacting of wastes using solid waste compactor and a drum compactor. Sandia used to store its hazardous waste in two roll-off bins and three Conex containers, and shipped waste offsite every 90 days.

To provide a safe working environment for waste handling operations and protect the nearby Arroyo Seco Creek from any possible contamination from spill during routine activities, Sandia upgraded the HWSTF. The upgrades included the replacement of Building 9622, and the nine storage sheds and expansion of the loading dock for better igress. The replacement building is called Building 9611.

Building 961 and Building 9611 are single story buildings adjacent to each other. Both buildings are insulated pre-fabricated, pre-engineered steel frame buildings with concrete floor and metal roof. Prior to the construction of Building 9611, Sandia prepared a National Environmental Policy Act of 1969 (NEPA) checklist and determined that the renewal and upgrades of Building 9622 qualified for two categorical exemptions listed in Chapter 10, Code of Federal Regulations (10 CFR) Subpart D, Appendix B, B6.6 or B6.0.

Building 9611 was designed and constructed according to the following standards: 1997 Uniform Building Code (UBC), 1998 California Building Code, AISC Manual of Steel Construction, ASD 9th edition, AISC Seismic Provisions for Structural Steel Buildings, 1997 Edition and Supplement No. 1, AWS D1.1 Structural Welding Code - Steel and AWS D1.1 Structural Welding Code and AWS D1.3 Structural Welding Code - Sheet Steel. A structural engineer registered in the State of California certified that Building 9611 was built in accordance with the the A.I.S.C. (Ninth Edition) and A.I.S.I. (1986) specifications with 1989 addendum and that the design loads and combinations were applied in accordance with 1997 UBC. The design loads and combinations included, e.g. the wind load up to 72 miles per hour, seismic data using Zone 4 and collateral load.

Prior to grading and contruction, Sandia conducted partial closure of Building 9622, and Bays 1 through 9. The partial closure included power washing, demolishing and shipping off-site for appropriate disposal. Sandia took soil samples from 11 different locations under the old hazardous waste management facility adjoining Building 961. These locations included the previous Building 9622, areas under the Bays 1 through 9 metal storage sheds and the run-off collection area. Soil samples were taken at the following depths: 1 foot below ground surface (bgs), 2 feet bgs and 3 feet bgs. Samples were analyzed for the following compounds: volatile organic compounds (VOCs), semi-volatile organic compounds (semi-VOCs), pesticides and PCBs, dioxin and metals. No VOCs, semi-VOCs, pesticides and PCBs, and dioxin were detected from the soil samples. Metals were either below backgrounds or below preliminary remedial goals for residential levels.

Building 9611 overlapped the foot print of the previous Building 9622, nine storage bays, and the magazette. The total hazardous waste management area of 5,315 square feet in Building 9611 remains unchanged from previous total permitted management areas. The foundation system of Building 9611 consisted of continuous grade beams and pilasters under each frame column. The floor is concrete slab on grade. Inside Building 9611, there is an office and a laboratory, and nine storage bays which are the same size as the previous nine storage sheds. The waste type and volume in each bay is same as previously permitted for the outside 9 storage sheds. The nine storage bays now have its own sump for secondary containment. Another sump is built into the central area of the building to catch any spill that could result from routine waste management activites outside the waste storage bays. Both the cement floor and sumps are sealed with epoxy coating to prevent absorption of chemical waste should a spill occur during operations. Building 9611 has a new loading dock and a roll-up door along south side of the building for waste handling activities. Clean fill was used to elevate the ground surface of the loading dock. Spill containment is also provided at the loading dock. The Building 9611 has water, electricity, sewer, communication and fire sprinkler system installed according to current building codes. The magazette was relocated and now is inside Building 9611. Building 9611, pending permit renewal approval, is currently only used to store hazardous waste up to 90 days.

A new roll-up door was installed in the south side of Building 961 during the HWSTF upgrade to facilitate access of forklift.

The floor of both Buildings 961and 9611 is made of 6 inches concrete slab with chemical resistant epoxy coating. Both buildings are equipped with full sprinkler system and fire alarm system.

Two roll-off bins and one Conex are located at the concrete paved facility yard outside the western side of Building 9611. A Conex is similar to a shipping container at the loading docks at international harbor. The roll-off bins and the Conex, about 40 cubic yard each in capacity and previously storing waste up to 90 days, are now proposed to be used for storing solid waste or empty drums up to one year, and are considered part of HWSTF.

Treatment of hazardous wastes consists of consolidation and commingling of similar wastes in containers, and compacting of wastes using two solid waste compactors and a drum compactor. Currently, one drum compactor and one solid waste compactor are located inside Building 961. The drum compactor in Building 961 will be retrofited at a later

date to make it explosion proof capable of compacting both empty drums and solid wastes. A new drum/solid waste compactor will be located at Bay 9 of Building 9611.

Due to limited numbers and capacities of permitted offsite commercial mixed waste treatment, storage and disposal facilities nationwide, the disposal of mixed waste offsite sometimes may encounter difficulties. The permit allows that Sandia's mixed waste may be stored for greater than one-year with DTSC approval. Each storage extension request by Sandia must identify the specific waste and container requiring extended storage. Treatment and disposal limitation for mixed waste, as well as treatment standards imposed by Land Disposal Restrictions may be just cause for granting extended storage approval.

Findings of Significant Effect on Environment:
(A copy of the Initial Study which supports this finding should be attached.)

DTSC has determined that the project will not have a significant effect on the environment as that term is defined in the Public Resources Code Section 21068. A copy of the Initial Study which supports this finding is attached.

Mitigation Measures:

DTSC has determined that the project does not require any mitigation measures beyond those incorporated as part of the project.

Figure 1. Location Map, Sandia National Laboratories, Livermore, California

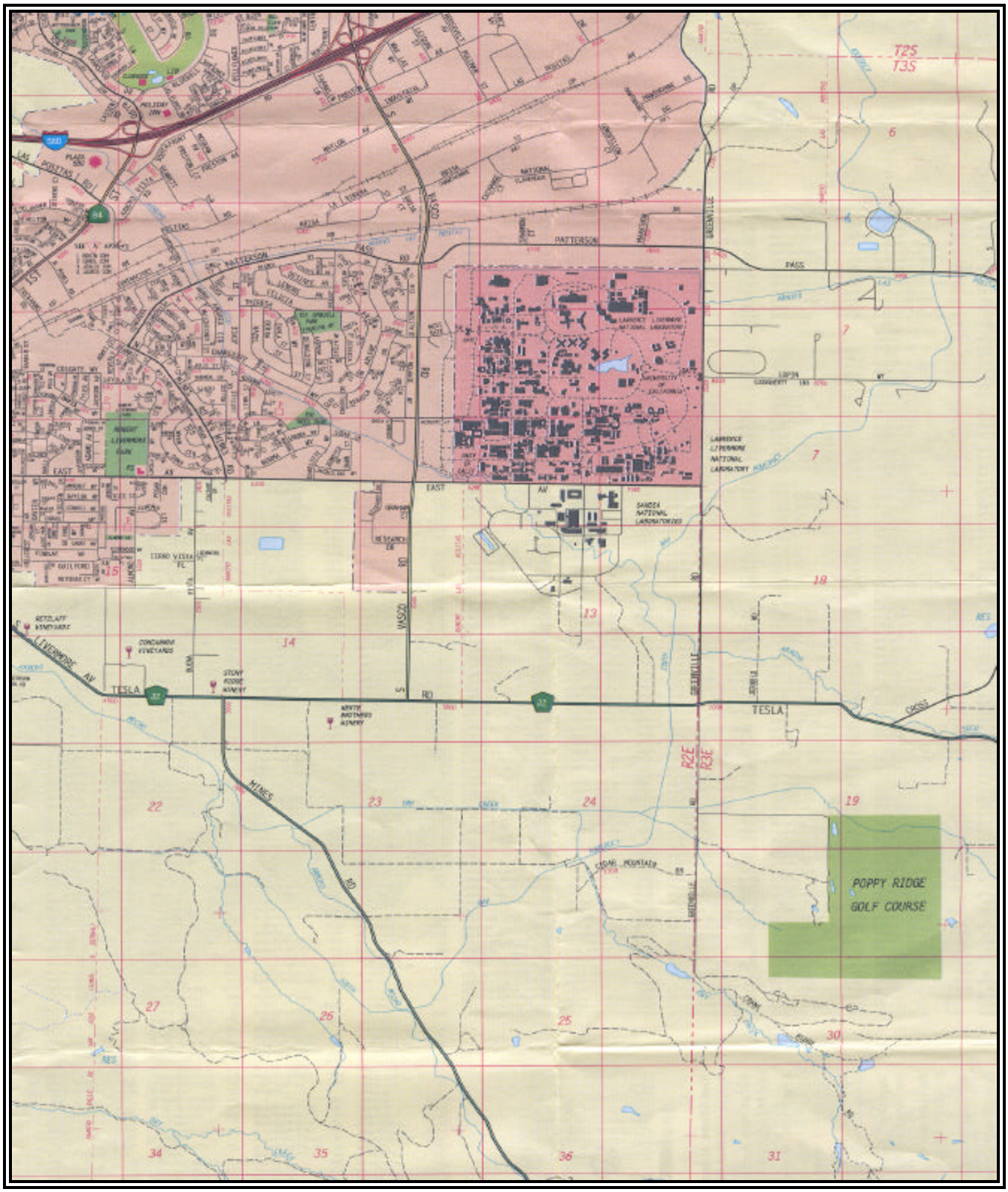

Figure 2. Facility Map, Sandia National Laboratories, 7011 East Avenue, Livermore, California

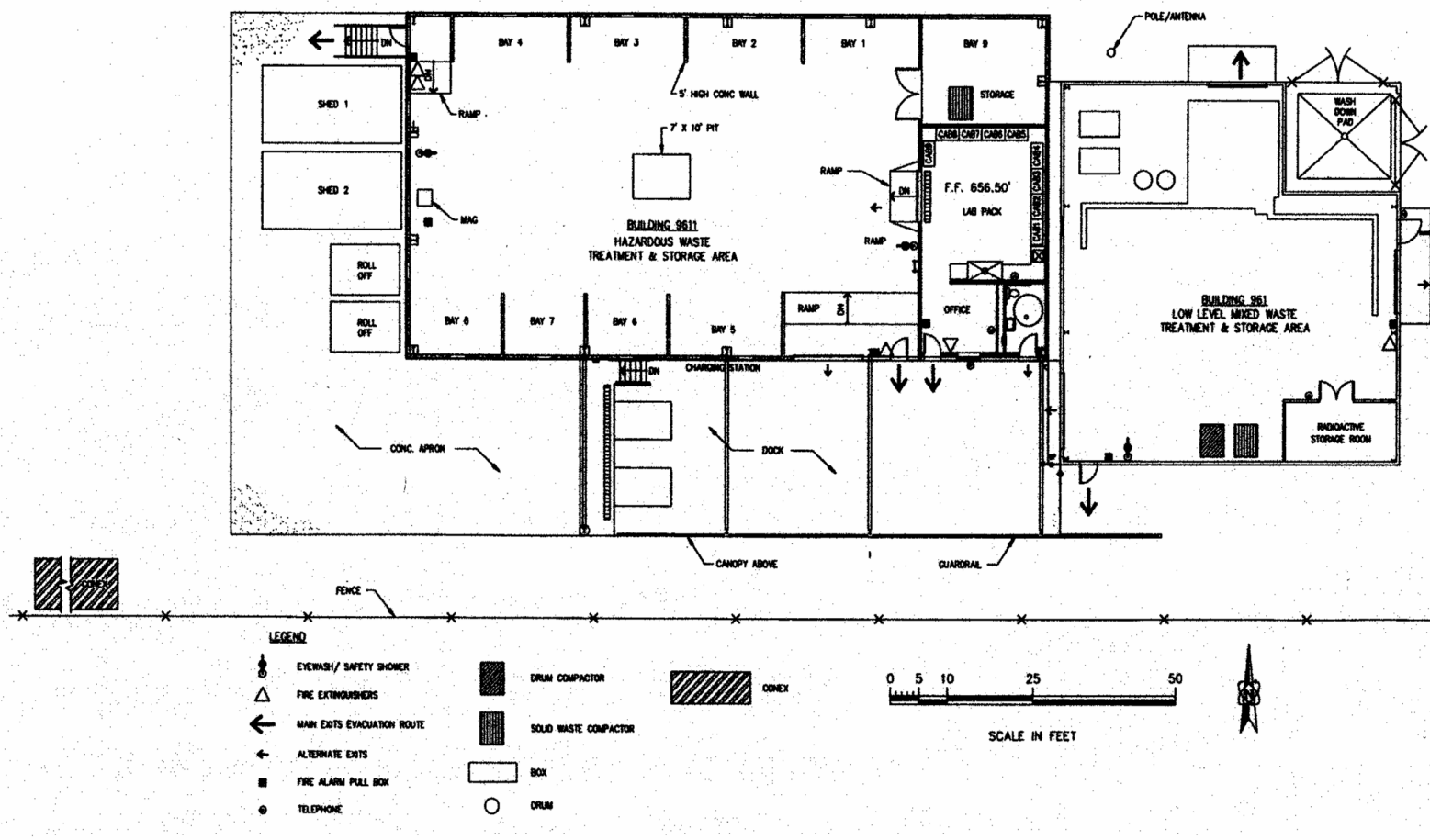

Figure 3. Site Map of U.S. Department of Energy/Sandia National Laboratories, Livermore, California

DTSC Branch Chief Signature		Date
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