

Site Summary – Building 4133

Site Identification:

Building 4133
Hazardous Waste Treatment Facility
Hazardous Waste Management Facility

Operational Use/History:

- Building 4133 was transferred to its present location in December 1977. It was previously labeled Building 4724, Contaminated Sodium Facility. Prior to being physically moved, it was surveyed for radiological contamination and released for unrestricted use.¹
- Building 4133 has been permitted as a hazardous waste treatment facility regulated by the California Department of Toxic Substances Control (DTSC) under the Resource Conservation and Recovery Act (RCRA).
- By 1998 Building 4133 was no longer in use. The structure is still standing.²

Site Description:

- Building 4133 is constructed of galvanized steel walls and roof that are anchored to a concrete slab floor. It is a single story structure.³

Relevant Site Information:

- There are no Use Authorizations and no Incident Reports associated with Building 4133.⁴

Radiological Surveys:

- In 1988, six soil samples were collected and analyzed just to the north of Building 4133.⁵ The samples were below soil release limits.
 - Values were 7.4 to 37 pCi/g (gross alpha) and 33 to 52 pCi/g (gross beta).
- DTSC requested radiological surveys be performed for Building 4133 and that those surveys be independently verified.
- Boeing conducted a survey of Building 4133 in 1999.⁶ All soil samples in the yard and scans and smears of the building and equipment were below release limits indicated that the facility and yard would be suitable for “release for unrestricted use” if Building 4133 had been a licensed facility or a radiological facility.
 - Of the 304 taken, 302 surface contamination measurements were at or below the minimum detectable activity of the instrumentation, and all 304 were below the surface contamination release criteria.

Group G

- The highest total alpha surface contamination measured at the facility was 36 dpm/100 cm², and the highest removable alpha surface contamination measured at the facility was 6 dpm/100 cm².
- The highest total beta surface contamination measured at the facility was 1,292 dpm/100 cm² and the highest removable beta surface contamination measured at the facility was 24 dpm/100 cm².
- The highest observed net ambient gamma reading found inside the fenced facility was 2.9 µR/h which is below the action level of 5 µR/hr.
- The results of 6 soil and asphalt samples taken within the 4133 fenceline indicated one soil sample at 0.1 pCi/g Cs-137 and all others with no detectable man-made activity.
- ORISE conducted a verification survey of 4133 in 2000. The survey included the interior and exterior of the building including the surrounding soil. All release criteria were met.⁷
 - On the interior of the building, surface scans did not identify any locations of direct radiation in excess of ambient background radiation.
 - Total surface beta: -900 to 2,300 dpm/100cm² (corrected for background).
 - Removable surface alpha: 0 to 3 dpm/100cm² (corrected for background).
 - Removable surface beta: -4 to 6 dpm/100cm² (corrected for background).
 - The exposure rates measured on the inside of the building were 7 µR/hr and 9 µR/hr.
 - On the exterior of the building, surface scans did not identify any locations of direct radiation in excess of ambient background levels.
 - Total surface beta: -440 to 770 dpm/100cm² (corrected for background).
 - Removable alpha: 0 to 1 dpm/100cm² (corrected for background).
 - Removable beta: -2 to 6 dpm/cm² (corrected for background).
 - The exposure rates measured ranged from 15 µR/hr to 17 µR/hr.
 - Background: 14 µR/hr.
 - Soil samples were also collected to analyze the concentration of radionuclides. The results are as follows: non-detect for Am-241, 0.3 to 0.6 pCi/g for Cs-137, 0.7 to 0.9 pCi/g for Ra-226, 1.1 pCi/g for Th-228, non-detect for Th-230, 0.9 to 1.3 pCi/g for Th-232, non-detect for U-235, and less than 0.1 to 0.8 pCi/g for U-238.
- DHS performed verification sampling in 2000.

Status:

- Building 4133 is currently undergoing closure as an RCRA-permitted hazardous waste treatment facility.

References:

- 1- Rockwell International, Internal Letter “Unrestricted Release of Building T724 for Unrestricted Use,” from J.E Begley to R.J. Tuttle, January 18, 1978.
- 2- Personnel Interview, Brian Sujata, September 23, 2003.
- 3- Rocketdyne Internal Document, no document number, “Assessment of Department of Energy Buildings within the SSFL,” September 30, 1996.
- 4- Review of Radiation Safety Records Management System, 2003.
- 5- Rocketdyne Document, A4CM-AN-0003, “Radiological Characterization Plan, Area IV, SSFL,” March 30, 1994.
- 6- Boeing Document, RS-00015, “Building 4133 Radiation Survey Report” January 26, 2004.
- 7- ORISE Document, ORISE-00-0577, “Verification Survey of Building 4133, SSFL, The Boeing Company, Ventura County, California,” J.R. Morton, April 2000.
- 8- Historical Site Photographs from Boeing Database.
- 9- SSFL Area IV, ETEC Industrial Planning Maps, 1962-1992.

Photograph – Building 4133



