

# Hanford Facility Beryllium Fact Sheet

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Building Number/Name: 209-E Tank Farm Waste Support Facility  
Date prepared: February 23, 2004  
Date revised: March 20, 2012  
Responsible Contractor: CHPRC  
Contact: Kristy Kimmerle, CIH

## **PAST OPERATIONS**

Beryllium brought in facility: YES

Form of beryllium: SOLID

Period of beryllium operations (dates): Start: Pre-1985 End: Pre-1997

Location(s) in facility that contained beryllium materials: Characterization sampling was conducted in 2010. The CAR and MIX rooms remained posted as potential beryllium contaminated systems due to the high radioactivity levels in the Gloveboxes and Hoods including all process lines, drain systems and ventilation systems which did not allow for beryllium sampling. The CAR and the MIX rooms had beryllium controls in place during demolition. All sample results taken before, during and after the demolition were below the acceptable action and trigger levels as described in the *Sampling Protocols for Buildings*, DE-AC06-08RL-14788D.

The S&W report indicated small concentrations of beryllium material were used in the Critical Mass Laboratory underneath 2 hoods. No information was found to confirm this. The Critical Mass Laboratory was designated as an airborne radioactive contamination area. In February 1998, knowledgeable employees were interviewed to identify potential past use of beryllium. These individuals were not aware of past use of beryllium in the two hoods. However, they recalled that beryllium sources were used in the facility. Sometime between 1985 and 1988, the Mixer Room was cleaned out and renovated. In 1989 the facility was closed. After 1989, Environmental Waste Operations used the facility to repackage waste. In December 1997, the Car/Mixer Room was cleaned out. Beryllium was not present in any of the chemical products sampled or identified. No beryllium contamination areas were noted during the 1999 assessment.

Description of beryllium activities: Beryllium sources were used. Radioactive waste that was possibly covered with beryllium dust was segregated in glove boxes and beryllium alloy tools may have been used. No operations were identified that would have generated a potential beryllium exposure hazard.

Building monitoring data summary: Ambient air samples were collected on 7/1/99 near the south end of the old Lunchroom and in the West Hallway near the CAM alarm. Results reported for these samples were below the Method Detection Limit (MDL) of  $0.004 \mu\text{g}/\text{m}^3$ . Surface samples were collected from 29 sites throughout the building on 7/1/99. Results reported for these samples were below the MDL of  $0.5 \mu\text{g}/100 \text{ cm}^2$ . Areas that were not sampled in 1999 but could possibly be contaminated with beryllium include all non-office areas within the facility, including the Critical Mass Laboratory and associated airborne radioactive contamination areas.

Personnel monitoring data summary: A personal air sample was also collected on 7/1/99 in the breathing zone of a technician while wipe sampling surfaces for beryllium. Results reported for the samples were below the Method Detection Limit (MDL) of  $0.015 \mu\text{g}/\text{m}^3$ .

Specify Engineering/Administrative controls used during operations: Radiological controls.

Comments, including any additional information needed (specify): During the creation of the original Beryllium Fact Sheet there were beryllium tools still located in the facility; no known beryllium operations were identified (past or present). Due to its designation as an airborne contamination area, the Critical Mass Laboratory was not able to be sampled during the 1999 FDH beryllium assessment. Therefore, beryllium contamination at that site could not be characterized. Since then, a Beryllium Characterization was conducted in the building in 2010 except for Hood 1 and Hood 2 located in the CAR room, Glove Box 200 in the Mix room, or from the interiors of any process lines, drain systems and ventilation systems.

**Maximum Estimated Past Be exposure: LOW**

**CURRENT OPERATIONS**

Building still present: NO

Beryllium present: NO

Current building occupancy/activity: Completed building demolition on 12/15/2011.

**Maximum Estimated Current Be Exposure from Routine Operations: NONE**

Basis for above information: These results are documented by the Beryllium Characterization Report 209E 5/21/2010, the Down post after Demolition Report 1/30/2012 and the Beryllium Facility Assessment 209E 6/28/2010.

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*For questions or comments, please send email to [Kristy\\_J\\_Kimmerle@rl.gov](mailto:Kristy_J_Kimmerle@rl.gov)*