

Hanford Facility Beryllium Fact Sheet

Building Number/Name: 236Z Plutonium Reclamation Building
Date prepared: June 30, 2004
Date revised: February 9, 2012
Responsible Contractor: CHPRC
Contact: Kristy Kimmerle, CIH

PAST OPERATIONS

Beryllium brought in facility: YES
Form of beryllium: VARIES
Period of beryllium operations (dates): Start: 1973 End: 2004

Location(s) in facility that contained beryllium materials: Miscellaneous Treatment (MT) gloveboxes MT-1, MT-3, MT-4, MT-5, MT-6 and the connecting conveyor glovebox in Room 41. These enclosures and downstream ventilation systems in Room 26 are indicated with a Potential Internal Beryllium Contamination (PIBC) postings.

Description of beryllium activities: The MT gloveboxes in Room 41 may have processed beryllium-contaminated plutonium residues. These waste residues may have included Rocky Flats Environmental Technical Site (RFETS) incinerator fly ash known to contain beryllium contamination. Glovebox 27 in Room 27 may also have been used during residue stabilization campaigns. (Note: Glovebox 27 was decommissioned and removed from 236-Z in 2011).

Dissolved Plutonium/Beryllium (PuBe) neutron source material may have been processed in MT-4, MT-6 and the conveyor glovebox in Room 41. PuBe neutron source material typically consisted of an alloy of plutonium and beryllium in a ratio of about two parts of plutonium to one part beryllium on a weight basis. The sources were machined in Glovebox HA-39, then packaged for transportation to 236-Z. Plutonium was reclaimed, and unwanted material was typically disposed of as liquid waste. (Note: HA-39 was originally located in 234-5Z, Room 235, but was decommissioned and removed from PFP in 1977).

Building monitoring data summary: Beryllium characterization sampling campaigns of 236-Z were conducted in 2004 and 2010. Beryllium area air and wipe samples were routinely collected during intrusive work activities involving Glovebox 27 or MT gloveboxes. Beryllium above the pertinent Laboratory Quantification Limit (LOQ) has never been found during analysis of beryllium area air or wipe samples collected in 236-Z.

Personnel monitoring data summary: Beryllium above the pertinent LOQ has never been found during analysis of personal monitoring samples collected in 236-Z.

Specify Engineering/Administrative controls used during operations: Continuous negative building ventilation with separate negative ventilation of glovebox systems has been operational for decades. Sealed glovebox and other process equipment enclosures have been required for decades during the handling of Plutonium with Beryllium impurities material. Intrusive work activities into systems with PIBC require addition engineered isolation. Administrative controls are established by the Beryllium Work Permits (BWPs) associated with this facility.

Maximum Estimated Past Be exposure: None known

CURRENT OPERATIONS

Building still present: YES

Beryllium present: YES

Current building occupancy/activity: The building is undergoing glovebox and affiliated system removal. It is currently listed as Inactive. This is a Beryllium Controlled Facility and has various beryllium internally contaminated systems and Beryllium Controlled Areas (BCAs).

Maximum Estimated Current Be Exposure: LOW

Basis for above information: The D&D activities are tightly controlled using sound engineering and good work practices with trained and medically qualified Beryllium Workers in appropriate PPE. This information was obtained by Deborah Alexander in interviews with site personnel, from the PFP Resource Center release of "Update and Status of Beryllium at PFP" Information Bulletin 3 dated March 8, 2004, the PFP Resource Center release of "Information of the Status of PFP Be Work" dated May 26, 2004, and the reference information from the Beryllium Facility Assessment Form completed on 1/4/2010.

Comments, including any additional information needed (specify): None.

For questions or comments, please send email to Kristy_J_Kimmerle@rl.gov