

Hanford Facility Beryllium Fact Sheet

Building Number/Name: 202S REDOX
Date prepared: February 23, 2004
Date revised: February 14, 2012
Responsible Contractor: CHPRC
Contact: Kristy Kimmerle, CIH

PAST OPERATIONS

Beryllium brought in facility: None known.

Form of beryllium: N/A

Period of beryllium operations (dates): Start: N/A End: N/A

Location(s) in facility that contained beryllium materials: Two survey units in the facility are contaminated with beryllium. They are the east end of the Upper South Pipe (Operating) Gallery and the Administration rooms on the southwest side. It is not known how these areas were contaminated, however, historical process knowledge indicates that:

- Beryllium epoxy was used in resins at REDOX.
- Trace quantities of beryllium are conceivably present and believed to be found in Dissolver Cells A, B and C, waste transfer lines, Waste Treatment Cell D and associated piping.

The Canyon area of the building may also have contained small quantities of beryllium used in the handling and fabrication of fuel elements and fuel rods.

Description of beryllium activities: An October 1960 report noted a laboratory study to determine what materials will pass into solution during decladding and dissolution of NPR fuel elements. This report mistakenly identified this building, but no cladding experiments were conducted in this building. Activity was most likely conducted in the 222S building.

Building monitoring data summary: Full Characterization conducted November 2010 – March 2011 and July 2011. SWIHD Reports 10-20432, 10-20439, 10-20443, 10-20447, 10-20467, 10-20469, 10-20474, 10-20537, 10-20538, 10-20539, 10-20595, 10-20597, 10-20598, 10-20670, 10-20671, 10-20672, 10-20681, 10-20683, 10-20685, 10-20706, 10-20708, 10-20709, 10-20715, 10-20716, 10-20717, 10-20731, 10-20734, 10-20735, 10-20807, 10-20806, 10-20805, 10-20841, 10-20842, 10-21006, 10-21007, 10-21012, 11-21278, 11-21279, 11-21405, 11-21404, 11-21685, 11-21686, 11-21777, 11-21778, 11-21371, 11-21370, 11-22102, 11-22103, 11-23045, 11-23046,

Personnel monitoring data summary: November 2010 – March 2011 and July 2011. SWIHD Reports 10-20432, 10-20456, 10-20544, 10-20596, 10-20669, 10-20693, 10-20707, 10-20730, 10-20808, 10-20840, 10-21008, 10-21011, 11-21276, 11-21277, 11-21307, 11-21308, 11-21368, 11-21369, 11-21402, 11-21403, 11-21683, 11-21684, 11-21775, 11-21776, 11-21900, 11-21921, 11-24211, 11-24212, 11-24224, 11-24225.

Specify Engineering/Administrative controls used during operations: N/A

Maximum Estimated Past Be exposure: NONE

CURRENT OPERATIONS

Building still present: YES. Building is Inactive.
Beryllium present: YES

Current building occupancy/activity: Although this building is currently unoccupied, annual walkthrough surveillance and various maintenance tasks resulting from surveillances are being conducted.

Maximum Estimated Current Be exposure: NONE

Basis for above information: Two survey units in the facility are contaminated with beryllium. They are the east end of the Upper South Pipe (Operating) Gallery and the Administration rooms on the southwest side. These results are documented by the Beryllium Characterization Report 202S 9/23/2011, and the Beryllium Facility Assessment Form 6/28/2010.

Comments, including any additional information needed (specify): Beryllium Work Permits are required to access the Beryllium Controlled Areas.

Two survey units were not sampled for beryllium because they are not routinely surveyed or entered by workers. They are The REDOX Canyon and 2718S. Samples were not collected in the REDOX Canyon due to potential exposure to high airborne radiation and suspected high levels of radioactive contamination and because it is not part of the routine facility surveillance. 2718S is a deteriorated exterior building that has been closed and locked for many years is not part of the routine facility surveillance. Those survey units (#17 and #18 respectively) shall be posted as Beryllium Controlled Areas (BCAs) and access prohibited until radiological surveys are performed and authorization to enter is granted by RADCON and Facility Operations. Entry into those areas shall be in accordance with controls specified in a Beryllium Work Permit (BWP). Characterization sampling should be performed within the survey units, if deemed safe, prior to facility demolition.

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