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DATE: May 30, 2013

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SUBJECT: **Post-Demolition Summary Report for the 183-KW Chlorine Car Building**

Attached is a Post-Demolition Summary Report for the 183-KW Chlorine Car Building. This report documents the final status of the area after completion of Decontamination, Decommissioning, Deactivation, and Demolition (D4) activities. The information in this report includes references to radiological and industrial hygiene surveys, sample data, waste profiles, nearby waste sites and other relevant information regarding the "as left" condition of the facility.

Please contact Mark Allen at 509-308-5375 if you have any questions on this information.

TTY:tty

Attachment: *Post-Demolition Summary Report for 183-KW Chlorine Car Building.*

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Post-Demolition Summary Report for the 183-KW Chlorine Car Building

May 2013

This post-demolition summary report documents the characterization and final status of the 183-KW Chlorine Car Building at the completion of deactivation, decontamination, decommissioning and demolition (D4) activities.

Site Information

The original 183-KW Chlorine Car Building was used to house and unload rail cars of chlorine in support of water treatment processes in the 100-KW area. Later the building was used to store spent cation exchange resin from the Fuel Storage Basin at the 105-KE/KW reactors and for general storage.

The facility operated between 1955 and 1971 (DOE 2004) and was used for storage from 1971 until October, 2005.

The 183-KW facility contained two bays (35-ft x 96-ft by 21-ft high), with a railroad spur at each bay. The entry doors were metal/concrete and bomb resistant. Exterior walls were 1 ft-3 in thick concrete. The center dividing wall was 1-ft thick concrete. All three walls extended below grade 3 ft-4 in. The roof was 1 ft-3 in thick concrete, and the floor was 1 ft-4 in thick concrete. The concrete wall that the entry door was attached to was 3 ft-1 in thick (SIS).

The chlorine was stored and used directly from railroad tank cars and the air pressure was used for unloading. Chlorine was fed from the railcars to the evaporators in the 183.1 KW Headhouse where it was vaporized it to a gaseous state. The chlorine was then injected into the filtered water prior to placement in the 183.4-KW Clearwells.

The 183-KW Chlorine Car Building above grade was demolished (Figure 1) to the slab by October 25, 2005 under the River Corridor Contract (RCC). See Figure 2 for a post-demolition view.

Radiological Scoping and IH Baseline Surveys

The 183-KW facility demolition was performed under the RCC contract. The Radiological Survey Plan was encompassed in *Radiological Survey Plan – 163-N, 183-N and 183-KW/183-KE Ancillary Facilities and 190-DR Liquid* (SP-05-12). The IH Baseline for 183-KW Water Treatment Plant was completed August 20, 2007 (CCN 135242).

Waste Characterization Sampling

The 183-KW Chlorine Car Building was inspected and sampled (CCN 121451).

Waste Profile

The 183-KW Chlorine Car Building above grade was demolished during the RCC contract. Demolition was completed on October 25, 2005 under the RCC contract. The demolition material was loaded into roll-off containers and sent to the Environmental Restoration Disposal Facility (ERDF). The waste profile used was Waste Profile Number WP100KPIPSOIL010.

Status of WIDS Sites Associated with the Building Site

There are no WIDS sites associated with the 183-KW Chlorine Car Building.

Anomalies

No anomalies were encountered during the demolition of the 183-KW facility.

Work Packages

The following work packages were used:

2005-04-01-002, *Type I, Radiological, Asbestos, Demand Work Request, 183 and 183.1 K West Characterization*

2005-06-23-001, *Type I, Radiological Demolition of the 183-KW chlorine Car Protection Building*

2005-08-03-001, *Type I, 183-KW Chlorine Line Evaluation*

Cost Performance Information

As of May 23, 2013, \$489,872 was charged to the 183-KW Chlorine Car Building cost accounts.

Lessons Learned

There were no identified lessons learned from the demolition of this facility.

Final Building Status

All D4 activities were performed in accordance with applicable environmental documentation, including the Removal Action Work Plan for 105-KE/105-KW Reactor Facilities and Ancillary Facilities (DOE/RL-2005-26, Rev. 1).

Demolition of the above grade structure was completed on October 25, 2005. One hundred and eight one (181) containers (44,263 cubic feet, 2,806 tons) of demolition debris were shipped to ERDF.

Documentation

Documents referenced in this summary are available through the Document Control organization. Additionally, photographs of this facility prior to, during, and following demolition activities are maintained in the working files of D4's Characterization group and referenced in this Post Demolition Summary Report in Figure 1 and 2

References

Characterization references

CCN 121451, *Characterization Summary Report for the 183-KW Facility*, June 1, 2005, Washington Closure Hanford, LLC., Richland, WA.

CCN 135242, *IH Baseline for 183-KW, Water Treatment Plant*, August 20, 2007, Washington Closure Hanford, LLC., Richland, WA

Removal Action Work Plan reference

DOE/RL-2005-26, Rev. 1, *Removal Action Work Plan for 105-KE/105-KW Reactor Facilities and Ancillary Facilities*, February 2007, United States Department of Energy, Richland, WA.

Stewardship Information System reference

SIS Database, *RCC Stewardship Information System Facility Summary Report – 183-KW, Chlorine Car Building*, May 21, 2013

Waste Profile references

WP 100KPIPSOIL010, *ERDF Waste Profile Datasheet, 183-KW Process Water Treatment System*, May 4, 2010, Washington Closure Hanford, LLC, Richland, WA



Figure 1. 183-KW Chlorine Car Building



Figure 2. 183-KW Chlorine Car Building After Demolition