

## FACILITY STATUS CHANGE FORM

0095671

|  |   |                                 |
|--|---|---------------------------------|
| <b>Date Submitted:</b><br>April 14, 2011 | <b>Area:</b><br>300 Area                                    | <b>Control #:</b><br>D4-300-040 |
| <b>Originator:</b><br>John Harrie        | <b>Facility ID:</b><br>323 Mechanical Properties Laboratory |                                 |
| <b>Phone:</b><br>509.308.9935            | <b>Action Memorandum:</b><br>Action Memorandum #3           |                                 |

This form documents agreement among the parties listed below on the status of the facility D&D operations and the disposition of underlying soil in accordance with the applicable regulatory decision documents.

**Section 1: Facility Status**

- All D4 operations required by action memo complete.
- D4 operations required by action memo partially complete, remaining operations deferred.

**Description of Completed Activities and Current Conditions:**

Deactivation: Utility isolations were performed on the facility prior to beginning facility decontamination.

The following hazardous materials were removed prior to facility demolition: oils, asbestos containing material, grease, mercury, freon, and miscellaneous construction materials. Hazardous material removal and waste disposition was performed in accordance with *Removal Action Work for 300 Area Facilities*, DOE/RL-2004-77, Revision 2 (RAWP). Fixative was applied to the inside of the building to lock down any remaining chemical contamination prior to demolition.

Demolition: Demolition of the above-grade structures were completed in June of 2008. The building debris were removed and disposed of at ERDF. Due to the facility histories, the demolition was performed under Radiological and Industrial Hygiene controls.

**Description of Deferral (as applicable):**

The 323 foundation slab, associated ventilation system slab, four 25,000 gallon below-slab tanks (UPR-300-18), as well as any surrounding contaminated soil were deferred to Field Remediation (FR) for final waste site remediation. There are no Industrial Health (IH) postings associated with this site. Remaining slabs are posted as a Contamination Area (CA). No pre- or post-demolition GPS or GPERS surveys were performed by D4 as the site remained posted as a Contamination Area (CA) and below-grade structures are being removed by FR.

**Section 2: Underlying Soil Status**

- No waste site(s) present. No additional actions anticipated.
- Documented waste site(s) present. Cleanup and closeout to be addressed under Record of Decision.
- Potential waste site discovered during D4 operations. Waste site identification number <to be> assigned.

Cleanup and closeout to be addressed under Record of Decision.

**Description of Current/As-Left Conditions:**

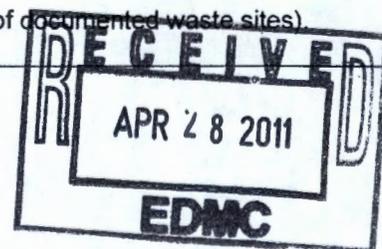
All above-ground 323 building structures were removed. The below-grade slabs associated with the 323 building and ventilation system and below-slab tanks have been left in-place.

**Identification of Documented Waste Site(s) or Nature of Potential Waste Site Discovery (as applicable):**

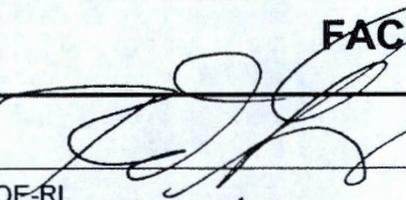
Reference Attachment 2.

**Section 3: List of Attachments**

- Facility information (building history, characterization and identification of documented waste sites)
- Project photographs.



# FACILITY STATUS CHANGE FORM

|   |  |                       |
|---|--|-----------------------|
|  |  | <i>4/20/11</i>        |
| DOE-RL  |  | Date                  |
| <i>Larry Gadbois</i>  |  | <i>April 21, 2011</i> |
| Lead Regulator  | <input checked="" type="checkbox"/> EPA <input type="checkbox"/> Ecology | Date                  |

**DISTRIBUTION:**

EPA: Larry Gadbois, B1-46  
 Ecology: Rick Bond, H0-57  
 DOE: Rudy Guercia, A3-04  
 Document Control, H0-30  
 Administrative Record, H6-08

SIS Coordinator: Ben Cowin, H4-22  
 D4 EPL: Chris Strand, L7-10  
 Sample Design/Cleanup Verification: Megan Proctor, H4-22  
 FR Engineering: Jason Olsson, L6-06  
 FR EPL: Darrin Faulk, N2-01

## Attachment 1: Facility Information

### Building History:

The 323 Mechanical Properties Laboratory building measured 40-feet (12 m) by 80-feet (24 m) by 12-feet (3.6 m) was constructed in 1959/1960 with an aluminum frame structure covered with corrugated aluminum sheet metal. This facility was built on top of the original 321 tanks. A ventilation system enclosure was located to the south, and gas cylinder enclosures were located on the west side of the building. The main building was divided into north and south areas. The north area was at grade and contained offices, a small machine shop, a change room and a lunch room. The south area was constructed 5-feet (1.5 m) below grade and contained the laboratory, including a hot cell that was built over the 321 Tank Farm, a 1944 underground storage tank farm comprised of four 25,000-gallon tanks. The floor of the laboratory was also the cover for a vault to access the tanks. At various times during its history, the facility supported waste vitrification development, FFTF components testing, and PNNL research.

### Building Characterization:

Table 1 summarizes the industrial hygiene, radiological control, and asbestos samples collected in the 323 Building. Table 2 summarizes the contaminants of concern for facility demolition and the associated determination of no impact to the soil.

### Identification of Documented Waste Sites:

Table 3 documents the Identified Waste Sites associated with 323.

**Table 1. Summary of Characterization Surveys at the 323 Site.**

| Type                          | Date          | Documented In   | Results Summary  |
|-------------------------------|---------------|---|--|
| <b>Pre-Demolition</b>         |               |   |  |
| Initial Hazard Classification | March 2002    | IHC-2006-0022, Rev 001  | Below Category 3   |
| Asbestos                      | December 2007 | CCN137221   | 1 to 3 % in vinyl floor covering and mastic.                                       |
| IH Scoping Survey             | October 2007  | CCN136147   | No occupational exposure levels of Pb, Cr, and Cd; no Be restrictions.             |
| Radiological Surveys          | August 2007   | RSR 300PS-08-0891<br>Pre-demo areas above 8 ft. RSR-300PS-08-1166<br>323 lead removal and RSR-300PS-08-1232<br>Hotcell. | Range of fixed contamination 16K to 40K (beta-gamma) total dpm/100 cm <sup>2</sup> |
| <b>Post-Demolition</b>        |               |   |  |
| IH Survey                     | June 2008     | CCN145967   | No IH controls required  |
| Follow-up Walk-down IH Survey | July 2010     | CCN152333   | Non-Be contaminated  |
| Radiological Survey           | June 2010     | RSR-300PS-10-1399<br>Partial downpost of CA   | Small fixed contamination area on slab at 300K dpm/100 cm <sup>2</sup>             |

**Table 2. Contaminants of Concern for Facility Demolition**

| <b>Contaminant of Concern</b> | <b>Determination of no impact to the soil</b>   |
|-------------------------------|---|
| Radionuclides                 | Site posted as a CA around foundation. Posted URMA due to tank below slab. All identified contamination is fixed.                         |
| Beryllium                     | Building interior was locked down prior to demolition. Historical information and visual inspection of the demolition area was performed. |
| Class II non-friable Asbestos | A visual inspection was performed following demolition and the area was down-posted accordingly.  |
| Lead                          | Lead brick and shot were removed with the hotcell.  |

**Table 3. Identification of Documented Waste Sites**

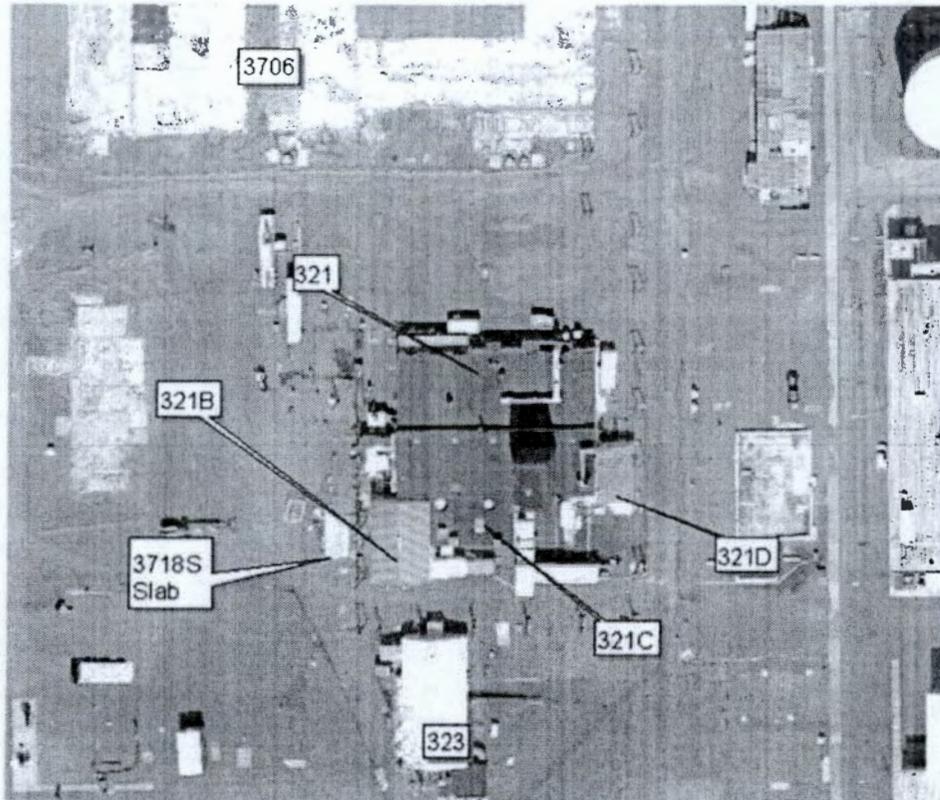
| <b>Site No.</b> | <b>Description</b>   | <b>Status</b>  |
|-----------------|--|--|
| 300-15          | 300 Area Process Sewer System  | The underground pipelines from the 323 Building to this active system were isolated prior to demolition. |
| 300-85          | 323 Building Steam Valve Pit   | This rejected site was not removed.  |
| 323 Tank 1      | 321 Building Underground Waste Tank  | This UGS tank and associated encasement structure were not disturbed.                                    |
| 323 Tank 2      | 321 Building Underground Waste Tank  | This UGS tank and associated encasement structure were not disturbed.                                    |
| 323 Tank 3      | 321 Building Underground Waste Tank  | This UGS tank and associated encasement structure were not disturbed.                                    |
| 323 Tank 4      | 321 Building Underground Waste Tank  | This UGS tank and associated encasement structure were not disturbed.                                    |
| UPR-300-18      | Contaminated soil beneath the building from a release at the 321 Tank Farms, below the 321 Building lab. | None of the contaminated soil associated with this site was removed.                                     |

**Anomalies Discovered During Demolition**

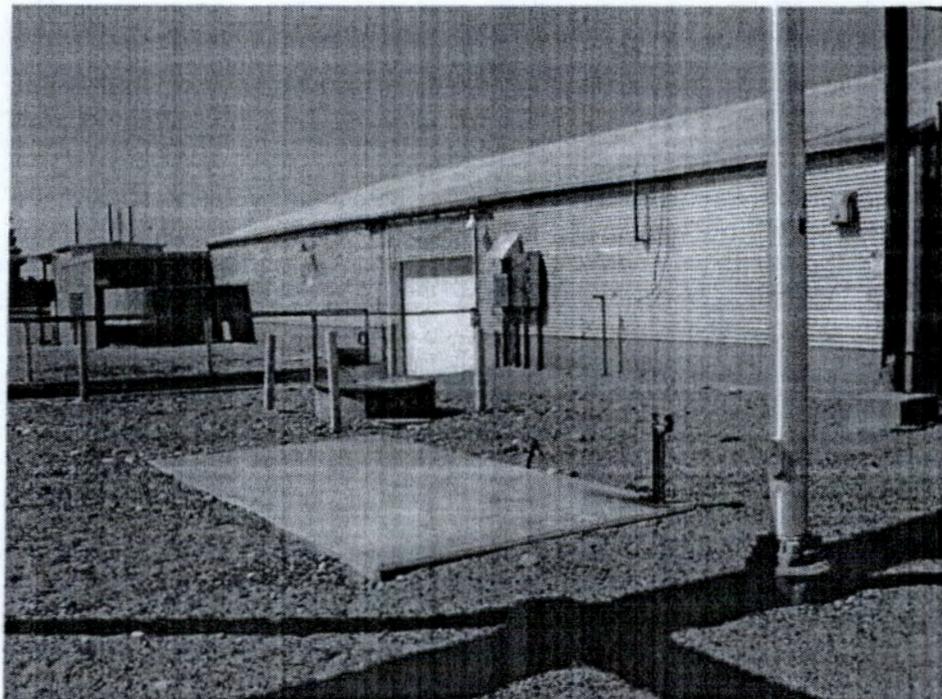
No anomalies were discovered during the demolition of the 323 Building.

**Attachment 2: Project Photographs**

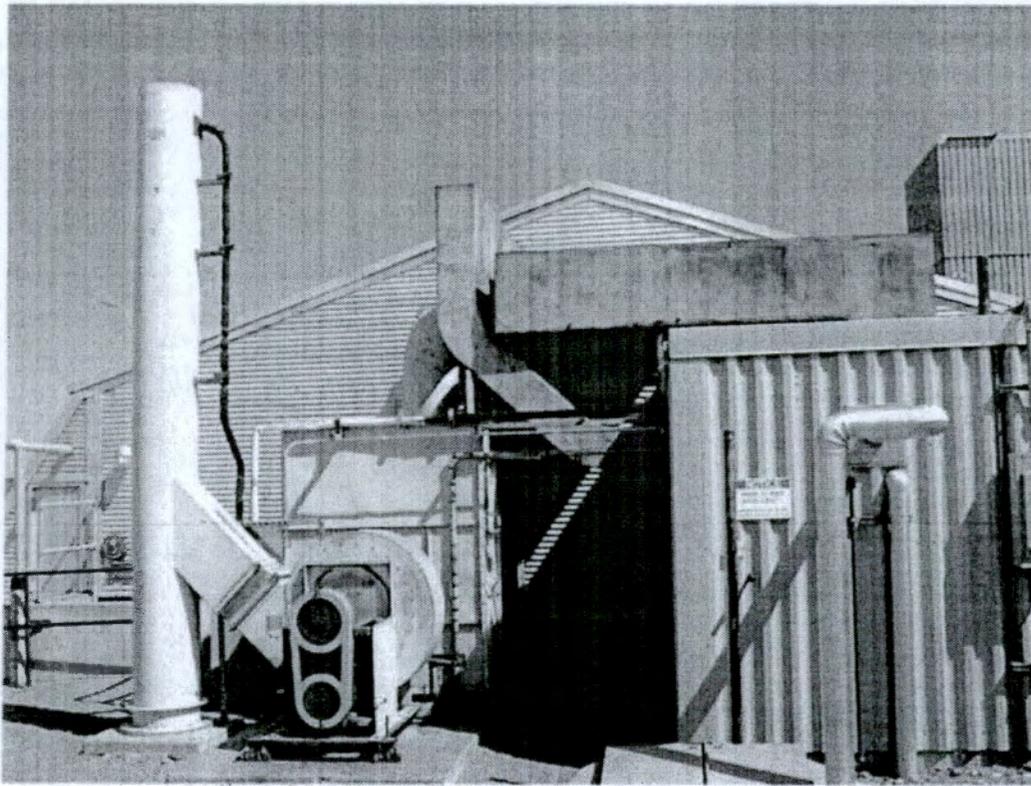
**Figure 1: The 323 Building Location, April 2008**



**Figure 2. 323 Building, Pre-Demolition May 2006**



**Figure 3. 323 Building Site Ventilation System, Pre-Demolition**



**Figure 4. 323 Building Site, Post-Demolition**

