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FACILITY STATUS CHANGE FORM

Date Submitted: 7/10/2017	Area: 300	Control Number: D4-300-105
Originator: D. Turlington/B. Karlsen	Facility ID: MO-226	Phone: 509-373-0176

Action Memorandum/Removal Action Work Plan:
DOE/RL-2010-34, Rev. 2; TPA-CN-0706

This form documents the status of facility decontamination, deactivation, decommissioning, and demolition operations or debris removal in accordance with the applicable regulatory decision documents.

Section 1: Facility Status

☒ All D4 operations required by action memo complete.

Description of Completed Activities and Current Conditions:

The required facility removal actions were performed in accordance with the DOE/RL-2010-0034, Rev. 2, *Removal Action Work Plan for River Corridor General Decommissioning Activities*.

Demolition of MO-226 was performed during April and May of 2017. The facility was completely removed.

The following actions were specifically implemented for MO-226:

- MO-226 was characterized via sampling for radiological, beryllium, asbestos, and industrial hygiene health.
- Mobilization was established by setting up temporary utilities/facilities which were removed after D4 activities were completed.
- MO-226 site was prepared for demolition by setting up demolition zone areas and staging demolition related equipment.
- MO-226 and attached breezeway were demolished and resulting debris was transported to ERDF for disposal.
- MO-226 site was demolished to grade and the soil re-contoured to match the surrounding area.

Total D4 Cost for the Facility:

$269.13K

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 a separate CERCLA Response Action.
☐ Potential waste site discovered during D4 operations. Waste site identification number <to be> assigned. Cleanup and closeout to be addressed under a separate CERCLA Response Action.

Description of Current/As-Left Conditions:

The MO-226 site has been leveled and is vacant.
Control Number for this document per CHPRC is D4-300A-259.

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

N/A

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FACILITY STATUS CHANGE FORM (continued)

Date Submitted: 7/10/2017	Area: 300	Control Number: D4-300-105

Section 3: List of Attachments

Attachment 1 Facility Information (building history and characterization)
Attachment 2 Project Photographs
Attachment 3 Asbestos Report
Attachment 4 Beryllium Verification Report

- See SWIHD File, *Be_Verification_Report-MO226_4-19-17_Rev 1* for sampling data and reports

DOE-RL	RF Guercia		7/10/17
	Print	Signature	Date

FACILITY STATUS CHANGE FORM (continued)

Date Submitted: 7/10/2017	Area: 300	Control Number: D4-300-105

Distribution:
EPA: Ben Simes
Ecology: Stephanie Schleif, H0-57
DOE: Rudy Guercia, A3-04
Administrative Record, H6-08 (300-FF-2 OU)

Sampling Design/Cleanup Verification:
Theresa Howell, H4-23

Building History:

MO-226, a.k.a. 318 Trailer 4, is a vacant, unoccupied prefabricated mobile trailer that was installed in 1986. The building is approximately 3,696 ft^2 with a height of 9 feet. The building was an instrument shop, a lab, several support offices and restrooms. The primary use was operations and maintenance (O&M) and environmental support for the 300 Area.

MO-226 provided additional office, laboratory, and instrument shop space to the 318 Building which is a Radiological Calibration and Standards Laboratory. The trailer was used for radiological instrument calibrations.

The only history of work involving beryllium is the CuBe screens that were used on the Radiation Probes in the MO-226 Trailer Rooms 2 and 4. The screens were not handled in a manner to change their shape or release beryllium under normal conditions of use. Once identified in 2000, the screens were substituted with non-beryllium containing screens.

In 2000, an exposure assessment was conducted during the manipulation of the CuBe alloy screens used on the radiological probes in the instrument shop, Rooms 2 and 4. Ten samples were collected on the screens, in storage drawers, and on the work benches. The reporting limit at the time was 0.5 μg. All results except one were below the reporting limit. The result that exceeded the reporting limit and the DOE public release limit was at 0.94 μg/100 cm2 and was collected inside the CuBe screen storage drawer.

MO-226 (excluding Rooms 2 and 4):

In 2006 and 2007, nine composite wipe samples were collected throughout MO-226 Trailer. All samples were below the PNNL follow-up screening limit. In addition, 17 compliance wipe samples have been collected and all sample results were below the PNNL ACL of 0.1 μg/100 cm2.

On February 27, 2017, Administrative Interface Agreement (AIA) PRC-AIA-PNNL-00495, Demolition and Removal of MO 226 in the 300 Area, between PNNL and CHPRC was completed and transmitted to PNNL.

Demolition of MO-226 began in April of 2017 and was completed in May of 2017.

Attachment Tables:

Table 1 summarizes the Ecological and Cultural Review, Industrial Hygiene, and Radiological Control samples collected from MO-226.

Table 2 summarizes the contaminants of concern for facility demolition.

Table 1. Summary of MO-226 Surveys and Reports

Type	Date	Documented In	Results Summary
Pre-Demolition			
Ecological and Cultural Review for MO-226	Completed March 2, 2017	HCRC#2017-300-002,ECR-2017-305	No Historical or Cultural Impacts Found
Radiological Survey Record	Approved March 27, 2017	RSR No. L-1700350	Non-Rad

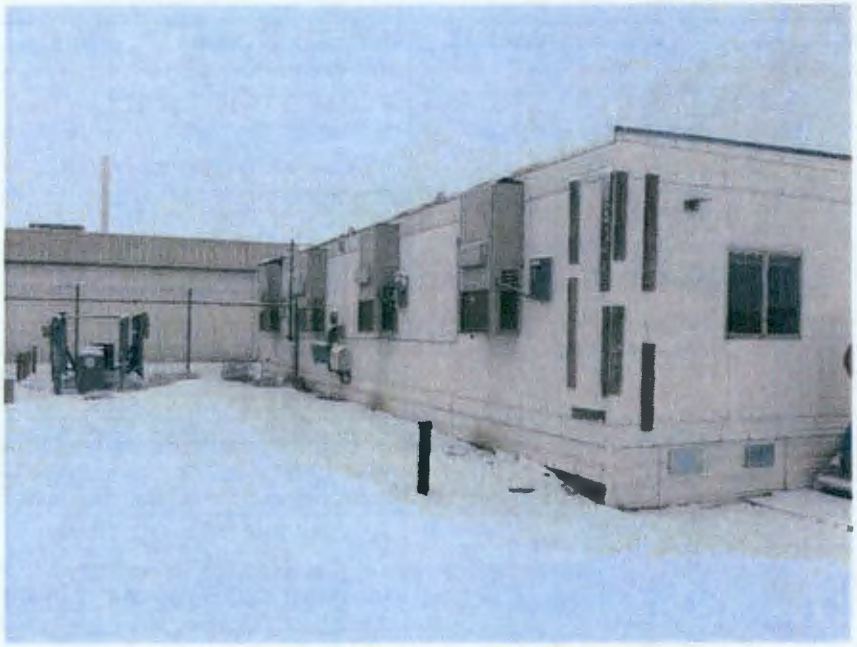
Asbestos Inspection and Sampling	Completed April 12, 2017	Attachment 3	ACM found
IH Baseline and Be Characterization	Completed March 22, 2017	SWIHD File Name: Be_Verification_Report-MO226_4-19-17_Rev 1 Be Verification Report - Attachment 4	No Be.

Table 2. Contaminants of Concern for Facility Demolition

Contaminants of Concern	Management Practice
Radionuclides	Radiological survey performed in March of 2017 did not identify radiological contamination.
Beryllium	IH characterization sampling (Attachment 4) performed in March of 2017 determined Be concentrations to be less than action levels.
Asbestos	Asbestos inspection (Attachment 3) performed in April of 2017 determined ACM in the vinyl flooring, roofing, and cement board lining in lab fume hood. Cement board was abated prior to demolition. Wet methods were used during demolition.

Anomalies Discovered During Demolition:

No anomalies were discovered during demolition of MO-226.



Pre-Demo MO-226 on 1/31/17

Pre-Demo MO-226 on 1/31/17

Pre-Demo MO-226 breezeway on 1/31/17

During Demo MO-226 breezeway on 4/25/17

During Demo MO-226 on 4/28/17

During Demo MO-226 on 4/29/17

During Demo MO-226 on 4/30/17

During Demo MO-226 on 4/30/17

Post-Demo MO-226 on 5/1/17

Post-Demo MO-226 on 5/17/17

Asbestos Building Inspection
MO226/300 Area
April 12, 2017

1.0 Introduction

The purpose of this asbestos building inspection report is to identify asbestos containing material in MO226 /300 Area; which is scheduled to be demolished. The facility was thoroughly inspected by a certified AHERA Building Inspector. Material identified as suspect or Presumed Asbestos Containing Material (PACM) was sampled to determine the nature and types of Asbestos Containing Materials (ACM) or will be handled and disposed of as ACM.

2.0 Building Description

The building is a vacant, unoccupied prefabricated mobile trailer that was acquired in 1982 and installed in 1986. The primary use was operations and maintenance (O&M) and environmental support for the 300 Area. The building contains approximately 3,696 ft^2 with a height of 9 feet. The building is a wood frame structure with aluminum siding. Floor coverings are VCT, vinyl flooring or low grade commercial carpet. Walls are gypsum sheetrock with wall covering on wood studs. Ceilings are prefabricated panels on wood studs. The structure has a built-up roof. The building contains an instrument shop, a lab, several support offices and restrooms.

3.0 PACM

The following building materials were sampled and/or will be handled and disposed of as ACM:

- Vinyl flooring – sampled and confirmed to be ACM. The flooring materials will be demolished using wet methods, establishing regulated areas and handling debris as ACM.
- Roofing - sampled and confirmed to be ACM. The roofing materials will be demolished using wet methods, establishing regulated areas and handling debris as ACM.
- Cement board lining in lab fume hood – The lining material was not sampled but appears to be cement asbestos board and will be abated prior to demolition of the building.

4.0 Sampling Methods

A total of 20 bulk samples were collected. Samples were taken of all PACM identified by a certified AHERA Building Inspector during the inspection except the cement board lining in the lab fume hood which will be considered ACM without sampling. Samples were collected using AHERA sampling methodology and EPA guidance. PACM was classified as thermal system insulation (TSI), surfacing materials or miscellaneous materials. The number and location of samples was determined based on this classification.

TSI sampled:

- None observed

Surfacing materials sampled:

- None observed

Miscellaneous materials sampled:

- Caulk – 4 samples collected on various types of caulking/sealant located on the interior and exterior of the building.
- Roofing material – 2 samples collected. Roofing material homogenous over entire structure.
- Wallboard – 4 samples collected including the wall covering. Wallboard is homogenous throughout the building.

- Ceiling panel board – 2 samples collected. Ceiling material is homogenous throughout the building.
- Doors – 2 samples collected. Door substrate is homogenous in the building.
- Vinyl cove base and underlying mastic - 2 samples collected on various types of baseboard located in the building.
- Floor tile and underlying mastic – 1 sample collected on homogenous floor tile located in some of the rooms.
- Vinyl flooring and underlying mastic – 3 samples collected on homogenous original flooring below wood floor covering in Room 2.

Bulk samples were shipped to Bureau Veritas North America in Kennesaw, Georgia for asbestos analysis using PLM. Bureau Veritas is accredited by NVLAP. A layered analysis of each sample was requested for substrate identification and qualitative and quantitative analysis. The analytical laboratory report and sample information is included in SWIHD Survey 17-20687. Photographs of sample locations are provided in the IH Survey Report.

5.0 MO226 Bulk Sampling Results

Sample Number	Asbestos	Non-Asbestos	Comments
17-20687-001		X	Floor tile and underlying mastic in east corridor
17-20687-002	X		Vinyl flooring – Room 2 (left in good condition)
17-20687-002		X	Underlying mastic– Room 2
17-20687-003	X		Vinyl flooring – Room 2 (left in good condition)
17-20687-003		X	Floor board – Room 2
17-20687-004	X		Vinyl flooring – Room 2 (left in good condition)
17-20687-004		X	Underlying mastic – Room 2
17-20687-005		X	Pipe penetration caulk - Utility Closet
17-20687-005	X		Vinyl flooring - Utility Closet (left in good condition)
17-20687-006		x	Conduit penetration caulk - Water Closet
17-20687-006	X		Vinyl flooring – Water Closet (left in good condition)
17-20687-007		X	Caulk – west exterior door frame
17-20687-008		X	Caulk – north exterior wall ventilation duct
17-20687-009		X	Door – SW exterior
17-20687-010		X	Door – NW exterior
17-20687-011		X	Ceiling panel – men's restroom
17-20687-012		X	Ceiling panel – Room 8
17-20687-013		X	Wall panel - Room 6
17-20687-014		X	Wall panel - Room 10
17-20687-015		X	Wall panel – Room 8
17-20687-016		X	Wall panel – Room 6
17-20687-017	X		Roofing material – south side (left in good condition)
17-20687-018	X		Roofing material – south side (left in good condition)
17-20687-019		X	Vinyl baseboard
17-20687-019		X	Underlying mastic
17-20687-020		X	Vinyl baseboard
17-20687-020		X	Underlying mastic

6.0 Conclusion

MO226 does have ACM. The following items will be abated prior to building demolition:

- Cement board lining in lab fume hood

Vinyl flooring and roofing materials are ACM. Vinyl flooring left in place will remain in good condition. Demolition will be completed using asbestos controls for Class II materials. All demolition debris will disposed of as ACM.

Please contact Daren Schwartz at 373-4267 or Vern Holden at 373-1770 for additional information.

Prepared by:

Vern Holden, CIH, CSP, CAS, ARM
Certified Industrial Hygienist
AHERA Building Inspector

Beryllium Verification Report For MO-226 Rev 1 4/19/2017

Executive Summary

MO-226 is a trailer that is being prepared for demolition. Verification sampling was conducted on MO-226 to confirm that it is beryllium cleared prior to demolition or shipment off-site.

Based on the sampling results, MO-226 can be considered to be beryllium cleared with the exception of the uncharacterized electrical distribution equipment present. The electrical distribution equipment inside of MO-442 doesn't require sampling.

Introduction

MO-226 is a vacant, unoccupied prefabricated mobile trailer that was acquired in 1982 and installed in 1986. The primary use was operations and maintenance (O&M) and environmental support for the 300 Area. The building contains approximately 3,696 ft^2 with a height of 9 feet. The building contains an instrument shop, a lab, several support offices and restrooms.

Verification sampling was conducted to satisfy the requirement that buildings (including mobile offices) must be sampled prior to being demolished or removed.

Sample Strategy & Methodology

Sampling was conducted in accordance with DOE-0342-002. Based on its size, previous sampling results, and past usage, 20 samples were required by the Verification Sampling Plan.

Deviations

None.

Results Summary

All 18 wipe samples collected were below the reporting detection limit of 0.05 $\mu g/100\ cm^2$. The two bulk samples collected were below the trigger level of 1.0 $\mu g/g$ with the highest result being 0.42 $\mu g/g$. Comparison of the results to the TCV table determined that at a minimum of 16 samples needed to be collected. Therefore, no further sampling is required.

Conclusions/Recommendations

The sample results support a conclusion that the building can be considered beryllium cleared.

References

None.

Signatures

Daren Schwartz 6/29/17

Completed By: Daren Schwartz

Reviewed By: Roby Robinson, CIH

Attachments

Sample Data Tables/Summary of Data
SWIHD Sample Reports With Photos of Sample Locations
Verification Sampling Plan

Attachments

Sample Data Tables/Summary of Data

Beryllium Sampling Results for MO-226 (wipe samples)				
Sample Number	**Sample Date**	**Sample Result (µg/100 cm²)**	**Control Level (µg/100 cm²)**	**Sample Location**
17-20500-001	3/14/17	0.42	2.0	Room 9, top of desk
17-20500-002	3/14/17	0.35	2.0	Room 2, window frames on east wall
17-20499-001	3/14/17	<0.02	0.2	Room 4, counter next to lab hood
17-20499-002	3/14/17	<0.05	0.2	Room 4, second shelf of cabinet
17-20499-003	3/14/17	<0.05	0.2	Room 4, next to Panel B East
17-20499-004	3/14/17	<0.05	0.2	Room2, east door
17-20499-005	3/14/17	<0.05	0.2	Room2, inside file cabinet
17-20499-006	3/14/17	<0.05	0.2	Room 2, inside sixth door of toolbox
17-20499-007	3/14/17	<0.05	0.2	Room 2, wall northwest corner
17-20499-008	3/14/17	<0.05	0.2	Room 2, top of desk
17-20499-009	3/14/17	<0.05	0.2	Room 1, south wall
17-20499-010	3/14/17	<0.05	0.2	Room 3, west wall
17-20499-011	3/14/17	<0.05	0.2	Room 5, third shelf of bookcase
17-20499-012	3/14/17	<0.05	0.2	Men's Restroom, counter near sink
17-20499-013	3/14/17	<0.05	0.2	Women's Restroom, top of storage cabinet
17-20499-014	3/14/17	<0.05	0.2	Communication's Room, front panel of communication equipment

Beryllium Sampling Results for MO-226 (bulk samples)				
Sample Number	**Sample Date**	**Sample Result (µg/g)**	**Control Level (µg/g)**	**Sample Location**
17-20499-015	3/14/17	<0.05	0.2	Janitor Storage Closet, south wall
17-20499-016	3/14/17	<0.05	0.2	Room 10, north wall between electrical panel and thermostat
17-20499-017	3/14/17	<0.05	0.2	Room 8, north wall below electrical panel
17-20499-018	3/14/17	<0.05	0.2	Room 6, inside Hoffman electrical panel box