Encapsulation Of Asbestos

Tank Farm Maintenance Procedure

MAINTENANCE

USQ # N/A-4

<table>
<thead>
<tr>
<th>Rev-Mod</th>
<th>Release Date</th>
<th>Justification</th>
<th>Summary of Changes</th>
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<tr>
<td>E-1</td>
<td>09/13/2017</td>
<td>Industrial Hygiene Change Request</td>
<td>Removed “Tinted Pink” from Step 5.1.8. Record Section Update.</td>
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<tr>
<td>E-0</td>
<td>12/08/2016</td>
<td>Periodic Review</td>
<td>Modified Section 3.3.3, and 4.3.2, Step 5.1.6, and 5.4.3 and Inconsequential Changes.</td>
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<tr>
<td>D-1</td>
<td>11/18/2014</td>
<td>CHAMPS Removal</td>
<td>Removed reference to CHAMPS, updated records statements and removed next periodic review date.</td>
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<tr>
<td>D-0</td>
<td>11/07/2013</td>
<td>Periodic Review Process: consistency with other ABS procedure.</td>
<td>Updated terms and definitions, added general information, reworded wording, modified Environmental and Limits sections, modified special tools and equipment and added site form to performance documents, adjusted steps to reflect current field standards, moved warnings to applicable steps, and removed attachments.</td>
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<tr>
<td>C-2</td>
<td>04/25/2013</td>
<td>Inconsequential Change to update reference.</td>
<td>Replace 7-ABS-331 with TFC-ESHQ-S_IH-C-52 per WRPS-PER-2012-0779.3</td>
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1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions for encapsulation of asbestos containing materials.

1.2 Scope

This procedure involves surface preparation and repair for all asbestos containing materials. This procedure shall not be used if wetting down of the work area could endanger personnel or damage equipment.
Encapsulation Of Asbestos

2.0 INFORMATION

2.1 Terms and Definitions

**ACM:** Asbestos Containing Materials.

**Amended Water:** Water that has been mixed with liquid surfactant to improve the wetting process of asbestos containing materials by relieving surface tension.

**AWP:** Asbestos Work Permit.

**Certified Asbestos Worker:** Workers who have successfully completed curriculum outlined in training courses # 170055, “Certified Asbestos Worker” and 170057, Certified Asbestos Worker Refresher” or equivalents. (See ITEM training report for course descriptions and equivalent course numbers).

**CP-10:** Insulating coating.

**Dip-Lag:** Impregnated lagging cloth used to mold on asbestos surfaces.

**Encapsulant:** Materials specifically designed for application on ACM to prevent fiber release.

**Friable:** Any material containing greater than 1% asbestos by weight or volume that when dry can be crumbled, pulverized, or be reduced to powder by hand pressure.

**NEA:** Negative Exposure Assessment

**PACM** Presumed Asbestos Containing Materials.

2.2 General Information

2.2.1 Asbestos work control guidance referenced in this procedure is from TFC-ESHQ-S_IH_C-52 “Asbestos Exposure Control and Management.”

2.2.2 Environmental compliance guidance referenced in this procedure is from TFC-ESHQ-ENV-STD-02, “Regulated Substance Management.”
3.0 PRECAUTIONS AND LIMITATIONS

3.1 Personnel Safety

3.1.1 Personnel protective equipment shall be worn in accordance with AWP, and/or RWP, or by IH.

3.1.2 All identified hazards will be addressed in the pre-job safety meeting and job specific JHA.

3.2 Radiation and Contamination Control

Work in radiological areas will be performed using a RWP following review by Radiological Control per the ALARA Work Planning procedure TFC-ESHQ-RP_RWP-C-03.

3.3 Environmental Compliance

3.3.1 Removal, remediation, or disturbance of ACM or PACM requires a Notice of Intent to Remove to be filed with the Benton County Clean Air Authority 10 days prior to commencing work for activities involving > 260 linear feet (80 linear meters) or 160 square feet (15 square meters) of ACM.

3.3.2 Notify Environmental in the event of any ACM/PACM spill.

3.3.3 HEPA vacuums must be used (in a radiological area) only in accordance with the requirements of RPP-ENV-32854, TFC-ESHQ-ENV_RM-P-11, Using Filtered Vacuum Cleaners for removing Radiological Surface Contamination.

3.3.4 Environmental must be consulted before work can be performed using a HEPA Vacuum in a radiological area.

3.3.5 The use of HEPA vacuums for personnel decontamination in radiological area may be replaced by use of wet-wipe and visual inspection to verify surface contamination is removed from respirators and protective clothing prior to doffing.

3.3.6 Activities associated with working with ACM or PACM, including managing and removal of ACMs, will be in accordance with TFC-ESHQ-ENV-STD-13, “Asbestos Management Program” and TFC-ESHQ-S_IH-C-52, “Asbestos Exposure Control and Management.”
3.4 Limits

Comply with Environmental standards when disposing of any waste generated during the performance of this procedure. An approved Asbestos Work Permit shall be present at the job site prior to commencing work activities, when disturbing ACM or PACM.
4.0 PREREQUISITES

4.1 Special Tools, Equipment, and Supplies

The following supplies may be needed to perform this procedure:

- Respiratory Protection as required in AWP
- Protective Clothing as specified in AWP
- ACM or PACM waste containers (asbestos labeled plastic bags, 6 mil minimum)
- 6 mil plastic sheeting, fire retardant
- High-Efficiency Particulate Air (HEPA)-filter vacuum cleaner (see Section 3.3)
- Encapsulation materials
- Other tools, equipment and supplies as identified by Shift Manager/OE/FWS.

4.2 Performance Documents

The following documents may be needed to perform this procedure as field conditions warrant:

- TFC-ESHQ-S_IH-C-52, Asbestos Exposure Control and Management
- RPP-ENV-32854, Using HEPA Filtered Vacuum Cleaners For Removing Radiological Surface Contamination Checklist
- DOE-0336, Hanford Site Lockout/Tagout Procedure
- Site Form A-6003-870, TOC Asbestos Work Permit.

4.3 Field Preparations

4.3.1 IF sampling is identified on AWP, CONTACT Industrial Hygiene Department one (1) day in advance for assistance.

4.3.2 IF not working outdoors, AND AWP requires pre-monitoring for airborne asbestos,

COMPLETE pre-monitoring for airborne asbestos.

4.3.3 IF the AWP requires a regulated area, ESTABLISH a regulated area where the concentration of airborne asbestos fibers exceed, or can reasonably be expected to exceed, the eight hour Permissible Exposure Limit of (0.1 f/cc) or 15 minute Excursion Limit (1.0 f/cc).

4.3.4 IF lock and tag is required, CONFIRM lock and tag or over-tagging requirements have been satisfied in accordance with DOE-0336 Hanford Site Lockout/Tagout Procedure.
5.0 PROCEDURE

5.1 Surface Preparation and Repair

5.1.1 IF disturbing friable material, ENSURE AWP is present at the work site.

5.1.2 SIGN IN before entering regulated area on AWP.

5.1.3 DON all protective clothing and sampling equipment for workers as specified on AWP.

5.1.4 IF an asbestos spill has occurred or occurs during encapsulation activities, RESPOND per TFC-ESHQ-S_IH-C-52.

5.1.5 AS required by the AWP, APPLY amended water

OR

APPLY penetrating encapsulant on the ACM to prevent fiber release.

5.1.6 PERFORM repair to all damage such as cracks, dents, depressions, holes, …etc with encapsulating materials.

5.1.7 APPLY final surface coat over the repaired asbestos with Dip-lag, or CP-10.

5.1.8 IF Dip-lag or CP-10 was used, APPLY bridging encapsulant over the top.

5.1.9 IF the encapsulation was performed outdoors or in a high traffic area, APPLY aluminum jacket or other approved material to protect the encapsulated asbestos as stated in the work package.
5.2 Cleanup

5.2.1 CLEAN work area.

5.2.2 REMOVE disposable protective clothing AND PLACE into an asbestos labeled disposal bag.

5.2.3 PLACE bags in asbestos storage receptacle for burial.

5.2.4 WIPE exterior of respirator using a clean damp rag.

5.2.5 REMOVE AND WIPE respirator clean with wet-wipe to remove all visible surface debris.

5.2.5.1 IF the AWP identifies a Negative Exposure Assessment (NEA) for the work, RETURN respirator to shop for cleaning AND RELEASE tools for use.

5.2.5.2 IF the AWP does not identify a NEA for the work, BAG AND HOLD respirator and tools in a bag labeled DANGER Asbestos,

5.2.5.3 IF the results of personal air sampling demonstrate exposures below the PELs, RELEASE respirator for return to shop and tools for use.

5.2.5.4 IF the AWP does not identify a NEA for the work and personal air sampling results are above the PELS, PERFORM the following:

a. PLACE respirator in a water soluble bag with a DANGER Asbestos label and a note from Project Supervisor stating the mask was wet-wiped AND RETURN respirator to mask station.

b. IF tools do draw air, LABEL with DANGER Asbestos label AND STORE.

c. IF tools do not draw air AND IF there is no visible surface particulates, CLEAN AND RELEASE tools for use.
5.2 Cleanup (Cont.)

5.2.6 SIGN OUT on the AWP after exiting the regulated area.
5.3 Clearance Sample and Restoration

5.3.1 IF AWP requires a clearance sample, **OBTAIN** a clearance sample.

5.3.2 **AFTER** area has been cleared, **REMOVE** signs and barriers.

5.3.3 **DISPOSE** of scrap materials, coveralls, plastic, in asbestos waste storage receptacle for burial.

5.3.4 IF installed, **REMOVE** lock and tag in accordance with DOE-0336 Hanford Site Lockout/Tagout Procedure **AND**

**NOTIFY** facility operations normal use can be resumed.

5.4 Review

5.4.1 **REVIEW** work package with Certified asbestos Supervisor **AND**

**CONFIRM** all permits have been completed and are in work package.

5.4.2 **RETURN** work package to Asbestos Planner for asbestos assessment revision and inventory update to Asbestos Planner.

5.4.3 IF HEPA vacuums were used in a radiological area during the performance of this procedure for asbestos related activities, refer to TFC-ESHQ-ENV_FS-C-01.
5.5 Records

This procedure is performed within a work package, as such, the procedure in its entirety will be maintained as a record per the Work Control process.

The record custodian identified in the Company Level Record Inventory and Disposition Schedule (RIDS), is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.