UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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Via U.S. Postal Service Mail and Electronic Mail

July 16, 2013

Base Realignment and Closure Division
ATTN: Warren Switzer
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Re: Toxic Substances Control Act (TSCA) – Polychlorinated Biphenyls (PCBs): Sampling and Analysis Plan; and Work Sequence and Approach – USEPA Conditional Approval – Amendment 2 to Original Approval

Dear Mr. Warren Switzer:

Thank you for submitting the Sampling and Analysis Plan and Equipment Inventory Equipment Removal Project, Riverbank Army Ammunition Plant, Riverbank, California dated June 2013 (SAP); and Work Sequence and Approach Equipment Removal Project Riverbank Army Ammunition Plant, Riverbank, California dated May 2013 (WS Document). The U.S. Environmental Protection Agency Region 9 (USEPA) is approving the SAP and WS Document with the conditions established below. This approval is Amendment 2 to the Original Approval.

USEPA's September 4, 2012 letter (Original Approval) approved the U.S. Army and Riverbank Local Redevelopment Authority's (LRA's) PCB Cleanup Document (PCD) for Phase 1 work. In response to Condition A.3 in that Approval and USEPA's October 29, 2012 Amendment 1 (Amendment 1) to that Approval, the US Army and LRA submitted the SAP and WSA for approval to USEPA. This approval

USEPA Conditions of Approval: SAP and WS Document

A. Sampling and Analysis Plan (SAP)

The SAP includes the revised inventory of equipment that will be cleaned up, disposed of and/or sent to a recycler as scrap.

1. **Section 3, Summary Scope of Work.** The standard demolition equipment that may be used to dismantle or cut the oversized equipment can include plasma cutters, torches or any other equipment that uses heat to cut metal. Refer to condition B.

2. **Section 4, Sampling Requirements, First Paragraph.** USEPA clarifies the first paragraph. In lieu of sampling the paint in painted items, the U.S. Army can assume the PCB concentration in

the paint is equal to or greater than 50 mg/kg and dispose of the items in a TSCA-approved or RCRA-permitted landfill.

3. **Section 4, Table, Materials:**

   a. **"Pressure-washed equipment – unpainted metal," Sampling Required.** Under "Sampling Required," one (1) sample is proposed to be collected per each 50 ton batch. However, USEPA is modifying this section of the Table and instead 2-point composite samples shall be collected per each 50-ton batch. Further, if less than 50 tons or less than 10 items comprise one batch, at a minimum one (1) sample must be collected from a batch consisting of less than 50 tons or less than 10 items. These items can be disposed of in a municipal solid waste landfill if surface PCB concentrations are less than 10 ug/100 cm sq.

   b. **"Pressure-washed equipment-painted metal," Sampling Required.** Under "Sampling Required," one 5-point composite sample is proposed to be collected per each 250-ton batch. However, USEPA is modifying this section of the Table. If a batch consists of less than 250 tons or less than 10 items, at a minimum, one sample must be collected from a batch consisting of less than 250 tons or less than 10 items.

   c. **"Pressure-washed equipment-painted metal," Sampling Required.** Under "Sampling Required," one 5-point composite sample is proposed to be collected per each 250-ton batch. However, USEPA is modifying this section of the Table. If a batch consists of less than 250 tons or less than 10 items, at a minimum, one sample must be collected from a batch consisting of less than 250 tons or less than 10 items.

   d. **"Waste oil . . . ."** Used oil containing PCBs at concentrations greater than 5 ppm is regulated as a hazardous waste by the California Department of Toxic Substances Control (DTSC). TSCA regulates used oil that contains PCBs at concentration of 2 ppm or greater but less than 50 ppm for energy recovery. RCRA also regulates used oil containing PCBs. However, used oil must be sampled, analyzed, and managed consistent with the most stringent state and federal requirements.

      Management of used oil must be in full compliance with the TSCA regulations in 40 CFR 761.20(e) including proper testing of the oil and providing all required documentation to demonstrate that used oil contains no detectable quantities of PCBs (that is, the concentration of PCBs in the oil is less than 2 ppm). Each piece of equipment containing oil must be sampled separately and the samples individually analyzed. Based on the analysis results, oil with certain PCB concentrations may be consolidated. The U.S. Army and LRA should confer with USEPA on the management of used oil determined to contain PCBs during draining of oil-containing equipment, containerization, and final disposition.

4. **Section 4.2, Disposal at a Municipal Solid Waste Landfill.** Condition A.3.a above modifies the first paragraph in Section 4.2 of the SAP. Condition A.3.b above modifies the second paragraph in Section 4.2 of the SAP.

5. **Section 4.4, Non-PCB Chemical Sampling.** This approval does not address sampling, disposal, and/or recycling of non-PCB chemicals. The U.S. Army and the LRA must confer on that matter with DTSC and applicable local agencies.

6. **Section 4.5, Waste Oil, Sampling.** Refer to Condition A.3.d above.

7. **Section 4.6, Water, Decontamination Fluids, and Cleanup Waste.**

   a. **Reuse of PCB contaminated water; and Section 5.5, Wastewater Samples.** The treated water to be reused in decontamination activities shall contain no more than 0.5 ug/L PCBs consistent with 40 CFR 761.79(b)(1)(iii). However, USEPA will review the information that Weston submitted on June 10, 2013 to determine if the 2 ug/L PCB concentration that Weston proposed for reuse of water to wash equipment can be allowed under the TSCA PCB regulations. USEPA will discuss its findings concerning Condition 7.a with the U.S. Army and LRA to resolve this matter before reuse of water generated from equipment washing activities that will be used for the same purpose.

   b. **Spent activated carbon.** If activated carbon is going to be analyzed for PCBs, the disposal method to be chosen must be based on the laboratory analysis results for PCBs in the spent carbon. However, the U.S. Army/LRA must consult with its contracted analytical laboratory on the method the laboratory will use to prepare spent carbon samples for PCB extraction and analysis.

   c. **Cleanup waste.** PCB cleanup waste as described in 40 CFR 761.61(a)(5) may be disposed at a municipal solid waste (MSW) landfill if the PCB concentration in the waste is less than 50 mg/kg. However, the state and/or local permit for the selected MSW landfill must allow the landfill to accept that waste. A hazardous waste landfill permitted by USEPA under RCRA or by a state authorized under RCRA, or a TSCA approved landfill are other options for disposal of PCB cleanup waste.

   d. **Water treatment equipment.** Section 4.6 states that water treatment equipment (WTE) will be decontaminated for reuse or disposal in accordance with 40 CFR 761.79. The decision to decontaminate or dispose of this WTE must be discussed with USEPA before selection and implementation of any of those actions.

      If the decision is to dispose of the WTE, the U.S. Army/LRA must dispose of the equipment consistent with applicable requirements in 40 CFR 761.61(a)(5) if USEPA determines that such equipment is a PCB remediation waste. 40 CFR 761.79 addresses decontamination and disposal of associated decontamination fluids and not disposal of potential PCB remediation wastes such as equipment contaminated with PCBs.

      If the decision is to decontaminate the WTE for reuse, the U.S. Army/LRA must identify the decontamination method and standards in 40 CFR 761.79 that will be followed for

decontamination. In addition, the PCB concentration at which the equipment will be considered decontaminated must be clearly identified and justified. USEPA may require PCB decontamination levels more stringent than those in 40 CFR 761.79.

e. **Water treatment.** Section 4.6 does not describe the equipment that will be used to collect and treat the water. This Condition modifies the SAP by adding to the SAP the following description of the water collection and treatment system that Weston included in its June 10, 2013 electronic mail (e-mail) message to USEPA.

> "Rinse water will be collected within a plastic-lined curbed pad and pumped to one of two 20,000 gallon holding tanks and will be treated using a batch-operated, skid-mounted pre-treatment system. The pre-treatment system (see attached process flow diagram) will include the following treatment processes: 2 beds of sand filtration, 5-micron bag filters, and 2 beds of Carbon Media (Organo-Clay followed by Virgin Coconut Shell Carbon). Treated water will be discharged to a 20,000 gallon discharge tank. The sand filters will be backwashed as needed to a fourth 20,000 gallon tank and the decanted water will be re-treated."

The U.S. Army and LRA's operation of the water collection and treatment system must not result in releases of PCBs to the environment and/or human exposure to PCBs.

8. **Section 5, Sample Collection.** USEPA is modifying the first sentence in Section 5 by replacing "may" with "will." In addition, characterization samples for compositing and/or disposal of hazardous materials (addressed in the last bullet of Section 5) excluding PCBs is not covered under this TSCA PCB Approval. The U.S. Army/LRA must discuss the characterization of hazardous materials for disposal with the DTSC and applicable local regulatory agencies.

9. **Section 5.2, Paint Chip Samples.** Sampling equipment and tools used in collecting paint samples must be decontaminated before collecting each sample consistent with the decontamination procedures in 40 CFR 761.79(c)(2). Discrete paint samples for preparation of composite samples must be collected in quantities sufficient to (1) allow preparation of paint composite samples for analysis and (2) analysis of portions of any discrete sample as an individual sample, if necessary.

10. **Section 5.3, Chemical Samples.** This TSCA PCB Approval does not cover Section 5.3 of the SAP. The U.S. Army/LRA must address the matters in Section 5.3 with DTSC and applicable local regulatory agencies to ensure compliance with applicable state, local, and other federal regulations.

11. **Section 5.4, Waste Oil Samples.** When consolidating the used oil to be drained from equipment (e.g., hydraulic equipment), consolidation of the oil must be based on the following three categories: less than 50 mg/kg, equal to and above 50 mg/kg but less than 500 mg/kg, and equal to or greater than 500 mg/kg. In addition, the type of oil (e.g., hydraulic oil) should be identified

to determine best option for disposal consistent with 40 CFR 761.60(a). Please also refer to Condition 3.d.

12. **Section 6, Laboratory Qualifications.** The U.S. Army or LRA must also provide a copy of this approval to the laboratory so that relevant modifications to the SAP via the conditions herein are implemented by the laboratory.

13. **Section 7, Data Quality Objectives.** In addition to sampling for disposal characterization, the project objectives include sampling to determine if certain equipment will be retained for reuse or will be recycled as scrap metal.

14. **Section 7.1, Analytical Method Requirements.** References to the latest revisions of the PCB extraction and analytical methods to be used in sample preparation and analysis were replaced with older versions. This Condition requires that USEPA SW-846 Method 3500C/3540C (Soxhlet extraction) or latest revision be used for extraction of PCBs from solid samples such as paint followed by analysis of the extract via SW-846 Method 8082A or latest revision.

    Extraction of PCBs from wipe samples may be performed via SW-846 Method 3500C/3550C (Ultrasonic extraction) or latest revision followed by analysis via Method 8082A or latest revision. USEPA's preference is that Soxhlet extraction be used for extraction of wipe samples which ensure sufficient solvent is available to extract the sample. However, if the Ultrasonic method is used for wipe sample extraction, the U.S. Army and/or LRA should verify the analytical laboratory's standard operating procedure for that method. A sufficient amount of solvent must be used to ensure extraction of wipe samples will be effective and quantitative.

15. **Section 7.2.1, Laboratory Quality Control Checks.** USEPA will address this matter together with the reuse of decontamination water.

16. **Section 8.3, Sample Custody.** When sample custody is in doubt, a proposed approach to handle the affected samples must be consulted with USEPA before implementation.

17. **Air Monitoring.** This Condition removes the air monitoring described in Section 1.3.1 of the Work Sequence Document and adds it with the following modifications to the SAP.

    USEPA has developed health-based guidelines for PCBs (Aroclors and congeners) in air protective of industrial workers. Depending on the Aroclors present, these national guidelines range from 0.02 ug total PCBs/cubic meter (cu. m.) of air to 2.0 ug total PCBs/ cu m. of air. However, PCB non-cancer effects need to be accounted for and because of this reason, USEPA is requiring that PCBs in air (particulates and vapor) do not exceed 0.2 ug/cu. m.

    USEPA does not approve health and safety plans for PCB cleanups. USEPA considers the sampling within the exclusions zone to implement the RAAP's health and safety plan. Therefore, that sampling is not covered by this approval.

The action level for samples collected outside the exclusion zone is 0.2 ug total PCBs/cu. m, which USEPA considers to be protective in this case for cancer risk (i.e., within the 1 E-6 to 1 E-4 risk range) and for adverse non-cancer health effects. Air sample volumes for TO-4A analysis must support quantitation of air PCB concentrations of 0.2 ug total PCBs/cu. m. For this reason detection limits must be equal to or below 0.02 ug total PCBs/cu. m.

Samples for analysis using TO-4A must be collected daily for the first three days of activity and analyzed as rapidly as possible (24-hour turnaround time maximum). If the air concentrations measured in those first three samples are all less than 0.02 ug total PCBs/cu. m, subsequent sampling may be reduced to a frequency of biweekly for the duration of the project. If the concentration in any air sample exceeds 0.02 ug total PCBs/cu. m, the U.S. Army / LRA must immediately notify and confer with USEPA.

B. Work Sequence (WS) Document, Appendix C to SAP

1. USEPA is only approving the following sections of the WS Document (Appendix C) as modified herein to prevent potential conflict with the SAP conditionally approved in Section A above. This approval does not cover any other sections of the Work Sequence Document. The following work sequence is approved:

   a. **Mobilization and Set-Up (Section 1.1):** This condition adds a clarification to the 5th paragraph. The results of characterization and/or cleanup verification sampling must demonstrate that equipment to be disposed of at a municipal landfill or to be sent to a scrap metal facility (not a recovery oven or smelter) meets the cleanup standards established in the SAP for each of those options.

   b. **Equipment Removal (Section 1.3)**

      1. Air Monitoring (Section 1.3.1). Air monitoring must be conducted as required in Condition A.17 above, which adds air monitoring requirements to the SAP.
      2. Vacuum Floors (Section 1.3.2). The vacuumed dust is assumed to contain PCBs due to Galbestos and other PCB potential sources (e.g., hydraulic equipment). If not sampled for disposal, the vacuumed dust must be disposed of as a PCB remediation waste with a PCB concentration equal to or greater than 50 mg/kg.
      3. Remove Chemicals (Section 1.3.3). Removal, storage for disposal, and transportation to disposal of chemicals at the RAAP is not covered by this approval. Storage of any liquid PCB remediation waste with PCB concentrations equal to or greater than 50 mg/kg must be store in compliance with the requirements in 40 CFR 761.65(c)(1)(iv) and all state, local and other federal regulatory requirements that apply.
      4. Drain Fluids from Equipment (Section 1.3.3). The text in Section 1.3.3 is not approved. Instead follow Section 4.5 of the SAP as modified by Condition A.3.d above.
      5. Remove and Pressure Wash Equipment (Section 1.3.4). Smaller Equipment and Debris. The sentence: "Painted equipment with significant weight or high scrap value (e.g., copper) will be cleaned of paint using chemical stripping or abrasive . . ." is

deleted from the text. Section 4.3 (Post-Decontamination Sampling for Disposal as Scrap) of the SAP must be followed as modified by this approval.

6. Remove and Pressure Wash Equipment (Section 1.3.4). Large Fixed Equipment. The sentence: "Painted equipment with significant weight may be cleaned of paint using chemical stripping or abrasive . . ." is deleted from the text. Section 4.3 (Post-Decontamination Sampling for Disposal as Scrap) of the SAP must be followed as modified in this approval. The sentence: "Any PCB-impacted surface will be cleaned and/or paint stripped before hot-cutting to >6 inches to either side of the cut." That sentence is replaced with: "Any surface known or assumed to be impacted by PCBs shall be cleaned by the methods specified in the SAP before hot-cutting the surface to > 6 inches to either side of the cut."
7. Transportation and Disposal (Section 1.5); and Demobilization (Section 1.6). PCB waste disposal records and reports must be kept and provided in compliance with 40 CFR 761 Subpart K. The transporter of the waste must meet the requirements in 40 CFR 761.205. Waste manifest must also be kept for waste disposed at RCRA hazardous waste landfills permitted either by USEPA or a state authorized under RCRA.

This conditional approval does not relieve the U.S. Army and the Riverbank Local Redevelopment Authority from complying with all other applicable federal, state, and local regulations and permits. Departure from the approval conditions without prior written permission from USEPA may result in the commencement of proceedings to revoke this approval, and / or an enforcement action. Nothing in this approval bars USEPA from imposing penalties for violations of this approval or for violations of other applicable TSCA PCB requirements or for activities not covered under this approval.

This approval only applies to equipment that is the subject of this approval and located within the buildings and areas identified in Figure 4 - Riverbank Army Ammunition Plant Phase 1, Equipment Removal Project Schedule & Work Sequence. USEPA reserves the right to require additional sampling and / or cleanup (or decontamination) of PCBs on the exterior and/or interior surface of such equipment depending on the fate of the equipment and sampling and analysis results.

Thank you for the opportunity to being of assistance to the U.S. Army and LRA on Phase 1 of the PCB cleanup involving the interior of buildings at the RAAP. If you have any questions concerning this conditional approval, please contact Carmen D. Santos at 415.972.3360.

Sincerely,

for Jeff Scott, Director
Waste Management Division

Cc: James McAllister, US Army Corp of Engineers
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