UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

Via Electronic and U.S. Postal Service Mail

September 4, 2012

Base Realignment and Closure Division
ATTN: Mr. Warren Switzer
Project Manager Army BRAC-D Office
2530 Crystal Drive Room 500
Taylor Building/NC3
Arlington, VA 22202
warren.h.switzer.civ@mail.mil

Re: Toxic Substances Control Act (TSCA) – Polychlorinated Biphenyls (PCBs)
May 10, 2012 Request for TSCA Risk-Based Disposal and Decontamination Approval
Removal of PCB-Containing Galbestos Siding and Cleanup of Residual Siding Particles
From Building and Equipment Riverbank Army Ammunition Plant (PCB Cleanup Document) – USEPA R9 Phased Approval

Dear Mr. Warren Switzer:

The U.S. Environmental Protection Agency Region 9 (USEPA) has reviewed the U.S. Army's (Army's) and Local Redevelopment Authority's (LRA) request for a TSCA risk-based PCB cleanup at the Riverbank Army Ammunition Plant in Riverbank, California (RAAP Site). This request is presented in the subject LRA's PCB Cleanup Document (PCD). USEPA is considering the PCD to be the PCB risk-based disposal approval application under 40 CFR 761.61(c) for cleanup of PCBs at the RAAP Site. To expedite the cleanup of the RAAP Site buildings, USEPA is dividing its approval of the work proposed in the PCD (Application) into two phases: (1) Equipment Cleanup and Disposal of PCB Remediation and Bulk Product Wastes (Phase 1 Work); and (2) Building PCB Cleanup, Removal and Disposal of Galbestos, and Disposal of PCB Remediation and Other PCB Containing Wastes (Phase 2 Work).

By this letter, USEPA is approving with conditions the Phase 1 Work consistent with the TSCA regulations for PCBs in 40 CFR 761.61(c). We plan to respond to questions or provide clarifications on this approval during a conference call being scheduled by the LRA for either the week of September 10 or September 18, 2012.

USEPA intends to approve the Phase 2 Work later after the LRA and/or the Army updates its Application (PCD) to make it complete. Therefore, USEPA requests the LRA and/or the Army submits a revised PCD that more fully describes the work to be completed as part of the Phase 2 Work. The current Application does not sufficiently describe this work and establish appropriate risk-based cleanup levels for that cleanup (either derived via a site-specific health risk assessment or application of USEPA's Regional Screening Levels). We will schedule a future conference call to further discuss the submission of an updated PCD and approval of the Phase 2 Work.

In regard to the Phase 1 Work, the PCB contamination of equipment within the RAAP Site has been largely caused by releases from the Galbestos panels (contain PCBs, asbestos, and other contaminants) in the buildings. As such, the building surfaces (e.g., floors, walls, steel frame components) and the equipment where the released PCBs settled are considered PCB remediation waste. Consistent with 40 CFR 761.50(b)(3)(ii) that PCB remediation waste must be cleaned up or disposed of in accordance with the requirements in 40 CFR 761.61.

In regard to the Galbestos panels themselves, they are prohibited and not authorized for use in accordance with 40 CFR 761.20 and 761.30, respectively. The Galbestos panels must be removed and disposed of consistent with 40 CFR 761.62 as PCB bulk product waste. Offsite disposal options for bulk product waste include among others disposal into a TSCA-approved or a RCRA-permitted, or a state permitted municipal solid waste landfill. In the state of California, PCBs are regulated as a hazardous waste and the Galbestos panels would need to be disposed of at a TSCA-approved or RCRA-permitted landfill.

The remainder of this letter contains the terms of approval for the cleanup of PCB-impacted equipment and other personal property items located at the RAAP Site.

Phase 1 Work – USEPA Approval:

Equipment Cleanup and Disposal of PCB Remediation and Bulk Product Wastes

A. General Conditions

1. **July 17, 2012 building contents inventory.** Within 30 days after the date of this letter, the Army and/or LRA must submit a revised inventory of building contents (personal property only)[1] at the RAAP Site clearly identifying each piece of equipment or part and the planned disposition for each piece of equipment or part including and not limited to the following categories: cleanup for distribution in commerce (including reuse at the RAAP and sale to other parties), cleanup for transportation to offsite disposal, cleanup to facilitate disposal via a specific method, and disposal method (e.g., smelter, landfill).

   The inventory shall also indicate, as available, the PCB concentration for each item in the inventory based on adequate characterization sampling and laboratory analysis and the cleanup method to be used. Complete laboratory analysis reports must be made available to USEPA upon request.

   The reuse, salvage, or sale of items (e.g., personal property including equipment, metal parts) currently inside the buildings, once cleaned up, is subject to applicable distribution in commerce prohibitions and use authorizations for PCBs in 40 CFR 761.20 and 40 CFR 761.30, respectively.

[1] The PCD states that an inventory of personal property and photographs were provided to USEPA. However, as the inventory was provided after the LRA's submission of the PCD, this statement in the PCD was not accurate. Moreover, no photographs have been provided.

2. **Equipment, items, and materials not covered by this approval.** This approval does not cover materials such as painted and unpainted wood, painted and unpainted plastics, rubber (including tires), cardboard, ceramic, fiberglass, pallets, office equipment (e.g., typewriter), furniture with cloth (e.g., chair), furnishings (e.g., desks, chairs) and any other items, equipment, or materials that may be impractical to clean up to effectively remove PCBs. Materials or items not covered by this approval must be tested for PCBs and if PCBs are detected in these materials then disposed in accordance with applicable TSCA regulations as well as state and local regulations.

3. **Sampling and analysis plan (SAP).** Within 30 days after the date of this letter, the Army and/or LRA must submit for USEPA approval a SAP that is responsive to the conditions of this approval.

   The SAP must include clear data quality objectives applicable to the RAAP Site and specific to PCBs. In addition and among other information, the SAP must propose the number and types of samples that will be collected consistent with the conditions of this approval, extraction and analysis methods to be used including detection limits, PCB-extract cleanup methods to be applied before analysis of the extracted sample, duplicate samples, laboratory quality control samples (such as surrogate recoveries with a minimum acceptance criteria of 65%, matrix spike and matrix spike duplicates, and method blanks), sampling methods for paint or other coatings on non-porous surfaces that must be sampled, and corrective actions that will be taken by the laboratory when problems are encountered during analysis or preparation of the samples for analysis that are likely to affect data quality. The number and types of samples to be collected must be cross referenced to the items listed in the revised building contents inventory being required in Condition A.1.

   The SAP must include sampling methods for characterization of paint or other coating on metal surfaces that will be disposed at an offsite facility (e.g., smelter, metal recovery oven, landfill). The TSCA regulations specify that extraction of PCBs from non-liquid samples be conducted using either USEPA SW-846 Method 3550B (sonication) or Method 3540C (Soxhlet) before analysis via USEPA SW-846 Method 8082A or latest revision. Based on data quality, performance, and types of materials to be tested, the Soxhlet extraction (Method 3540C) must be used for extraction of PCBs from the sample. USEPA is willing to further discuss the choice of PCB extraction method with the Army and/or LRA.

   Further, the SAP must include the revised inventory required in Condition A.1 above.

B. <u>Specific Conditions</u>

1. **Equipment proposed for reuse.**

   a. **Coating on metal equipment (Coated non-porous surfaces).** USEPA is approving cleanup of metal equipment and/or metal parts coated with porous surfaces such as paint under 40 CFR 761.61(c) using procedures (such as abrasive blasting/NACE #2) to effectively remove all the paint and PCB contamination from the coated non-porous surface. Cleanup verification sampling must be conducted as required below under "Cleanup verification (testing)." In addition, the Army and LRA must keep records for at least three years of pre- and post-cleanup photographic documentation. A copy of such records must be included in the final PCB cleanup report.

Pieces of equipment and/or metal parts cleaned up consistent with this condition must be tested via wipe standard tests (as defined in 40 CFR 761.123) to demonstrate that PCBs do not remain on the equipment and/or metal after cleanup. Therefore, the items in the inventory should be divided into groups of similar kinds of equipment or parts based on construction materials, size, functionality, or type of use. Pieces of equipment and/or parts are referred to below as items.

Cleanup verification (testing). Visual inspection in conjunction with testing is required for cleanup verification. The items in the Initial, Second, and Third Subgroup discussed below must be selected at random.

A minimum of 10% of items (Initial Subgroup) in each group must be tested as indicated above after cleanup of the equipment. If PCBs are not detected in any item comprising the Initial Subgroup, then no additional testing is needed for that group of items. If PCBs are detected in any item in the Initial Subgroup, a second 10% of items (Second Subgroup) not yet tested and remaining in the group must be tested via wipe samples. If no PCBs are detected in all of the Second Subgroup items, then only the Initial Subgroup items that failed the wipe tests need to be re-cleaned. If PCBs are detected in any of the Second Subgroup items, then all remaining equipment must be re-cleaned in addition to the items in the Second Subgroup that failed the wipe tests; and a minimum of 20% of the re-cleaned items (Third Subgroup) must be tested via wipe tests.

In reference to the cleanup verification (testing) required above, if the Army and/or LRA cannot verify that potential end users of pieces of equipment and/or parts that may be distributed in commerce excludes sensitive subgroups, then USEPA must assume that sensitive receptors may come into physical contact with certain pieces of equipment and/or parts. Based on this uncertainty, USEPA is requiring that wipe samples be analyzed at a laboratory using an analytical method detection limit equal to or less than 1 ug/100 cm sq. Analytical results for the individual testing required above would have to be non-detect for unrestricted use.

If the Army and/or LRA, however, can verify the end use of pieces of equipment and/or parts from the RAAP will be restricted to industrial or commercial use, then the analytical results for the individual testing required above would have to be less than 10 ug/100 cm sq.

The paint or other coatings on pieces of equipment and/or metal parts may contain PCBs. The following scenarios are provided to facilitate disposal of paint that will be removed from pieces of equipment and/or metal parts.

Paint manufactured with PCBs and at time of removal from the items (e.g., via abrasives) and based on the paint analysis, the paint contains PCBs above or equal to 50 mg/kg. This also applies to lead-based paint which in many instances has been found to contain PCBs. In addition to have been manufactured with PCBs, the paint may also be contaminated by PCB sources at the RAAP such as Galbestos dust. After removal from the equipment, the paint must be disposed of as a PCB bulk product waste in accordance with 40 CFR 761.62. If this interpretation changes, we will discuss such changes with the Army and LRA. Abrasives mixed with the paint

must be disposed of as PCB remediation waste consistent with 40 CFR 761.61(a)(5). Waste lead-based paint that also contains PCBs and it is removed from equipment and/or metal parts must be disposed of in accordance with the most stringent requirements for this waste.

Paint not manufactured with PCBs and at time of removal and based on analysis of the paint, the paint contains PCBs at levels below 50 mg/kg. The PCBs in the paint may be due to contamination via Galbestos or other PCB sources at the RAAP. After removal from equipment and/or metal parts, the paint must be disposed of as a PCB remediation waste under 40 CFR 761.61(a)(5). Abrasives or other materials used to remove the paint must be disposed as a PCB remediation waste consistent with 40 CFR 761.61(a)(5).

b. **Uncoated metal equipment and bare metal (Uncoated non-porous surfaces).** USEPA is approving the use of abrasive blasting for cleanup of uncoated non-porous surfaces contaminated with Galbestos dust (non-liquid PCBs). The Army/LRA may also use kerosene, diesel fuel, terpene hydrocarbons, mixtures of terpene hydrocarbons, and terpene alcohols to cleanup pieces of equipment, parts of pieces of equipment, and/or metal parts that are not amenable to cleanup via abrasive blasting. Solvents different than those listed here may be used for this purpose, however, the PCBs must have a minimum solubility of 5% in those solvents; and chlorinated solvents are excluded. The Army / LRA must identify and notify USEPA of the alternate solvent that will be used within at least 5 days before starting the cleanup. Cleanup verification testing consistent with Condition B.1.a above must be performed to demonstrate effectiveness of the cleanup.

2. **Equipment proposed for disposal at an offsite facility.**

a. **Preparation of equipment for transportation to offsite disposal facility.** The Army proposes to "wipe down with a solvent" painted equipment and other equipment contaminated with Galbestos dust before transportation for disposal. Under 40 CFR 761.61(c), USEPA is approving the use of solvents to remove Galbestos dust and other PCB containing material (e.g., dirt, debris) from equipment or parts to prevent potential releases of PCBs into the environment and transportation vehicles during transportation.

The disposal of any piece of equipment that meets the definition of a PCB Item in 40 CFR 761.3 must be conducted in accordance with the disposal requirements for that PCB Item stipulated in 40 CFR 761 Subpart D. In addition, the Item must be prepared for transportation to disposal consistent with Subpart D and this condition.

3. **Equipment or parts for disposal in a smelter or scrap metal recovery oven.**

a. **Metal surfaces (e.g., equipment, parts) in contact with non-liquid PCBs (e.g., paint containing PCBs).** These metal surfaces may be disposed of in a scrap metal recovery oven or a smelter subject to the conditions established below.

Conditions.

1. The scrap metal recovery oven or the smelter must be operating in compliance with the requirements in 40 CFR 761.72 and the concentration of non-liquid PCBs in contact with the metal surfaces must be less than 500 ppm (as measured by bulk paint samples). Metal recovery ovens and smelters compliant with 40 CFR 761.72 requirements may not be available in USEPA R9.

2. If the PCB concentration of the non-liquid PCB in contact with the metal surfaces (e.g., equipment or parts) is equal to or above 500 ppm (as measured by analysis of bulk paint samples), the metal surfaces must be cleaned up first in a scrap metal recovery oven operating consistent with 40 CFR 761.72(a) or cleaned up to a surface concentration of less than 100 ug/100 cm^2 (less than 500 ppm) before smelting. Collection and analysis of wipe and bulk paint samples must be performed after cleanup and prior to smelting to ensure the requirements of this condition are met.

3. Representative sampling of the non-liquid PCB (e.g., paint) in contact with the metal surfaces must be conducted in addition to wipe samples to confirm the PCB concentration before disposal via smelting or scrap metal recovery oven.

4. **Tenant equipment inside buildings contaminated with Galbestos dust.**

   a. **Testing and cleanup of tenant equipment.** The scope of the Phase 1 Work is hereby expanded to include testing of tenant-owned equipment located within buildings contaminated with Galbestos dust. This condition modifies the PCD to include this additional work. The Army and/or the LRA shall test such equipment consistent with Condition B.1.a and the sampling and analysis plan (SAP) required in Condition A.3 (Sampling and analysis plan) after approval by USEPA. Tenant equipment and parts found to be contaminated with PCBs due to Galbestos dust or other PCB sources at the RAAP must be cleaned up consistent with the conditions of this approval.

5. **Determining PCB concentration for offsite disposal; land disposal of PCB remediation and PCB bulk product waste; decontamination wastes and residues.**

   a. **Painted materials and equipment. Condition.** Refer to Condition A.3.

   b. **Bare metal and metal equipment. Comment.** Collection and analysis of wipe samples from bare metal parts and equipment may be necessary to determine appropriate offsite disposal option.

6. **Land disposal of PCB remediation and PCB bulk product wastes.**

   a. **Clarifications.** The state of California regulates liquid and non-liquid wastes containing PCBs as a hazardous waste depending on the PCB concentration. Non-liquid wastes containing PCBs equal to or above 50 ppm are regulated for disposal at a RCRA hazardous waste landfill. Wastes

containing PCBs at 50 ppm or greater concentration cannot be disposed in municipal solid waste landfills in California.

Galbestos siding that will be removed for disposal under Phase 2 Work activities is a PCB bulk product waste and disposal of such waste is regulated under 40 CFR 761.62 and not under 40 CFR 761.61(b), which provides additional options for disposal of PCB remediation waste.

7. **Decontamination waste and residues.** Decontamination wastes and residues must be characterized for disposal and disposed of in accordance with the requirements in 40 CFR 761.79(g).

8. **Sequence of equipment cleanup.**

   a. **Condition.** Within 30 days after the date of this letter, provide the sequence for cleanup of personal property including how materials and equipment will be relocated to the areas where it will be cleaned up, locations where the cleanup will be performed, and locations and storage methods for cleaned up materials and equipment. In addition, explain measures that will be taken to prevent recontamination of equipment and/or parts, and contamination of areas due to Galbestos that are not currently contaminated.

9. **Oil-filled equipment.**

   a. **Condition.** Within 30 days after the date of this approval, please submit the following information:

      1. An inventory of oil-filled equipment at the RAAP describing the type of equipment and/or part, current status of equipment (e.g., in service, out of service but in storage), projected disposition of the equipment, PCB concentration (i.e., Aroclor and concentration) for each piece of equipment tested, and supporting laboratory analysis results associated with each piece of equipment and/or part.

      2. The most current laboratory analysis results for the oil from two presses with hydraulic fluid that according to the PCD remain at the RAAP. Based on the PCD the oil inside these presses was changed out about twenty years ago.

      3. Records for oil filled equipment (including electrical equipment) at the RAAP from which PCB-containing oil has been drained and replaced with other oil.

10. **Limitation of exposure and control of releases.** The Army / LRA must conduct all Phase 1 Work in a manner that is protective of workers, the public, and the environment. Decontamination of sampling equipment and tools must be in accordance with 40 CFR 761.79(c)(2).

11. **Sampling and recordkeeping.** The Army / LRA must maintain records of sampling activities and analysis results associated with sampling to demonstrate that cleanup objectives have been met. The Army / LRA is responsible for compliance with all applicable federal, state, and local regulations

during decontamination, movement, relocation, transportation, and disposal of materials and equipment contaminated with PCBs and currently located at the RAAP.

USEPA appreciates the opportunity to being of assistance to the US Army and LRA concerning PCBs at the RAAP. If you have any questions concerning this approval, please call Carmen D. Santos at 415.972.3360.

Sincerely,

Jeff Scott, Director
Waste Management Division

Cc Via Electronic Mail Only

James McCallister, US Army Corp of Engineers
james.p.mcalister@usace.army.mil

Debbie Olsen, Riverbank Local Redevelopment Authority
dolson@riverbanklra.org

John Woodyard, Weston Solutions, Inc.
john.woodyard@westonsolutions.com

John Chesnutt, USEPA R9 – SFD
chesnutt.john@epa.gov

Eric Esler, USEPA R9 – ORC
esler.eric@epa.gov

Ivan Lieben, USEPA R9 – ORC
lieben.ivan@epa.gov

Steve Armann, USEPA R9 – WMD
armann.steve@epa.gov

Carmen D. Santos, USEPA R9 – WMD
santos.carmen@epa.gov