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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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October 9, 2007

Mr. Kevin Cloe
Western Vieques Remedial Project Manager
Commander Atlantic Division
Naval Facilities Engineering Command
6506 Hampton Boulevard
Norfolk, VA 23508-1278

Re: Review of the Draft Final Work Plan Removal Actions SWMU 6, SWMU 7, AOC J, and AOC R, Former Naval Ammunition Support Detachment, Vieques, Puerto Rico

Dear Mr. Cloe:

The U.S. Environmental Protection Agency (EPA) has completed the review of the Draft Final Work Plan Removal Actions Solid Waste Management Unit (SWMU) 6, SWMU 7, Areas of Concern (AOC) J, and AOC R, Former Naval Ammunition Support Detachment, Vieques, Puerto Rico, revision of August 2007. Enclosed you will find our comments.

If you have any questions or comments, please contact me at (787) 741-5201.

Sincerely,

A handwritten signature in blue ink, appearing to read "Daniel Rodríguez".

Daniel Rodríguez
Remedial Project Manager
Enforcement and Superfund Branch

Enclosure

cc: Josefina González, EQB, w/ encl.
Richard Henry, FWS, w/ encl.
Brett Doerr, CH2M Hill, w/ encl.
Wilmarie Rivera, EQB, w/ encl.

**EPA Comments on the Draft Final Work Plan Removal Actions
SWMU6, SWMU 7, AOC J and AOC R
Former Naval Ammunitions Support Detachment
Vieques, Puerto Rico
Dated August 2007**

General Comments:

1. The Quality Assurance Project Plan (QAPP) was submitted as an appendix to the Sampling and Analysis Plan (SAP). It should be noted that a QAPP that complies with the UFP-QAPP guidance will contain all the planning information required to proceed with a project and will be functionally equivalent to separate SAP and QAPP, thus preventing duplication of information and preventing inconsistencies. Also, Laboratory and Field SOPs should be provided as an appendix to the QAPP.
2. The EPA-approved Master Quality Assurance Project Plan dated May 2007 prepared by CH2MHill is applicable to all work done in Vieques by the Navy and its contractors. Field and Laboratory SOPs should follow those included in the Master QAPP when appropriate. If individual site conditions require modifications to the information in the Master QAPP, this should be clearly stated in the site-specific QAPP and a description of the modifications should be provided.

Specific Comments:

3. Executive Summary, Field Activities, Spanish version, page viii: Please make Spanish version consistent with English version. Also, confirmatory samples was translated as “muestras de trasfondo.” This translation has been used for “background sampling” in other site related documents. This translation can create some confusion. Please modify.
4. Section 2.3, Sample Analysis and Waste Characterization, page 2-2, First Bullet:
 - a. The work plan notes that toxicity characteristic leaching procedure (TCLP), reactivity, corrosivity, and ignitability (RCI) and total petroleum hydrocarbon (TPH) data will not be validated, but will go through a *data verification process* instead. However, QAPP Worksheet # 35 Validations (Steps IIa and IIb) Process Table, indicates that full validation will be performed on all samples found except TCLP parameters. The QAPP worksheets and Work Plan must be consistent; it is recommended that TPH data be validated.
 - b. This bullet discusses the waste characterization sampling and references Appendix C. However, even though the sampling will be based on a grid, the number of samples, or the frequency of sampling, should be identified. This was

the subject of much concern for both EPA and EQB, and the work plan should address this.

5. Section 2.3, Sample Analysis and Waste Characterization, Page 2-2, Second Bullet: This bullet appears to present the process used to determine if the soil removals are adequate and that all contaminated soils have been excavated. However, the text suggests that "Target Compound Concentrations" will be developed as comparisons for post excavation samples, but these concentrations will not be available to be reviewed by regulatory agencies. If this is the plan, this is not acceptable. EPA must be able to review post excavation sampling data and the concentrations to which these will be compared to ensure that the removal action meets regulatory requirements and is complete. This section should also include more detail on the number of samples that will be collected from each area.
6. Section 2.5, Removal Action, page 2-4, first bullet: As previously noted, it is doubtful whether the proposed high-visibility barricade fence (approximately three feet in height) will deter unauthorized access by both humans and animals.
7. Section 2.5, Removal Action, page 2-6, first bullet from top of page: It is indicated that confirmation sampling shall be established once the results of the waste characterization sampling are available, and shall be based upon the criteria detailed within the QAPP, Worksheet # 17. However, Worksheet # 17 "Post-Excavation Confirmatory Sampling, Analysis, and Evaluation," notes that post-excavation confirmatory sampling will be performed in accordance with the confirmatory sampling protocol provided in the work plan attachment (see above). This work planned attachment is to be developed; as per Appendix C, Section 2.1 of the Field Sampling and Analysis Plan for Laboratory Activities. Worksheet # 17 should clearly refer to Section 2.1 of the Field Sampling and Analysis Plan for Laboratory Activities, and clearly note that the addendum will be forthcoming.
8. Section 2.5, Removal Action, page 2-6, second bullet:
 - a. Please note that in addition to soil data, post-removal data may also include sediment and surface water data.
 - b. The bullet states that a new risk assessment will be conducted using the post-removal data. Please clarify whether one risk assessment will be conducted for all 4 areas, or will a risk assessment will be conducted for each area. Please note that a statistically valid number of samples should be collected to ensure that the data set will be appropriately robust for use in the risk assessments.
9. Section 2-6, Contingency Planning for Unanticipated Discovery, page 2-8, last bullet: The newly proposed groundwater contingency sampling outlined should be modified. All areas suspected of formerly or currently having a discharge to groundwater based

on the waste excavated/uncovered need to be targeted with the installation of a new well or well point (i.e., Geoprobe-type sampling).

10. Appendix C, Field Sampling and Analysis Plan:

- a. Section 2.1, Scope of Work, Confirmation Sample Laboratory Analyses, page 2-1: It is noted that the confirmation sampling protocol will be established once the results of the waste characterization sampling and associated residual risk assessment are available. EPA looks forward to working with you in developing the post-removal confirmatory sampling strategy, as discussed in QAPP Worksheet # 10.
- b. Appendix A, Quality Assurance Project Plan, QAPP Worksheet # 17, Sampling Design and Rationale:
 - i. Under “Post-Excavation Confirmatory Sampling, Analysis, and Evaluation,” please note that where debris is removed from a surface water body, confirmation sampling should include sediment and surface water.
 - ii. The formerly proposed groundwater sampling outlined in Worksheet # 17 has been removed. The existing wells should be re-sampled as well as new any wells.
- c. Appendix A, Quality Assurance Project Plan, QAPP Worksheet # 18, Sampling Locations and Methods/SOP Requirements Table: In the last column “Rationale for Sampling Locations,” for the floor of excavation (soil/sediment) and surface water floor of excavation (surface water) the rationale should be to confirm that the *removal goals* have been met, rather than the remediation goals, which will be developed through the Remedial Investigation risk assessment process.