



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
CARIBBEAN ENVIRONMENTAL PROTECTION DIVISION
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August 2, 2010

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

Re: Review of the Draft Remedial Investigation Sampling and Analysis Plan Eastern Conservation Area, Former Vieques Naval Training Range, Vieques, Puerto Rico

Dear Mr. Cloe:

The U.S. Environmental Protection Agency (EPA) completed the review of the Draft Remedial Investigation Sampling and Analysis Plan Eastern Conservation Area, Former Vieques Naval Training Range, Vieques, Puerto Rico, dated May 2010. Enclosed you will find our comments.

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

Sincerely,

Daniel Rodriguez
Remedial Project Manager
Response and Remediation Branch

Enclosure

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

**EPA Comments on the Draft Remedial Investigation Sampling and Analysis Plan
Eastern Conservation Area, Former Vieques Naval Training Range,
Vieques, Puerto Rico
May 2010**

General Comments:

1. Please confirm that the highest reported result of the replicates will be used as the result for that sampling unit for that chemical.
2. A geologic map of the ECA should be included in the report (or include geologic units on the topographic map - Figure 5).

Specific Comments:

3. Worksheet # 9a – Project Scoping Session Participants Sheet, page 17: Under “Project Role” for Mindy Pensak please include review of ecological risk assessments.
4. Worksheet # 10 – Problem Definition, General Problems to Address, page 43: In the third paragraph, the following sentence is not clearly understood: "Incremental sampling reduces the impacts of soil heterogeneity on laboratory analytical results by providing an average concentration over an exposure area rather than at a discrete point (i.e., reduces field sampling and laboratory processing errors), and also has less a greater chance of identifying potential contamination." Please restate this sentence to clearly indicate that incremental sampling provides a better chance of identifying contamination.
5. Worksheet # 10 – Problem Definition, General Problems to Address, page 44: In the third paragraph it is indicated that lagoon surface water and sediment sample analyses will not include inorganics, because a background data set is not available for comparison. Lagoon sediment and surface water will need to be analyzed for metals. Metals are munitions- related constituents, in addition to explosives. As indicated in Table 1 "MEC/MD Items Encountered in the ECA and Their Constituents," inorganics including iron, aluminum, copper, zinc and magnesium may be associated with the explosives identified in the ESA. If metals are found to be elevated above ecological screening values, lacking any available background data, additional analyses would be warranted to establish whether there are risks associated with the levels found to be present in the sediment/surface water. These could include AVS/SEM analysis, sediment toxicity testing and analysis of biota from the lagoon.
6. Worksheet # 11 – Project Quality Objectives/Systematic Planning Process Statements, page 47: If the Method Detection Limit (MDL) will be used for comparisons to the action levels, the Navy should request that its laboratory report their results to the (MDL). It should be noted that results near the MDL (to around 5-10 times the MDL) should be used with caution.

7. Worksheet # 11 – Project Quality Objectives/Systematic Planning Process Statements, page 49: The associated PQO/decision statements should include a statement regarding the evaluation of sediment and surface water data, in addition to the discussion on soil data.
8. Worksheet # 12 – Measurement Performance Criteria, pages 51-60: In order to avoid confusion, the actual measurement performance criteria should be listed, not a reference to another worksheet.
9. Worksheet # 17 – Sampling Design Rational, Environmental Media, page 75: In order to provide another line of evidence for determining if any site contamination is potentially impacting groundwater in the ECA, the EPA strongly suggests that subsurface soils (where they exist - i.e., in the lowland area) be sampled during this field effort in the event that a second field mobilization is difficult to implement. It is recommended that four discrete subsurface soil samples be collected from the 2-foot zone just above the water table for each sampling unit in the lowland area (i.e., Lowland 1-5) for a total of 20 samples.
10. Worksheet # 17 – Sampling Design Rational, Environmental Media, page 75: See comments #5 regarding the need to analyze lagoon sediment and surface water for inorganics.
11. Worksheet # 17 – Sampling Design Rational, Background, page 78: The appropriateness of the proposed background incremental soil sampling locations should be supported with data demonstrating that soils are not impacted by former activities at the UXO 15 sites, PI-9 and PI-13 (i.e., provide a table listing the discrete soil sample results from the October 2007 background study if applicable).
12. Worksheet # 18 – ECA Sampling Locations and Methods/SOP Requirements Table, page 83-84: According to this worksheet, the analytical groups for the Lagoon Decision Area are limited to Explosives. It may be premature to discount metals from the lagoon sediments. The Navy has expressed concern that the sediments will yield elevated metals due to the evaporative lagoon conditions. However, certain metals associated with munitions such as lead are not likely to be present at elevated levels due to the evaporative nature of the lagoon. EPA recommends including, at a minimum, a subset of metals focused on those most closely associated with munitions and explosives.
13. Worksheet # 18 – ECA Sampling Locations and Methods/SOP Requirements Table, pages 79-85: The sampling SOP number should be provided for each type of sample collected.
14. Worksheet # 19 – Analytical SOP Requirement Table, page 87: Please include inorganics analysis for lagoon surface water.

15. Worksheet # 20 – Field Quality Control Summary Table, page 89: Please include inorganics analysis for lagoon sediment and surface water.
16. Worksheet # 21 – Project Sampling SOP Reference Table, page 91: SOP # A-7, delineating procedures for MIS sampling should be added to this list.
17. Worksheet # 28 – Laboratory Samples QC Tables, pages 105-118: Field QC and corrective action information should be added to this worksheet. In addition, the measurement performance criteria should be provided, since this information is more closely related to the rest of the information in this Worksheet than to that in Worksheet # 15.
18. Worksheet # 28-1 – Laboratory Samples QC Tables, page 105: This section specifies that, for metals analysis, grinding will be performed by hand using ceramic equipment and only for the sub-samples. The SOPs provided for MIS sample sieving and grinding only apply to explosive analyses; a SOP describing the process for sub-sampling, sieving, grinding and other sample preparation information should be included in the SAP.
19. Worksheet # 30 – Analytical Service Table, page 121: Please indicate whether data validation tie is included in the turn around time.
20. SAP Worksheet # 30 – Analytical Service Table, page 121: Please include inorganics analysis for lagoon surface water.
21. Worksheet # 36 – Analytical Data Validation (Steps IIa and IIb) Summary Table, page 137: Please note that the Region 2 SOPs referenced as criteria as well as the national functional guidelines were developed for CLP SOWs, not SW-836 methods as will be the case for this project.
22. Figure 6, Conceptual Sampling Approach: A note in the legend that 100 subsamples per sampling unit is proposed would be helpful. The term "Subsurface Soil Sample" in the legend should be changed in the to "Deeper Surface Soil Sample" to be consistent with the text in the document.
23. SOP A-7 – Instructions on how to operate a coring tool such as the MIST sampling tool should be included in the SOP. In addition, it is stated that the sampling increments will be transferred to the appropriate sampling containers "...After the entire Decision/Sampling unit has been walked..." The SOP should describe the intermediate container (if any) that will be used while walking the Decision/Sampling Unit.
24. Attachment D, ECA – Strawman Ecological Risk Assessment Information, Section 1.1.2.1 Receptors, third paragraph, page 7: After the statement regarding the qualitative surveys that will be conducted for fish and invertebrate, the following

sentence appears: "One round proposed." Please elaborate to clearly indicate that the surveys will take place over one discrete period of time.