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LETTER AND U S EPA REGION 1 EVALUATION OF U S NAVY RESPONSE TO COMMENTS REGARDING SAMPLING AND ANALYSIS PLAN FORMER DERECKTOR SHIPYARD DATA GAPS INVESTIGATION NS NEWPORT RI
8/1/2011
U S EPA REGION 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION I
5 Post Office Square, Suite 100
Boston, MA 02109-3912

August 1, 2011

Winoma Johnson, P.E.
NAVFAC MIDLANT (Code OPNEEV)
Environmental Restoration
Building Z-144, Room 109
9742 Maryland Avenue
Norfolk, VA 23511-3095

Re: Sampling and Analysis Plan for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation

Dear Ms. Johnson:

Thank you for the opportunity to review the July 8, 2011 responses to EPA's comments on the Draft *Sampling and Analysis Plan* (SAP) for the Former Derecktor Shipyard Marine Sediment Data Gaps Investigation, dated May 2011. The SAP presents the sampling design and rationale and the analytical and data assessment requirements for the project in accordance with the requirements of the *Uniform Federal Policy for Quality Assurance Plans* and *EPA Guidance for Quality Assurance Project Plans*. Detailed comments are provided in Attachment A.

GC2: 2) The response is inconsistent in stating that TOC data will be collected to evaluate bioavailability of chemical constituents but that risk assessment is not a goal of this investigation because bioavailability is an integral component of risk assessment. EPA does not concur with the Navy's decision to limit TOC sampling as proposed.

GC3: EPA is concerned that only a one-foot core is planned for the radioisotope analysis and that nine samples will be collected for analysis from this core. Collecting a longer core would be more appropriate and reliable. Assuming a sediment deposition rate of one centimeter per year, a one-foot core could reveal up to 30 years of deposition history. However, there are potential problems in relying on the one-foot core. First, there is a history of compaction and also loss of sediment at this site, either of which will make analysis of the results difficult. (EPA assumes that multiple attempts to collect a complete and accurate core will be made.) While these effects would also exist with a longer core, there would be more material available to analyze that could result in the loss of fewer samples. Second, a greater deposition rate would result in a shorter history for a one-foot core that could result in not achieving the project objectives. (EPA has previously noted that deposition rates are likely quite different with and without the aircraft carriers.) Third, disturbance of the sediment from ship traffic could totally confound the results for a one-foot core, whereas, a greater history would be revealed with a longer core even if sediment within the top one foot is disturbed. EPA strongly recommends that the Navy collect a deeper core for radioisotope analysis.

I look forward to working with you and the Rhode Island Department of Environmental Management toward the cleanup of the Derecktor Shipyard. Please do not hesitate to contact me at (617) 918-1385 should you have any questions.

Sincerely,

Kymberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

Attachment

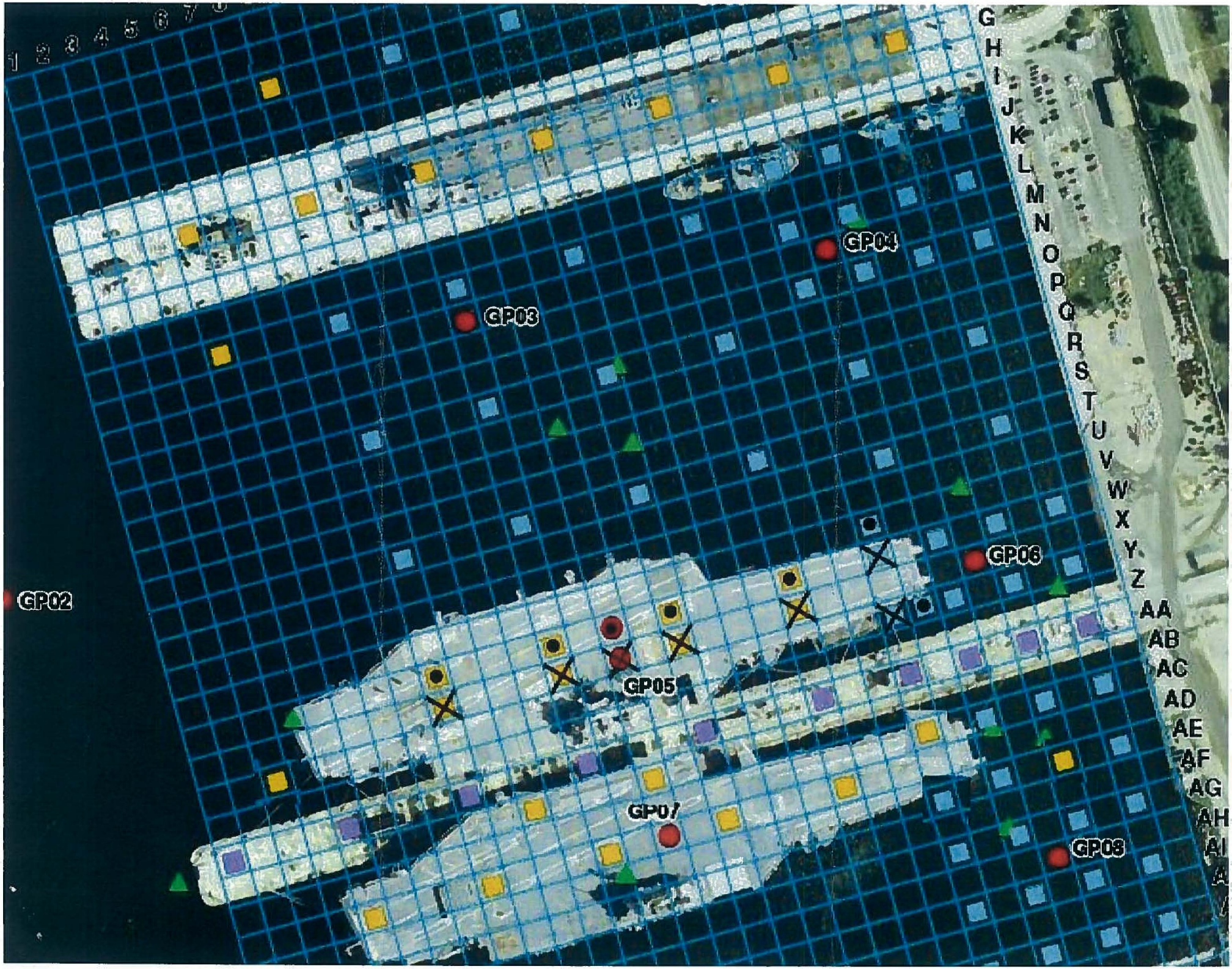
cc: Pam Crump, RIDEM, Providence, RI
Darlene Ward, NETC, Newport, RI
Bart Hoskins, USEPA, Boston, MA
Ken Finkelstein, NOAA, Boston, MA
Steven Parker, Tetra Tech-NUS, Wilmington, MA

ATTACHMENT A

Page	Comment
SC5. p. 37, §11.4	The revised sampling plan relocates samples originally placed under the existing aircraft carrier to a location closer to the existing one. This should result in the collection of appropriate samples assuming the locations can be maintained.
SC6. p. 38, §11.4	a) Zinc and copper were not carried forward as COCs for the risk assessment only because they were not the primary risk drivers because of other co-located COCs in higher concentrations. If this investigation determines that zinc and copper concentrations are significant at some locations, they cannot be dismissed if they result in a significant risk. This is consistent with earlier agreements. b) If retained, the statement should read that it is *Navy's* expectation that the data will be sufficient to support remedy selection and design. EPA believes that the results of the data gap investigation will determine whether there are sufficient data to support remedy selection and design without the need for further investigation. As EPA has stated in previous letters and in our October 27, 2010 meeting, the data from this study will not be sufficient to determine whether natural recovery is occurring.
SC10. p. 58, Worksheet #18	Please clarify which subsurface intervals will be sampled at each location.
SC11. p. 64, Worksheet #19	b) Please respond to this comment. For the TOC holding time, the 1988 Lloyd Kahn method specifies 14 days (not 28 days) for analysis if held at 4°C. Please correct the holding time proposed.
SC13. Figure 11-1	b) Per General Comment 1-1, EPA added five additional sampling locations around Pier 1 to Figure 17-1 (attached), which also impacts Figure 11-1. Note that neither location AD1 nor X1 was included because the focus of the additional locations was to evaluate metals contamination identified in Army Corps of Engineers sampling. One additional location was added to Pier 2.

Comment on GEL Laboratories Quotation Attachment in Navy's RTCs:

Technical Note #6 states that "GEL will determine Polonium-210 by Alpha Spectroscopy and assume equilibrium with Lead-210." Lead-210 has a half-life of 22.3 years but Polonium-210 has a half-life of only 138 days. Consequently, any Polonium-210 deposited in sediment more than approximately 2.5 years ago (7 half-lives) will likely be undetectable, whereas Lead-210 would be detectable for up to about 150 years. Furthermore, this technical note is inconsistent with the previous description of the radioisotope analysis methodology to be used that stated that Lead-210 would be the analyte of interest. Please clearly describe the methodology proposed for radioisotope analysis and why it is the most appropriate analysis for dating the sediment layers.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