



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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NAVSTA NEWPORT
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May 7, 2009

Winoma A. Johnson, P.E.
NAVFAC MIDLANT
Environmental Restoration OPHREV4
9742 Maryland Avenue
Bldg. N-26, Rm. 3208
Norfolk, VA 23511

Re: Revised Response to Comments and Report Revisions
Draft Study Area Screening Evaluation Report
Former Melville Water Tower Site
Naval Station, Newport, Rhode Island

Dear Ms Johnson:

EPA has reviewed the revised response to comments and report revisions for the Draft Study Area Screening Evaluation (SASE) for the Former Melville Water Tower Site, NAVSTA, Newport, Rhode Island, transmitted on April 9, 2009. The responses and revisions were prepared by Tetra Tech NUS, Inc. for the Department of the Navy, Naval Facilities Engineering Command Mid-Atlantic.

With respect to the human health risk evaluation related to arsenic, EPA has a few follow-up comments and recommendations.

- In Section 4.2.4, although it has been the practice to use $\frac{1}{2}$ of the reporting limit as a proxy concentration for calculating EPC for non-detects, this practice is now discouraged due to many disadvantages. EPA's ProUCL version 4.0 software provides a module that replaces non-detect results with surrogate values based on the overall distribution of the data, rather than an arbitrary surrogate of $\frac{1}{2}$ the detection limit. The ProUCL documentation provides a robust evaluation of this issue. EPA recommends that the Navy re-run the EPC calculation using this ProUCL version to determine whether the extensively peer-reviewed ProUCL procedure provides any significant improvement in the estimate of population mean compared to the simple substitution of $\frac{1}{2}$ the detection limit. The resulting EPC might be different than 6.7 mg/kg, depending on what the data distribution is.
- On Page D-8, the following point should be added to the summary points listed: Arsenic levels in some subsets of the soil data reported may exceed RIDEM regulatory criteria of 7 mg/kg, but all generally lie within the range of concentrations observed by USGS for the Eastern United States of up to 73 mg/kg, and overall do

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not appear to be significantly elevated from what could be expected to be present at the site.

- Finally, add EPA's ProUCL version 4.0. as a reference in the report and provide the output sheets from ProUCL as an appendix to the report.

In order to evaluate the potential for ecological risk at this site, EPA's ecological risk assessment guidance calls for an evaluation of contaminants present, habitats, and potential exposure pathways in Step 1 of the eight-step risk assessment process. A scientific management decision point (SMDP) may be reached at the end of Step 1 that indicates that further evaluation either is or is not needed. In the report revisions provided to address EPA's ecological risk evaluation comments, the Navy did not systematically present information in a manner that makes this SMDP easy to reach.

EPA has evaluated all the information presented for the site and determined that the habitat value of the un-remediated area is sufficiently small (as well as degraded by the nearby presence of a highway) and that it is unlikely that this area would support a viable population of any ecological receptor. Based on this determination there are not likely to be any complete exposure pathways and EPA can support proceeding without further ecological risk activities here.

For future reference, the Navy should recognize that if there is a potentially complete exposure pathway and a quantitative ecological screening step is undertaken, both reasonable maximum exposure (RME) and central tendency exposure (CTE) assumptions should be used in the screening. EPA uses the mean for the CTE exposure and the 95% UCL calculated using ProUCL software for the RME exposure scenario. Values that fall above the CTE, whether or not they exceed the RME exposure, generally require further investigation.

The second point related to the ecological risk evaluation that was missed by the Navy was the concept of an indicator species. The Eco SSL indicator species are not intended to be the only species considered for an ecological risk assessment. The American Woodcock as a species represents birds with certain feeding, foraging, and nesting habits. To state that the habitat is not suitable for this particular species misses the idea that there may be other species present with similar habits (and therefore similar exposure pathways). The Eco SSLs used the Woodcock as an indicator species and typically EPA would assume that a bird of similar habits might be present at the site and model risk accordingly when an Eco SSL is exceeded.

Although there is no action item for the Navy resulting from these ecological risk evaluation comments, in the future the Navy should perform the standard ecological screening-level risk assessment steps and include sufficient site documentation (including aerial and site photos, habitat descriptions, site conceptual model, etc.) to allow reviewers to understand the potential for exposure.

Please revise the Draft SASE Report for the Former Melville Water Tower Site to reflect the Navy's responses to EPA's January 15, 2009 comments, the Navy's proposed report revisions, and to address the follow-on human health risk comments above related to the arsenic evaluation. Then, submit a Draft Final SASE Report for EPA concurrence.

Sincerely,

A handwritten signature in cursive script that reads "Ginny Lombardo".

Ginny Lombardo
Remedial Project Manager

cc: Paul Kulpa, RI DEM
Cornelia Mueller, NAVSTA Newport
Stephen Parker, TtNUS