

N62661.AR.002762
NS NEWPORT
5090.3a

LETTER AND COMMENTS FROM RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL
MANAGEMENT ON DRAFT STUDY AREA SCREENING EVALUATION ADDENDUM SITE 19
ON SHORE DERECKTOR SHIPYARD NS NEWPORT RI

8/23/2012

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

RI 08232012



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

23 August 2012

Ms. Winoma Johnson, P.E.
NAVFAC MIDLANT (Code OPTE3)
Environmental Restoration
Building Z-144, Room 109
9742 Maryland Avenue
Norfolk, VA 23511-3095

Re: Draft Study Area Screening Evaluation Addendum
Site 19, On-Shore Derecktor Shipyard

Dear Ms. Johnson,

The Office of Waste Management at the Rhode Island Department of Environmental Management has conducted a review of the Navy's response to RIDEM's comment no. 22 on the *Draft Study Area Screening Evaluation Addendum*, dated October 2011 for On-Shore Derecktor Shipyard (Site 19), Naval Station Newport, located in Newport, RI. As a result of this review, this Office has generated the attached evaluation of response.

If you have any questions in regards to this letter, please contact me at (401) 222-2797, extension 7020 or by e-mail at pamela.crump@dem.ri.gov.

Sincerely,

A handwritten signature in purple ink, appearing to read "P. Crump".

Pamela E. Crump, Sanitary Engineer
Office of Waste Management

cc: Matthew DeStefano, DEM OWM
Gary Jablonski, DEM OWM
Richard Gottlieb, DEM OWM
Darlene Ward, NSN
Kymberlee Keckler, EPA Region I
Tom Campbell, Tetra Tech
Lisa McIntosh, W&C
Alex Mikszewski, W&C

RIDEM's Evaluation of the Navy's 2nd Response to Comment 22
Draft Study Area Screening Evaluation Addendum
Site 19 - On-Shore Derecktor Shipyard
Naval Station Newport, Newport, RI

RIDEM Comment 22 (12/8/11): *Page 5-7, Section 5.1.2.1, Background Evaluation; whole section. RIDEM does not concur with the background comparison in this report. Please be advised that RIDEM, to date, has not accepted the Navy's "Basewide Background Study Report."*

Navy Response (2/9/12): Comment noted. The NAVSTA Newport Basewide Background Study was developed and completed following USEPA guidance (*EPA/540/R-01/003. OSWER 9285.7-41*) and the Navy Policy on the Use of Background Chemical Levels (January 2004). The NAVSTA Newport Basewide Background Study was finalized in 2008. This document was not disputed and is being used, where applicable, to evaluate background soil conditions at the IR sites at NAVSTA Newport. Additionally, please see response to comment 21.

RIDEM Evaluation of Response (4/5/12): *RIDEM's position on the Background Study has been expressed in previous correspondence and meetings. After the background study was conducted it was mutually agreed upon to move forward on the various sites rather than enter into dispute over background issues for particular contaminants which may not affect remedial decisions for a site. As an illustration, if the entire site was to be capped, issues pertaining to background would not come into the remedial decision process. Further, RIDEM noted that certain aspects of the background study may be acceptable for a certain site and/or contaminants. Therefore, RIDEM reiterates its position; however, be advised that issues pertaining to background may ultimately not affect the remedial alternative for this site, and it is suggested that the parties move forward until such a time that a background issue becomes a key element in the ultimate remedial decisions.*

Navy Response (5/15/12): Based on comments received from EPA and RIDEM and the discussions at the March 2012 RPM meeting, Navy is proposing to utilize the NAVSTA Newport Basewide Background Study to establish a background dataset for metals in soil that were determined to be risk drivers or considered background based on the previous geochemical analysis that was conducted. Navy would like to use the ProUCL software program to calculate the Upper Predictive Limit to be used as a background threshold value (BTV) for Site 19 – On-Shore Derecktor Shipyard.

The EPA ProUCL Fact Sheet (http://www.epa.gov/nerlesd1/tsc/ProUCL_v4.00.05/ProUCL_v4.0_Facts_Sheet.pdf) states:

ProUCL 4.0 can be used to compute several parametric and nonparametric upper limits that are used to estimate the BTVs or not-to-exceed values for data sets with NDs and without NDs. These upper limits include: upper prediction limits (UPLs), upper tolerance limits (UTLs), and upper percentiles. Some of the nonparametric methods such as the Kaplan-Meier (Meier, 1958) method and ROS methods are applicable on left-censored data sets having multiple detection limits. The background statistics as incorporated in ProUCL 4.0 are particularly useful when individual site observations from some impacted site areas (perhaps after some remediation activities) are to be compared with BTVs to determine if adequate amount of remediation and cleanup has been performed yielding remediated site concentrations comparable to background level concentrations; that is if the site concentrations can be considered as coming from (or approaching to) the population of background concentrations.

Navy will calculate UPLs from the base background dataset for all surface and subsurface soil types. The soil types are combined because the soil type at Site 19 is classified as urban fill and is likely a combination of different soil types from other portions of NAVSTA Newport. Attached to this response to comment document is a table with the calculated UPL values for metals that were determined to be risk drivers or were considered within background levels by the geochemical analysis and the ProUCL output file. Navy would like to conduct a conference call with EPA and RIDEM to discuss this approach before revising the document.

RIDEM Evaluation of Response (8/23/12): Employment of UPLs to establish a background threshold value in soil, for this particular Site only, appears reasonable and is consistent with EPA guidance. However, RIDEM does not concur with the background input/output values for arsenic. Currently, the Navy is proposing a UPL of 18 mg/kg for surface soil and 29 mg/kg for subsurface soil. Based on RIDEM's preliminary evaluation of the background data for arsenic using the ProUCL software program, RIDEM requests that the Navy revise the UPLs for arsenic in the SASE Addendum to 13 mg/kg for surface soils and 20 mg/kg for subsurface soils.

In surface soils, both Beach and Stissing Silt Loam were determined to be unrepresentative soil types for site-wide soil conditions. Beach soils were considered unrepresentative because concentrations of aluminum, arsenic, chromium, and cobalt were many times lower than concentrations observed in all other soil types. Stissing silt loam was considered unrepresentative due to elevated concentrations of arsenic, chromium, cobalt, and iron, as compared to other soil types. Several of these elevated concentrations were also determined to be outliers. Therefore, the value of 13 mg/kg for surface soil was calculated by eliminating Beach (Ba) and Stissing Silt Loam (Se) soils from the input to ProUCL.

In subsurface soils, Mansfield Mucky Silt Loam and Stissing Silt Loam were determined to be unrepresentative of site-wide soil conditions due to elevated concentrations of arsenic and cobalt, as compared to concentrations observed in other soil types. Therefore, the 20 mg/kg result for subsurface soils was determined by excluding the Mansfield Mucky Silt Loam (Ma) and Stissing Silt Loam (Se) background data.

SURFACE SOIL

Soil Type	Navy Proposed UPL (mg/kg)	Outlier Values (mg/kg)	With Outliers (mg/kg)			Without Outliers (mg/kg)		
			Mean	Max	UPL	Mean	Max	UPL
All soils	18	71.7; 23.5; 22.5	7.07	71.7	17.7	6.21	17.1	14.7
All except Beach and Stissing Silt Loam	18	22.5	6.59	22.5	13.9	6.39	17.1	13.2
Beach soils	18	none	1	1.3	1.29	1.00	1.3	1.29
Mansfield Mucky Silt Loam	18	22.5	7.05	22.50	16	6.24	13	12
Merrimack sandy loam	18	none	4.03	6	6.05	4.03	6	6.05
Newport silt loam	18	none	6.28	17.1	16.7	6.3	17.1	16.7
Pittstown silt loam	18	none	9.04	15	14.5	9.0	15	14.5
Stissing silt loam	18	71.7; 23.5	13	72	69.3	9.16	16.3	15.2

SUBSURFACE SOIL

Soil Type	Navy Proposed UPL (mg/kg)	Outlier Values (mg/kg)	With Outliers (mg/kg)			Without Outliers (mg/kg)		
			Mean	Max	UPL	Mean	Max	UPL
All soils	29	42.6; 38.7; 37.9	10.9	42.6	27.2	9.97	28.9	23.7
All except Mansfield and Stissing silt loams	29	none	7.87	23.5	20.5	7.9	23.5	20.5
Mansfield Mucky Silt Loam	29	none	16.5	42.6	37.8	16.5	42.6	37.8
Merrimack sandy loam	29	none	4	6.7	5.65	4	6.7	5.65
Newport silt loam	29	17.7	4.36	17.7	9.28	3.69	5.8	6.44
Pittstown silt loam	29	none	14.2	23.5	22.8	14.2	23.5	22.8
Stissing silt loam	29	none	16.4	27.3	31.4	16.4	27.3	31.4

Please note that RIDEM is still currently evaluating the background data, and considers the results shown above preliminary. However, we realize the Navy is progressing towards the Feasibility Study for this Site and therefore we suggest that the Navy use RIDEM's suggested UPLs of 13 mg/kg for surface soil and 20 mg/kg for subsurface soil for arsenic in the Draft Final SASE Addendum, for this site only, to resolve this issue and move forward towards finalization of this document.