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LETTER AND U S EPA REGION I RESPONSES TO U S NAVY RESPONSES TO COMMENTS ON DRAFT FEASIBILITY STUDY FOR DU5-1 SITE 13 TANK FARM 5 NS NEWPORT RI
4/13/2012
U S EPA REGION I

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

April 13, 2012

Mr. Roberto Pagtalunan
NAVFAC MIDLANT (Code OPNEEV)
Environmental Restoration
Building Z-144, Room 109
9742 Maryland Avenue
Norfolk, VA 23511-3095

Re: Responses to EPA's Comments on the Draft Feasibility Study for DU5-1 at Site 13, Tank Farm 5

Dear Mr. Pagtalunan:

Thank you for the opportunity to review the March 2, 2012 responses to EPA's December 22, 2011 comments on the *Draft Feasibility Study for DU5-1 at Site 13, Tank Farm 5*, dated October 2011 (FS). The FS presents the development and evaluation of remedial alternatives to address unacceptable human risk associated with chemicals of concern in soil and groundwater at Decision Unit 5-1 at Site 13, Tank Farm 5. Detailed comments are provided in Attachment A.

In General Comment 2, it is incorrect to state that the groundwater PRGs are only slightly exceeded. The exposure point concentration for manganese exceeds its PRG by a factor of ten and the cobalt exposure point concentration exceeds its PRG by a factor of five.

It is unclear whether the groundwater contaminants were created by the Navy's activities or natural conditions, but given the historical use of the site EPA objects to characterizations that the cause is natural conditions alone (as implied) and such language must be removed from the feasibility study (FS) absent any appropriate background studies. EPA policy for potential drinking water aquifers is to return the groundwater to beneficial use rather than imposing LUCs alone to prevent groundwater use. This policy requires consideration of a treatment alternative for groundwater. This also concerns General Comment 3.

I look forward to working with you and the Rhode Island Department of Environmental Management toward the cleanup of the Tank Farms. Please do not hesitate to contact me at (617) 918-1385 to arrange a meeting to discuss these comments.

Sincerely,

Kymberlee Keckler, Remedial Project Manager
Federal Facilities Superfund Section

Attachment

cc: Pamela Crump, RIDEM, Providence, RI
Deb Moore, NETC, Newport, RI
David Peterson, USEPA, Boston, MA
Chau Vu, USEPA, Boston, MA
Steven Parker, Tetra Tech-NUS, Wilmington, MA

ATTACHMENT A

Page	Comment
SC2: p. ES-2	The reasonable maximum exposure (RME) carcinogenic risk to lifetime residents is at the upper limit of EPA's risk threshold and non-carcinogenic risk exceeds risk thresholds because arsenic alone exceeds a hazard index of 1. The central tendency exposure (CTE) can be useful for evaluating the risk range for decision-making at a site but only if the site has been well investigated so that a sufficient amount of data are available to make the CTE evaluation credible. A CTE evaluation for Tank Farm 5 is not useful because of the limited amount of data available. EPA policy generally requires the use of RME assessments to ensure that the most sensitive populations are protected. Consequently, soil must be retained as a medium of concern for both residential receptors and construction workers based on the contaminant concentrations in soil. Regarding the discussion of background in the response, EPA notes that the Navy used common background values for both Tank Farm 4 and 5 when in fact the background analysis completed for Tank Farm 5 differed from that completed for Tank Farm 4 because only two soil types were evaluated for Tank Farm 5. Based on the background values identified for the two soil types evaluated for Tank Farm 5, Navy has overstated the background values for Tank Farm 5. Please correct the background values for Tank Farm 5 because they should be based only on soil types NE and Pm as shown in Appendix F of the Data Gaps Assessment Report. A composite value should be calculated for Tank Farm 5 using the two soil types.
SC3a: p. ES-2, ¶3	Please see comment on response to SC2.
SC3b: p. ES-2, ¶3	Please see comment on response to GC2.
SC4: p. 1-1, ¶1	Please edit the second sentence by citing "the FFA among the Navy, EPA, and the State of Rhode Island" and using the site designation that is referenced in the FFA (*i.e.* Site 13).
SC5: p. 1-1, ¶2	Please see comment on response to SC4.
SC9: p. 1-14, ¶5	Please add this information to an appropriate location in Section 2.2, perhaps with the risk management discussion.
SC10: p. 1-17, §1.10	Please see comment on response to SC2.
SC11a: p. 1-18, §1.10	The response to SC2 does not address this comment. Please see comment on response to SC2.
SC13b: p. 1-20, §1.11	Because background concentrations are calculated conservatively (95% upper concentration limit) it is not likely that natural variability would be a

reasonable cause for background exceedances. Furthermore, because the site is a tank farm, the release of petroleum to the site is a potential source of metals contributing to soil contamination. Given the historical use of the site, EPA objects to characterizations that the cause of background exceedances is natural conditions only. Please remove that FS language. A proper background study for groundwater is warranted.

SC17a: p. 2-5, §2.2.1 Please see comment on response to SC2.

SC17b: p. 2-5, §2.2.1 Acknowledge that the RIDEM risk threshold is exceeded for recreational use of soil and sediment.

SC17c: p. 2-5, §2.2.1 The Navy must also restrict groundwater use for irrigational purposes or demonstrate that there is no risk for such uses including vegetable gardening.

SC18a: p. 2-6, §2.2.2 Please delete the sentence referenced in the original comment because residential PRGs were not developed for soil (refer to Table 2-4). Also, please see comment on response to SC2. Even if active remediation is determined not to be warranted, the development of PRGs for the hypothetical future resident scenario will be necessary to define the limits of land-use controls.

SC18b: p. 2-6, §2.2.2 The response to SC2 does not address this comment. Please address the details provided in EPA's the original comment.

SC22a: p. 2-8, ¶3 Please do not remove this discussion as soil should be retained as a medium of concern. Please see comment on response to SC2.

SC22b: p. 2-8, ¶3 Please conduct this evaluation as soil should be retained as a medium of concern. Please refer to EPA's comment on Navy's response to SC2.

SC25a: p.2-10, §2.2.5.1 Please see comment on response to SC2.

SC25b: p.2-10, §2.2.5.1 Please see comment on response to SC2.

SC29: p. 2-12, §2.6 Please see comments on responses to SC2, SC18a, and SC18b.

SC30a: p. 2-13, §2.3.1 Please include an RAO for soil to address potential risks associated with future use of the site, whether they are associated with the residential, recreational, or construction worker scenarios.

SC30b: p. 2-13, §2.3.1 Please see comment on response to SC2.

SC31b: p. 2-13, §2.3.2 As previously noted, the groundwater RAO must be to "Achieve federal and more stringent State drinking water standards," not just prevent exposure (that is just a short-term measure required until groundwater standards are achieved).

SC32: p. 2-13, §2.4 Estimate the volume of soil with contaminants exceeding levels that allow

for unrestricted use and unlimited exposure.

SC33: p. 3-1, §3.1 Please see comment on response to SC2.

SC34: p. 3-5, §3.3 The response is not correct. Table 3-1 eliminates all of the RPOs with the exception of No Action, Environmental Land Use Restrictions (ELUR), Monitoring, and Monitored Natural Attenuation. Section 3.3 should therefore only include the more detailed evaluation of technologies and process options for these four technologies. Please reconcile the differences between the tables and text.

SC39: p. 3-9, §3.3.2 EPA retracts this original comment because MNA was retained in Table 3-1 but deleted after further evaluation in this section. However, containment and removal were eliminated in Table 3-1 and should not have been further evaluated in this section.

SC40a: p. 3-11, §3.3.5 In the response to SC31b, EPA noted that the groundwater RAO was insufficient and that the Navy needs to achieve all drinking water standards. Therefore, RPO's that will achieve drinking water standards need to be carried forward.

SC40b: p. 3-11, §3.3.5 Please see comment on response to SC34.

SC41: p. 3-14, ¶1 Please see comment on response to GC2.

SC42: p. 4-1, §4.0 Please see comment on response to GC2.

SC45: p. 4-2, §4.1.2, ¶3 As previously noted, LUCs alone will not achieve the required RAO of achieving drinking water standards.

SC46: p. 4-2, §4.1.2, ¶4 The text states that the Navy would coordinate with abutters to prevent the installation of residential drinking water supply wells downgradient of the site. This is not consistent with the FS text. Given that the downgradient property abuts the bay, it is unlikely that groundwater would be suitable for drinking or irrigation purposes due to salinity. Please correct the text discussion as appropriate to address EPA's comment.

SC52a: p. 4-5, §4.2.2 GW-2 is not protective because LUCs will not achieve risk-based drinking water standards. EPA guidance for potential drinking water aquifers requires the return of groundwater to beneficial use rather than imposing LUCs to prevent groundwater use. The Navy must develop groundwater alternatives that will meet the RAO to achieve drinking water standards.

SC52b&d: p. 4-5, §4.2.2 The alternative will not meet risk-based groundwater standards. Therefore the alterative does not meet the criterion (limiting exposure alone is not sufficient).

SC53: p. 4-6, §4.3 Please see comment on response to SC52a.

SC54b: p. 4-8, Table	Please see comment on response to SC2.
SC56b: Table 2-2	The Coastal Resources Management Rhode Island General Laws may be applicable if soil remedial alternatives are considered to address potential risks associated with contamination in soil or if components of any groundwater alternatives (monitoring wells or active remedial components of any treatment alternatives) occur within the coastal regulated area.
SC57a: Table 2-3, A)	This ARAR should be included for the evaluation of soil remedial alternatives. Please see comment on response to SC2.
SC57a: Table 2-3, C)	Retain EPA's original text and add at the end: ", as well as all risk-based groundwater standards."
SC57b: Table 2-3, A)	Active groundwater and soil treatment alternatives may require the discharge of remediation process water to surface water.
SC58a: Table 2-4	Please see comment on response to SC2.
SC58b: Table 2-4	This comment should be addressed when the Navy adds soil remedial alternatives to the FS.
SC59: Table 2-5	Please see comment on response to SC2.
SC62a: Table 3-1	Please see comment on response to GC2.
SC62b: Table 3-1	There is no difference between hydraulic containment and hydraulic barriers. Nevertheless, hydraulic containment was not included as a retained technology or process option in Table 3-1. Therefore, it should not be further evaluated in Section 3.3.3. Please correct.
SC62c: Table 3-1	Removal by extraction wells was not a retained technology or process option in Table 3-1. Therefore, it should not be further evaluated in Section 3.3.3. Please correct.
SC63: Table 3-2	Please see comment on response to GC2.
SC64a,c,&d: Table 4-1	Please see comment on response to GC2.
SC65: Table 4-2	Please see comment on response to GC2.
SC66-69	Revise Tables based on comments made to the Section 2 ARARs tables.