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LETTER AND RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT COMMENTS ON DRAFT FINAL FEASIBILITY STUDY SITE 17 FORMER BUILDING 32 GOULD ISLAND NETC NS NEWPORT RI
2/15/2013
RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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

15 February 2013

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

Re: Draft Final Feasibility Study
Site 17, Former Building 32 - Gould Island, NETC

Dear Ms. Montegross,

The Office of Waste Management at the Rhode Island Department of Environmental Management has conducted a review of the *Draft Final Feasibility Study*, dated December 2012 for Former Building 32 – Gould Island (Site 17), Naval Station Newport, located in Newport, RI. As a result of this review, this Office has generated the attached comments on the *Draft Final Feasibility Study*.

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,

Pamela E. Crump, Sanitary Engineer
Office of Waste Management

cc: Matthew DeStefano, DEM OWM
Richard Gottlieb, DEM OWM
Gary Jablonski, DEM OWM
Deb Moore, NSN
Kymberlee Keckler, EPA Region I
Ken Finkelstein, NOAA
Ken Munney, USF&WS
Steve Parker, Tetra Tech

RIDEM Comments (2/15/13) on the
Draft Final Feasibility Study (12/31/12) for
Site 17 – Former Building 32, Gould Island
Naval Station Newport, Newport, RI

General Comments:

1. Several potential areas of concern (AOCs) identified by RIDEM at this Site have not been addressed in this Feasibility Study. These include the area where three small underground storage tanks (USTs) were located in the northwest corner of the power plant, the sludge pits for the acetylene generator building, and the potential leach field for the power plant. Please be advised that the State reserves the right to require investigation and/or remediation of these additional AOCs in the future under the State Program.

Specific Comments:

1. **p. ES-7, Executive Summary; Alternative SD3A.**

   RIDEM suggests changing Alternative SD3A to Alternative 4.

2. **p. 1-18, Section 1.8.2, Soil; 2nd paragraph.**

   This paragraph discusses how the rigging platform is structurally unsound and remaining impacted soils could erode into the sediment contributing to the volume of contaminated sediment. Once the rigging platform is removed, how will the Navy prevent erosion of soil into the Stillwater Basin? If erosion of this soil occurs after the dredging remedy is completed, then sediment will become recontaminated in this area. It is recommended that the FS be modified to state that the soil removal and stabilization of the area will occur prior to dredging at the site.

3. **p. 1-25, Section 1.10.1, Non-carcinogenic Risks.**

   The discussion of the results of the Phase 1 Remedial Investigation (RI) report human health risk assessment (HHRA) was updated to reflect a hazard index rounded to one significant figure, thereby indicating that noncancer risk to construction and industrial workers does not exceed unity, which indicates an acceptable level of risk. This rounding to one significant figure is in accordance with typical risk assessment practice and USEPA Risk Assessment Guidance (RAGS) Parts A and D. However, Section 1.10.5 was not updated accordingly. Please update this section for consistency.

4. **p. 1-26, Section 1.10.2, Carcinogenic Risks.**

   Section 1.10.2 was updated to indicate that there is an elevated cancer risk for construction workers due to the presence of cadmium and chromium (as hexavalent chromium, Cr^{+6}) in shallow soil. Additionally, cadmium and chromium were carried through as COCs for the PRG development process. However, 10^{-6} cancer risk level risk-based candidate PRGs were not calculated for cadmium and chromium and justification for not doing so was not provided. Furthermore, chromium in shallow soil is a cancer risk driver and therefore should have a residential and industrial direct contact PRG selected. Please derive PRGs for these COCs or provide justification why PRGs need not be developed. In addition, please update Figures 2-2A and 2-2B accordingly.

5. **p. 1-28, Section 1.10.4, Human Health Risk Assessment Contaminants of Concern; whole section.**

According to the Phase I RI analytical results for surface and subsurface soil, there are multiple locations where concentrations of total petroleum hydrocarbons (TPH) are greater than the Residential DEC of 500 mg/kg. Many of these locations are not comingled with PAHs that would be remediated as a result of being greater than PRGs. In other words, there are concentrations of TPH greater than the Residential DEC of 500 mg/kg that will be left in place because they were excluded from development of PRGs and no individual PAH exceeds its PRG in that location. These sample locations include surface soil samples TP10, SB313, SB318, SB334, SB335, and SB336 and subsurface soil locations TP05, TP06, TP09, TP10A, TP10B, SB306B, SB402, and SB404. As a result, please include in this FS a comparison of existing TPH results as well as confirmatory TPH results to RIDEM DECs/LC for all of these locations and any other areas where petroleum was released.

6. **p. 1-28, Section 1.10.5, Human Health Risk Summary.**

Despite the fact that concentrations of several VOCs exceed the USEPA risk-based vapor intrusion screening levels (VISLs) for a commercial scenario, indicating that vapor intrusion may be a complete pathway, the Navy did not evaluate this pathway in the Draft Final FS. In response to requests to evaluate this pathway, the Navy stated that because the RI evaluated vapor intrusion using available guidance at the time (i.e., USEPA's OSWER 2002 draft *Guidance for Evaluating the Vapor Intrusion Indoor Air Pathway from Groundwater and Soils*), which did not identify contaminants present at concentrations greater than 10^{-5} or 10^{-4} target cancer risk levels, evaluating this pathway "appears to be a request to step backwards to the RI".

Because the vapor intrusion guidance has been updated since 2002, there are revised VISLs now available, and toxicity values for several detected concentrations evaluated in the RI have been recently updated in USEPA's Integrated Risk Information System (IRIS) since the RI (namely, tetrachloroethylene; PCE), it is recommended that Navy include the updated VISLs in the development of risk-based PRGs for groundwater in this Draft Final FS. Additionally, Navy's statement that there are currently no buildings on the Site and there is no plan for constructing buildings on the Site and therefore including vapor intrusion as a relevant exposure pathway is not necessary directly contradicts Navy's previous comment: "unless an environmental land use restriction is memorialized by a selected alternative in a ROD for this Site, it cannot be assumed that the Navy's land use restriction will remain in perpetuity." The Navy does not state in the comment response whether an ELUR or LUC will restrict construction of buildings that may be occupied in the future. In light of the fact that PRGs may be developed and/or modified during the FS and in later stages before the Record of Decision, we therefore respectfully disagree that consideration of the vapor intrusion pathway is a "step backward" in this process and recommend that the FS include discussion of LUCs that require evaluation and/or mitigation of the vapor intrusion pathway for construction of future buildings at the Site (such as that approach recently proposed for Site 08 (NUSC) and Site 19 (Onshore Derecktor Shipyard).

7. **p. 2-3, Section 2.1.4, Identification of Applicable and Relevant and Appropriate Requirements; whole section.**

If an area on site exists following the remedial action that contains more than 3 yds of solid waste debris, RI Solid Waste Regulations No. 1 and No. 2 will need to be included as ARARs. Please update the ARAR tables in this FS if construction debris will remain onsite following the remedial action.

8. **p. 2-3, Section 2.1.4, Identification of Applicable and Relevant and Appropriate Requirements; whole section.**

RIDEM requested that the Navy include the following sections of RIDEM's Remediation Regulations as ARARs for this Site:

Chemical-specific
3.00 – Definitions, 8.01 – Remedial Objectives, 8.02 – Soil Objectives, 8.03 – Groundwater Objectives, 8.05 – Ecological Protection, 8.06 – Background Concentrations for Soil, 8.07 – Upper Concentration Limits, 8.11 – Remedial Objective Approvals, and 12.0 – Special Requirements for Managing Arsenic in Soil

Action-specific
3.00 - Definitions, 8.08 – Points of Compliance, 8.09 – Institutional Controls, 8.10 – Compliance Sampling, 8.11 – Remedial Objective Approvals, and 11.00 – Remedial Action

The Navy only included Sections 8.02 and 8.03 (with the exception of 8.02A(iv)) in the list of chemical specific ARARs and TBCs, and did not provide an explanation for not including the requested sections of the Remediation Regulations.

RIDEM also requested that the Rules and Regulations for Groundwater Quality, RIDEM, 7/26/10, and the Rhode Island Rules and Regulations for Hazardous Waste Management, Section 8, RIDEM, 6/7/10 be retained as ARARs in this FS.

Please include these sections/regulations as requested, or provide justification for their exclusion from this Feasibility Study. Please note that State Regulations should be considered ARARs and all applicable ARARs should be retained until the remedy is selected in the Proposed Plan.

9. **p. 2-10, Section 2.2.2, Derivation of Preliminary Remediation Goals; whole section.**

The Draft Final FS does not include PRGs for indeno(1,2,3-cd)pyrene, although indeno(1,2,3-cd)pyrene is present at a concentration exceeding the RIDEM industrial DEC. Please include development of a PRG for indeno(1,2,3-pyrene).

10. **p. 2-13, Section 2.2.2.3, Ecological PRGs; 3rd paragraph.**

"Finally, in accordance with RIDEM requests, the ERMQ PRG was reduced by half."

The Navy agreed to revise the ERMQ PRG from a value of 1.42 (unitless) to 0.71 as requested by RIDEM. However, this is not reflected in Table 2-6, Preliminary Remediation Goals for Sediment. The Proposed Ecological Risk-Based PRG and Selected PRG are still shown as 1.42. Please adjust the ERMQ PRG to 0.71 as agreed and modify the FS as necessary.

RIDEM has also requested that the Navy lower the PRG for PAHs from 46,178 ppb to 23,089 ppb. Although PAHs are factored into the ERMQ PRG, a separate PRG exists for PAHs only which was also calculated in the same manner as the ERMQ PRG. The Navy stated in the cover letter of their October 23, 2012 comment response package that they find no grounds to make additional reductions without further justification. However, the justification for decreasing the ERMQ PRG by half is the same as decreasing the PAH PRG by half. Both PRGs were based on NOECs/LOECs developed using the results of toxicity tests, which did not correlate well with chemistry data for the same

locations. Also, as mentioned during the conference call on this topic, the decrease of the PAH PRG will have no or minimal effect on the proposed area to be dredged in the Stillwater Area. Therefore, please adjust this PRG as requested.

11. p. 2-15, Section 2.2.2.4, Final PRGs; 3rd paragraph.

Please include a discussion of naphthalene exceedances in groundwater in Section 1 of this report, or explain why this discussion was unnecessary in this section.

12. p. 2-18, Section 2.4, Estimation of Areas and Volumes, soil; 1st bullet.

Please include TPH as a remedial goal for Area 2 since this area is a former petroleum storage area, located immediately adjacent to five former USTs.

13. p. 2-18, Section 2.4, Estimation of Areas and Volumes, Soil; 2nd bullet.

Please ensure that the cleanup of Area 3 meets TSCA requirements and that TSCA is made aware of the release in this area due to the PRG exceedances of PCBs in this location.

14. p. 2-18, Section 2.4, Estimation of Areas and Volumes, Soil; 1st paragraph.

"If pre-remedial sampling data indicates that action is necessary at this location, the in-place volume of soil requiring remediation is estimated to be 93 cy."

Is the pre-remedial sampling data indicated here the groundwater sampling for MNA? What will indicate if action is necessary? Please discuss this in the text.

15. p. 2-18, Section 2.4, Estimation of Areas and Volumes, Soil; 1st and 2nd paragraphs.

This section states that, in the area of SB306B, where building debris is present, 140 cy (in-place volume) of soil will be excavated to approximately 12 ft deep, over an estimated area of 314 square ft. An additional volume of 116 cy of soil mixed with debris will be excavated at SB306B, but would be handled with the debris excavated from the sumps. Please note whether this action will remove all the buried construction debris in this area, or how much will remain onsite.

16. p. 2-19, Section 2.4, Estimation of Areas and Volumes, Sump Debris.

Please ensure that each sump/trench is inspected for any potential floor drains which may exist. If any are found which have not been previously tracked and investigated, these will need to be tracked and investigated during the proposed remedial action.

17. p. 2-21, Section 2.4, Estimation of Areas and Volumes, Sediment; last paragraph.

"... a post-excavation sampling effort will be necessary to assure that the PRGs have been met within the dredge area on an area-average basis, which is the appropriate approach for sediment dredging."

RIDEM sent an email to the Navy on October 19, 2012 stating the following:

"RIDEM does not accept the area-weighted averaging approach in the Stillwater Basin area where dredging is proposed. Confirmatory sampling in the Stillwater Area must show that all sediment exceeding PRGs has been removed."

The Navy's response to this was included in the cover letter to the comment response package dated October 23, 2012, which was as follows:

"The Navy also requests reconsideration or clarification of RIDEM's position on the use of area average concentrations for measurement of success after dredging. Although this point is not critical to the subject of the FS document, it will require resolution prior to drafting a record of decision (ROD) or proposed plan."

RIDEM reiterates its position for individual compliance samples for the sediment removal area. Should the Navy wish to pursue the area-weighted averaging approach, the following requirements must also be met to ensure the removal of any potential hotspots: (1) no single result shall exceed a PRG by a factor of five, (2) no more than 10% of the individual locations shall exceed a PRG, (3) a statistically significant number of samples must be collected, and (4) the area-wide averaging approach shall include the impacted zone only. Finally, the above approach requires that the impacted area is well defined vertically and horizontally. This is not the case in the Stillwater Area. Therefore, if exceedances of the PRGs are observed in either base or sidewall samples, additional samples beyond the exceedance point will need to be collected to confirm that additional impact areas are not present.

Please also remove *"which is the appropriate approach for sediment dredging"* from the above sentence and throughout the document. RIDEM does not agree that area-weighted averaging is the appropriate approach; however, if all of the conditions above are met, RIDEM will consider the use of this approach for this Site.

18. p. 4-2, Section 4.1.2, Alternative SO2.

It does not appear in Appendix D that the cost of drumming sump water was included in the cost calculations for Alternative SO2. Please include this cost and update the FS as necessary.

19. p. 5-7, Section 5.1.4, Alternative 3A; 2nd paragraph.

The first sentence in this paragraph mentions Figure 2-8; however, this figure was not provided in this report. Please include this figure in the report, or provide a 2-dimensional figure showing the location of the sediment which exceeds PRGs in the Stillwater Area. Please also show sediment sample locations on the figure.

20. p. 6-3, Section 6.1.2, Alternative GW2; 4th paragraph.

"In order to provide documentation of the attenuation of organic COCs, and in order to document presence or changes in manganese concentrations relative to the PRG, an initial annual monitoring schedule is appropriate. If, after several rounds of monitoring, the organic COCs are still present at levels exceeding PRGs, and if a trend of reducing COC concentrations is not evident, continued annual monitoring would be appropriate."

Please revise the above statement as follows:

"In order to provide documentation of the attenuation of organic COCs, and in order to document presence or changes in manganese concentrations relative to the PRG, an initial annual monitoring schedule is appropriate. If, after several rounds of monitoring, the organic COCs and manganese are still present at levels exceeding PRGs, and if a trend of reducing COC concentrations is not evident, then the Navy will contact the regulatory agencies to determine whether active remediation is required or whether additional sampling is appropriate."

21. Figures

Although figures depicting exceedances of RIDEM's Residential DEC, Leachability Criteria, and GA Groundwater Criteria were provided in this Draft Final FS, it would be appropriate to include exceedances RIDEM's TPH criteria on these figures, or on a separate figure in this FS, to ensure that all areas exceeding RIDEM's TPH criteria are addressed in the remedial alternatives for soil according to the Dispute Resolution Agreement dated April 24, 2012.