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TRANSMITTAL LETTER AND U S NAVY RESPONSES TO U S EPA REGION I AND RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT COMMENTS ON THE DRAFT FOCUSED FEASIBILITY STUDY FOR CED AREA NCBC DAVISVILLE RI
11/3/2015
TETRA TECH

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PITT-11-15-001

November 3, 2015

Project Number 112G01813

Mr. Jeffrey Dale
Remedial Project Manager
Naval Facilities Engineering Command, Mid-Atlantic
4911 South Broad Street
Building 679, PNBC
Philadelphia, Pennsylvania 19112-1303

Reference: CLEAN Contract No. N62470-08-D-1001
Contract Task Orders WE01

Subject: Transmittal of Navy Response to USEPA and RIDEM Comments on Draft Focused Feasibility Study for CED Area
Former Naval Construction Battalion Center Davisville
North Kingstown, Rhode Island

Dear Mr. Dale:

Tetra Tech, Inc. is pleased to provide one paper copy each of the Navy Response to USEPA Comments on Draft Focused Feasibility Study for CED Area and the Navy Response to RIDEM Comments on Draft Focused Feasibility Study for CED Area at the former Naval Construction Battalion Center (NCBC) Davisville in North Kingstown, Rhode Island. Upon receipt of EPA and RIDEM concurrence that these responses are acceptable, the Navy will propose a schedule for the preparation of a revised Feasibility Study in accordance with the Federal Facilities Agreement (FFA).

Through copy of this letter, these responses are being provided to the recipients listed below. Multiple copies have been provided to USEPA for their internal distribution. If you have any questions regarding this material, please do not hesitate to contact me at (412) 921-8608.

Very truly yours,

Scott R. Anderson, P.G.
Hydrogeologist/Project Manager

JWL/clm
Attachments
c: D. Barney (NAVFAC Mid-Atlantic) w/attach. – 1 copy
C. Williams (U.S. EPA) w/attach. – 3 copies
R. Gottlieb (RI DEM) w/attach. – 1 copy
A. Glucksman (Mabbett) w/attach. – 1 copy
P. Steinberg (Mabbett) w/attach. – 1 copy
S. King (QDC) w/attach. – 1 copy
N. LaFontaine (Town of North Kingstown) w/attach. – 1 copy
S. Anderson (Tetra Tech) w/attach. – 1 copy
L. Sinagoga (Tetra Tech) w/attach. – 1 copy
G. Glenn (Tetra Tech) – cover letter only
NIRIS RDM w/attach. – 1 copy
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Navy Response to USEPA Comments on Draft Focused Feasibility Study for CED Area of the Former Naval Construction Battalion Center Davisville North Kingstown, RI (USEPA Correspondence Dated September 21, 2015)

(Note: Several comments had multiple parts. These types of comments have been separated into parts and labelled (a), (b), (c), etc., to simplify the responses.)

GENERAL COMMENT

Comment No. 1 – EPA has determined that it would be in the best interest of the Navy to remove the Groundwater Early Action Component to this remedy and replace it with several active alternatives. An "Early Action" would be done pre-ROD. Since this FFS is to support the ROD for this OU, an "Early Action" is not the appropriate mechanism to incorporate a groundwater remedy into the ROD. A comprehensive remedy must be put into place for the Navy plume comingling with the plume with a source area on the Nike PR-58 FUDS. While we agree with the Navy that currently there are no significant source areas on Navy property, there was use of the same chemicals at the former Building 224 and therefore, most likely spillage or floor drain leakage or outright dumping, as was reported in the IAS dated 1984, may have created a small plume that may or may not remain at the site. Navy has an obligation to restore the aquifer and to clean up the plume on Navy property. An FS in accordance with (IAW) EPA CERCLA Guidance must be submitted for review.

Navy Response: Groundwater alternatives will be prepared. The technologies evaluated and the alternatives in a revised FS will match the technologies and the five alternatives developed in the Nike PR-58 Site RI/FS. These technologies and alternatives are summarized in Section 14 of the Draft NIKE PR-58 RI/FS.

The Navy appreciates EPA guidance on what is in the best interest of the Navy; and would like to point out that the generally understood intent of this Focused Feasibility Study with an Early Action component for groundwater was intended to a) bring closure to the soil concerns; and b) apply a CERCLA based restriction on groundwater. Accomplishing these two actions would allow the future use of this parcel to be readily accommodated; and allow the property an opportunity to be put back into productive economic use for the region.

Additionally, Navy appreciates the apparent change in EPA's long held position ("*The Navy must wait for an acceptable plan to control the offsite source to be in place before a final plan can be proposed for the sites.*" EPA letter 11/15/01) that has kept the issuance of a final feasibility study for this site in abeyance since 2001.

With regard to the statement of "...may have created a small plume that may or may not remain at the site." the reader is referred to Appendix B (Groundwater Technical Memorandum).

SPECIFIC COMMENTS

Comment No. 2: p. i-iv – Revise the Table of Contents section titles based on the comments below (based on developing groundwater, as well as soil, active remedial alternatives).

Navy Response: Table of contents will be revised after the FS is revised.

Comment No. 3: p. 1, §1.0 – The Introduction needs to include that the Base was listed on the National Priorities List as the Naval Construction Battalion Center Superfund Site.

Navy Response: Agree. The subject text will be added.

Comment No. 4: p. 1-2, ¶ 1 – Replace the second sentence with a description of the active groundwater remediation alternatives to be developed.

Navy Response: The subject sentence will be revised to include groundwater alternatives.

Comment No. 5: p. 1-2, 2nd bull – After "develops soil" insert "and groundwater."

Navy Response: The subject sentence will be revised to include groundwater.

Comment No. 6: p. 1-2, 4th bull – After "Assembly and Detailed Analysis of Remedial Alternatives" insert "for Soil."

Navy Response: The subject text will be revised per the comment.

Comment No. 7: p. 1-2, 5th bull – The bullet needs to describe Section 5 as the "Assembly and Detailed Analysis of Remedial Alternatives for Groundwater" (including active groundwater alternatives).

Navy Response: The subject text will be revised per the comment to include the groundwater alternatives.

Comment No. 8: p. 1-3, 1st bull – This bullet needs to describe Section 6 as the Comparative Analysis of the Soil and Groundwater Alternatives

Navy Response: The subject text will be revised per the comment to include groundwater.

Comment No. 9: p. 1-3, §1.2 – In the last sentence of the second paragraph identify what type of private property borders the site – residential, commercial/industrial, undeveloped. Is the paved walking/biking path part of a recreational facility?

Navy Response: The subject will be revised per the comment to describe the surrounding land uses.

Comment No. 10: p. 1-5, § 1.2.2 – This section should also describe in more detail on site sources of the groundwater contamination (such as from Building 224 operations).

Navy Response: Disagree. The operations of each site are already described in Section 1.4.

Comment No. 11: p. 1-7, ¶ 1 – Were the contents or inside surfaces of the drums (if there were no contents) tested, and if so, what were the results?

Navy Response: The purpose of this section is to provide a very general background of the site's previous investigations and remedial actions. The content of the subject paragraph is sufficient, and the reader is referred to the Remedial Action Completion Report for further details.

Comment No. 12: p. 1-7, 1st bull – please explain why the 2014 HHRE identified a soil risk, but the 1998 HHRE didn't.

Navy Response: The risk estimates for the 1998 and 2014 HHREs are not the same because the databases evaluated and the risk methodologies used (including receptors evaluated) are not the same. For instance, the 1998 HHRE only included soil data from Sites 02/03. Whereas, the database for the 2014

HHRE also included, for example, Study Area 04 data. The 1998 HHRE did not evaluate hypothetical future residential exposures to soil; the 2014 HHRE did. However, the 1998 report did evaluate children in a daycare facility exposed to surface soil via ingestion and dermal contact. The toxicity criteria used for PCBs (a primary COC) in both reports are similar. However, in the 1998 report, the reference dose for Aroclor-1254 was used to evaluate Aroclor-1254 data only. In contrast, the reference dose for Aroclor-1254 was used to evaluate all PCBs in the 2014 HHRE.

Comment No. 13: p. 1-9, ¶ 3 – Regarding PCBs, the TSCA risk-based residential standard applied at most Region 1 site is 1 ppm, so is more conservative than the RIDEM residential standard.

Navy Response: Comment acknowledged.

Comment No. 14: p. 1-10, ¶ 2 – in this paragraph also discuss what CERCLA site contaminants (such as potentially from Building 224 operations) are present in the groundwater.

Navy Response: The reader can refer to Appendix B (Groundwater technical Memorandum) for the subject discussion.

Comment No. 15: p. 1-10, §1.2.5.2 – although the first sentence in the first paragraph mentions ecological receptors the previous section only discuss potential exceedances of human health standards. There was no discussion of potential exceedances of ecological standards. Include a discussion of potential exceedances of ecological standards in section 1.2.5.1.

Navy Response: Ecological risk was evaluated and determined in earlier EA documents, specifically Technical Memorandum for Ecological Risk Evaluation for IRP Sites 02 and 03 and Study Areas 01 and 04, 2000. This conclusion was repeated in the Initial Screening of Remedial Alternatives, Section 1.4.4 (EA, 2004). This conclusion will be added at a suitable location in the FFS.

Comment No. 16: p. 1-12, ¶2 – in the second to last sentence replace the second "RIDEM" with "CERCLA."

Navy Response: Disagree. The only reason lead is being addressed is because RIDEM does not use the USEPA lead-risk model and because of the "Newport Agreement of January 12, 2012" that the presence of unacceptable risk triggers RIDEM criteria for all contaminants, even those that were not identified as COCs in the HHRA. Under a CERCLA-type risk evaluation, lead would not have been identified as a COC.

Comment No. 17: p. 1-12, ¶3 – More detail should be provided as to how the determination that there was no ecological risk was made (since PCBs were identified in the soil above human health risk standards, eco-risk standards are often lower).

Navy Response: See Response to Comment No. 15.

Comment No. 18 – Some rationale should be provided to explain why FFS and Early Action are using the combined list of CVOCs (see page 1-12 through 1-13) – there should be CVOCs identified separately for soil and groundwater.

Navy Response: The subject comment appears to be referring to the last paragraph on page 1-12 which is a discussion of groundwater contaminants. In any case, CVOCs are not COCs in soil. The COCs in soil and groundwater are listed in section 2, but this information can also be added to this section.

Comment No. 19: p. 2-1, §2.0 – This section needs to address groundwater RAOs and GRAs, as well as those for soil.

Navy Response: The subject text will be revised to address groundwater RAOs and GRAs.

Comment No. 20: p. 2-2, ¶3 – In the first sentence replace "RIDEM requires that RIDEM Direct Exposure Criteria (DECs) also be met, and CERCLA requires that these requirements apply across the OU" with "CERCLA requires that more stringent State ARAR standards, in this case RI Remediation Regulation Direct Exposure Criteria (DECs), also be achieved throughout the OU."

Navy Response: Disagree. The subject paragraph was revised per USEPA comments on the preliminary draft in the interest of expediting the FFS process. The subject text will be revised as follows with emphasis on *all* contaminants, and to be consistent with Section 1.2.6 where the reason for applying the RIDEM DECs is fully described: "Because there is unacceptable risk in SA 04, RIDEM requires that RIDEM Direct Exposure Criteria (DECs) also be met for <u>all</u> contaminants, whether or not they were identified as COCs."

Comment No. 21: p. 2-3, ¶3 – Discuss the groundwater RAOs, GRAs, and ARARs in this section.

Navy Response: The subject text will be revised to address groundwater RAOs, GRAs, and ARARs.

Comment No. 22: p. 2-6, § 2.3.2.2 – Replace "These ARARs and TBCs provide some medium-specific guidance on "acceptable" or "permissible" concentrations of contaminants." with "The ARARs contain promulgated cleanup standards for Site contaminants. The TBCs provide guidance on developing risk-based cleanup standards".

Navy Response: The subject text will be revised, but the subject text is identical to that used in Site 16 FS, section 2.3.2.2.

Comment No. 23: p. 2-6, § 2.3.2.3 – Remove "concentrations of contaminants or" from the second sentence.

Navy Response: The subject text will be revised, but the subject text is identical to that used in Site 16 FS, section 2.3.2.3.

Comment No. 24: p. 2-6, § 2.3.2.2, and Table 2-1 and appropriate alternative Specific ARAR tables – Include EPA's lead guidance per the OU9 ROD Table E-1.

Navy Response: Disagree. The USEPA lead guidance was not a factor in selecting the lead PRG. The USEPA lead models were used in the RI which determined that there was no lead risk. This determination was over-ridden by RIDEM.

Comment No. 25: p. 2-7, ¶3 – Replace the fourth sentence with: "RIDEM DECs for residential exposure were also calculated to determine the extent of area where CERCLA remedial action was required.

Navy Response: Disagree with replacing the sentence. The subject of this paragraph describes how soil PRGs were developed. The subject sentence is a factual statement. The suggested sentence is not accurate because no DECs were calculated. In any case, PRGs essentially define the area/volume to be remediated, and the first paragraph of Section 2.4 covers the last portion of the suggested sentence. No revisions are proposed.

Comment No. 26: p. 2-7, §2.5 – Remove this section. The ARAR is the promulgated state number, not the State assessment process addressed under Rule 8.10. The Navy needs to follow EPA CERCLA guidance on how to interpret Site data and apply it to evaluating the Site.

Navy Response: Disagree. The use of the Rule 8.10 analysis was first advanced to the BCT by email 11/6/13 and then re-iterated in 3/10/15. The topic appeared in discussions on several occasions after that, but there were no rejections of the approach and use of Rule 8.10. If the RIDEM criteria are being used as PRGs; it certainly makes sense to apply other RIDEM regulations to evaluate compliance with the criteria.

Comment No. 27: p. 2-9, §2.7.1 – In the last sentence of the first paragraph remove: "or RIDEM residential DECs" (the PRGs were developed in part, from the DECs, so they are not separate from the residential DECs).

Navy Response: Agree.

Comment No. 28: Table 2-1, pp 2 & 3 – The text in the last column should indicate how the active remedy alternative will achieve MCLs, MCLGs, and State groundwater Remediation Regulations (unless waived as part of the TI waiver) and that that the LUCs will prevent use of groundwater.

Navy Response: Disagree. The ARAR tables in Section 2 are general and apply to one or more of the alternatives. The table follows the same format as the Site 16 FS. See the ARAR tables in Section 4 that describe how the ARARs are met for each alternative.

Comment No. 29: Table 2-2 – Remove RIDEM IC regs as this is an action specific ARAR.

Navy Response: Agree.

Comment No. 30: Table 2-2 – Include State Coastal Zone Management Regs per the OU9 ROD Table E-2. If monitoring wells for the groundwater alternatives or active remedies for soil may occur in or adjacent to federal and/or State jurisdictional wetlands, within the 500 year coastal floodplain, at or near historic sites, or in or near endangered species habitat, location-specific federal and/or State ARARs should be included in this table.

Navy Response: Agree. As stipulated or Site 16, Coastal Zone Management Regulations will be added. Other possible ARARs listed in the comment (wetlands, floodplains, and/or endangered species) will be added if pertinent after groundwater alternatives are developed.

Comment No. 31: Table 2-4 – Remove the Rule 8.10 analysis information from the Table (see previous comment).

Navy Response: Disagree. See response to Comment No. 26.

Comment No. 32: Table 2-5 – Need to add Action-specific ARARs for the active groundwater alternatives to be added to the FFS.

Navy Response: Action-ARARs for groundwater will be included after groundwater alternatives are developed.

Comment No. 33: Table 2-5, p. 1 – For the TSCA citation, the Action to Be Taken text needs to address all of the soil alternatives, not just excavation (if PCBs are to be left in place then LUCs and monitoring will ensure the is no exposure risk to residential/unrestricted recreational receptors.

Navy Response: The evaluation column discusses removal, covering, and LUCs. Inspections (that is, monitoring) would be performed to verify that LUCs are enforced and maintained.

Note that throughout the FFS, the term "monitoring" is used in references to sampling, such as groundwater monitoring. The term "inspection" is used to refer to verification and enforcement of LUCs.

Comment No. 34: Table 2-5 – Revise the last listed ARAR as follows:
Rules and Regulations for Hazardous Waste Management, Hazardous Waste Determination, DEM OWM-HW01-07, Rule 5.3 / Applicable / Standards for determining whether a waste is hazardous waste. Under Rule 3 of the regulations, hazardous wastes are defined as any hazardous waste as defined in 40 CFR 261.3. The standards also apply to "Rhode Island Wastes," which are defined as any wastes meeting the definition of R001 through R005 and R010 under the Rule and that do not meet any of the federal definitions of a hazardous waste. / These regulations would apply when determining whether

or not a solid waste generated during remedial activities is hazardous, either by being listed, exhibiting a hazardous characteristic, or meeting the definition of a Rhode Island Waste.

Navy Response: Agree. In addition to the revisions noted, "R001 through R005 and R010" will be replaced with "R006, R007, R009, and R010" to incorporate the 2014 revisions to the regulation.

Comment No. 35: p. 3-4, §3.2.2 – In the paragraph above "Effectiveness" add a new second and third sentence: "The existing land use restrictions would need to be incorporated into a CERCLA decision document to be enforceable under CERCLA and the FFA. As part of the remedial process, more specific land use restrictions may need to be required under the CERCLA remedy to prevent unlimited recreational uses (which, under State standards, are regulated as a residential use) or to restrict activities that may be consistent with the port facility restrictions, but pose a sufficient exposure risk from Site contaminants (such as a day care facility) or may interfere with the implementation of the CERCLA remedy."

Navy Response: The suggested text will be added.

Comment No. 36: Table 3-1, p.1 – (a) Incorporate the comment above into the Screening Comment text for the "Limited Action," "LUC" line.

Navy Response: Disagree with repeating the text in comment 35 in the screening column on Table 3-1. The subject text plays no part in the screening decision.

(b) "Monitoring" will be required if contamination exceeding PRGs is left in place.

Navy Response: Disagree. The extent of monitoring is already described. The existing data does not suggest that the remaining soil contamination is a continuing source of groundwater contamination, so groundwater monitoring is not necessary.

(c) Under "Containment" "Erosion Control" needs to be retained pertaining to active remedial components of any alternative (installing/O&M of monitoring wells, soil covers, ect.)

Navy Response: Disagree. Table 3-1 describes technologies for the remediation of the contaminants in soil. As noted in the table, erosion control is to minimize the migration of contaminated soil. An example

would be the stabilization of a sloped side of a landfill. The type of erosion control suggested in the comment is the typical erosion and sediment control (E&SC) that would be the necessary part of any construction activity. This type of E&SC is included in the ARARs.

Comment No. 37 – Please note: The following Chapter 4 Specific Comments are only made the first time there needs to be a change. Please make the appropriate changes for the other alternative language.

Navy Response: Comment acknowledged.

Comment No. 38: p. 4-8, §4.2.2 – This alternative also needs to include monitoring (including that the protective 2' cover remains over the contaminated subsurface soil; that there remains compliance with LUCs/Soil Management Plan; and, in coordination with monitoring that will be required for the groundwater component of the remedy, that soil contaminants are not migrating to the groundwater).

Navy Response: No groundwater monitoring is required because it has been demonstrated that the soil contaminants are not leaching into the groundwater. Annual inspections (that is, monitoring), cover control, and soil management are already included in the LUC component description.

Comment No. 39: p. 4-8, Component 1 LUCs – Remove last sentence. This is not an environmental restriction. Navy did not perform a risk assessment for port facility operation or support. There is no CERCLA standard for such a specific use restriction. The CERCLA restriction would be based on preventing residential/unrestricted recreational use, including day care facilities. Please make the appropriate change in the other alternatives.

Navy Response: The subject sentence refers to existing lease conditions and will be deleted.

Comment No. 40: p. 4-9, §4.2.2.2 – (a) In the second sentence of the first paragraph remove: "and RIDEM residential DECs by future residents" (the PRGs were developed in part, from the DECs, so they are not separate from the residential DECs) and add at the end of the sentence: ", along with maintaining 2 feet of cover over subsurface contaminated soils." Add a new third sentence: "Monitoring will ensure the remedy remains protective."

Navy Response: Agree in part. Subject sentence would be revised as follows: "..COC concentrations greater than residential PRGs. LUCs maintaining 2 feet of soil over COC concentrations greater than I/C PRGs would be protective by preventing unacceptable I/C exposure. Inspections will ensure that LUCs are enforced and that the remedy remains effective."

(b) In the second sentence of the third paragraph insert "and contact with subsurface soils that exceed I/C standards" after "future residential development"

Navy Response: Agree, suggested text will be added.

(c) and add at the end of the sentence: ", along with maintaining 2 feet of cover over subsurface contaminated soils."

Navy Response: Agree, suggested text will be added.

(d) Add at the end of the third sentence: ", and monitoring will ensure the LUC are enforced and the remedy remains protective."

Navy Response: Disagree. No groundwater monitoring is necessary. It has been demonstrated that the soil is not a source of groundwater contamination. Further, the subject sentence specifically describes "inspection", so the addition of "monitoring" would be redundant; propose to add to third sentence: "..and enforced and the remedy remains protective."

Comment No. 41: p. 4-10, Short-Term Effectiveness – please note that for this alternative and all others that EPA has not reviewed the Navy's Sustainability Evaluation for accuracy. EPA will require Navy to implement the selected remedy in as green and sustainable fashion as possible and report on their success in the RA-complete Report.

Navy Response: Comment Acknowledged.

Comment No. 42: p. 4-11, §4.2.3 – This alternative also needs to include monitoring (including that the protective 2' cover remains over the contaminated subsurface soil and the asphalt cover remains protective; that there remains compliance with LUCs/Soil Management Plan; and, in coordination with monitoring that

will be required for the groundwater component of the remedy, that soil contaminants are not migrating to the groundwater).

Navy Response: Disagree. As noted in other comments, it has been demonstrated that leaching to groundwater is not an issue. Therefore, groundwater monitoring for this purpose is not necessary. Inspection (that is, monitoring), cover maintenance, and soil management are already described.

Comment No. 43: p. 4-11, ¶3 – Add a new third sentence that describes that due to creating the impermeable cover stormwater requirements will also need to be met.

Navy Response: Agree. Storm water control provisions will be added.

Comment No. 44: p. 4-12, §4.2.3.2 – In the second sentence of the first paragraph remove: "and RIDEM residential DECs by future residents" (the PRGs were developed in part, from the DECs, so they are not separate from the residential DECs). Add a new third sentence: "Monitoring will ensure the remedy remains protective."

In the second sentence of the third paragraph insert "and contact with subsurface soils that exceed I/C standards" after "future residential development." Add at the end of the third sentence: ", and monitoring will ensure the LUC are enforced and the remedy remains protective."

Navy Response: See responses to Comment No. 40.

Comment No. 45: Table 4-1, Chemical specific ARARS – Include Lead Guidance per the OU9 ROD table E-1.

Navy Response: See response to Comment No. 24.

Comment No. 46: Table 4-3 – Remove RIDEM ELUR regulations and place into Table 4-4. Include Coastal Zone Management Regulations in Table 4-3 per the OU9 ROD table E-2 and any other location-specific ARARs that might apply to the individual alternatives (see Table 2-2 comments, above.

Navy Response: See responses to Comments Nos. 29 and 30.

Comment No. 47: Table 4-4 – (a) In addition to moving the ELUR regulations from Table 4-3 also

Navy Response: See Comment No. 29.

(b) include ARARs associated with maintaining 2' feet of cover over the contaminated subsurface soils

Navy Response: There is no ARAR for cover like this.

(c) (RI Sediment and Erosion Control guidance,

Navy Response: There is no E&SC to control.

(d) RI Air dust standards).

Navy Response: There are no active remedial activities that can create dust.

(e) Monitoring well requirements can be included in the groundwater ARARs and cross referenced to the soil monitoring requirements also.

Navy Response: Per previous comments, groundwater monitoring for leaching is not necessary.

Comment No. 48: Table 4-6 – See comments for Table 4-3.

Navy Response: See responses to Comments Nos. 29 and 30.

Comment No. 49: Table 4-7 – Include the appropriate Federal and State Requirements listed in Table E-3 of the OU9 ROD. Standards would also apply to O&M activities for the cover.

Navy Response: There are no ARARs on E-3 that are suitable for this alternative that have not already been called out on Table 4-7.

Comment No. 50: Table 4-9 – See comments for Table 4-3.

Navy Response: See responses to Comments Nos. 29 and 30.

Comment No. 51: Table 4-10 – Include the appropriate Federal and State Requirements listed in the OU9 ROD.

On the first page revise the last listed ARAR as follows:
Rules and Regulations for Hazardous Waste Management, Hazardous Waste Determination, DEM OWM-HW01-07, Rule 5.3 / Applicable / Standards for determining whether a waste is hazardous waste. Under Rule 3 of the regulations, hazardous wastes are defined as any hazardous waste as defined in 40 CFR 261.3. The standards also apply to "Rhode Island Wastes," which are defined as any wastes meeting the definition of R001 through R005 and R010 under the Rule and that do not meet any of the federal definitions of a hazardous waste. / These regulations would apply when determining whether or not a solid waste generated during remedial activities is hazardous, either by being listed, exhibiting a hazardous characteristic, or meeting the definition of a Rhode Island Waste.

Navy Response: See Response to Comment No. 34.

Comment No. 52: Chapter 5 – please also see general comments above (particularly an "Early Action" is not the appropriate mechanism to incorporate a groundwater remedy into the ROD). The RAOs need to also include restoration of the aquifer for beneficial reuse in a reasonable timeframe (unless a TI waiver is used). This is an EPA designated class IIb aquifer, a potential drinking water aquifer, and as such, unless a TI waiver approach is used, must be cleaned up to drinking water standards. If a TI waiver is used, the RAO would be to reduce groundwater contaminants in order to minimize contaminant migration until the off-site source controls are implemented (and potentially until TPH contamination is removed by the State action if the TPH is intermixed with the CERCLA contaminants).

Navy Response: Comment acknowledged. The FFS will be revised to include groundwater alternatives.

Comment No. 53 – The following additional wells are recommended for the groundwater LTM proposed in Table 5-1 of the FSS for the CED Area:

• MW03-17I (CVOCs): This well is proposed to monitor the intermediate depth beneath the core area of the Drum Removal Area.

• MW01-10S (CVOCs): This well will monitor potential eastern migration of contamination from the Drum Removal Area.

• MW03-10D (CVOCs): This well provides coverage of the deep plume along the important southeastern migration pathway from the source area.

• MW-Z3-03 (CVOCs): This well will serve as a sentinel well for the shallow TCE plume migrating westward from the source area.

• MW-Z3-03D (CVOCs): This well is located at the southern edge of the CVOC plume in the deep overburden. It will monitor the potential southern component of the deep plume at the southern boundary of the CED area.

• MW02-11D (CVOCs): This well is located in the deep overburden aquifer at the southern edge of the CVOC plume in the deep overburden. It will monitor the potential southern component of the deep plume at the southern boundary of the CED area. It appears to be beyond the leading edge of the deep plume, and, as such, will serve as a sentinel well. A potential substitute for this well is MW02-10D, which appears to be located on southern boundary of the leading edge of the deep CVOC plume. MW02-10D would monitor increases/decreases at the leading edge of the deep plume.

• MW01-15D (CVOCs): This well is located in the deep overburden just northeast of the leading edge of the deep CVOC well. It would serve as a sentinel well to indicate if the deep CVOC plume migrates further to the northwest.

• MW02-02S (CVOCs): This well monitors the shallow zone in an area where potential upward discharge from the deep overburden and bedrock may occur. MW02-02S is located over the leading edge of the TCE plume in deep overburden and bedrock zones and will serve as a sentinel well for upward migration of the deep plume into the shallow zone.

• MW02-03S (CVOCs): This well monitors the shallow zone in an area where potential upward discharge from the deep overburden and bedrock may occur. MW02-03S is located just beyond (eastward of) the leading edge of the TCE plume in deep overburden and bedrock zones. Thus, it will serve as a sentinel

well for potential upward migration of the deep plume into the shallow zone. Alternatively, monitoring of this well could be triggered after migration of the deep plume to MW02-03D is observed.

• MW01-14S/D (CVOCs): This well cluster provide coverage downgradient of the core area of the deep plume. Monitoring of the leading edge of this plume is not otherwise included in the LTM.

The above approach to long-term monitoring includes on-going monitoring in many of the key areas of the deep CVOC plume in the CED area. Ultimately, it will be necessary to demonstrate that contamination in all of these areas has fallen below remedial criteria before land use restrictions (LUCs) relating to groundwater quality can be removed. However, it appears that it may be a long time before the CVOC contamination throughout the CED Area is reduced to levels approaching remedial criteria. As a result, it may be more efficient to monitor just a few key locations that will provide an indication of contaminant levels in the CED area. Once such limited monitoring provides an indication that contaminant levels are approaching remedial criteria, a more extensive program of monitoring, including the above recommended LTM wells could be implemented to provide the groundwater quality data necessary to justify removal of the LUCs.

Navy Response: Comment acknowledged.

Comment No. 54: Table 5-4 – If a TI Waiver is invoke all of the chemical-specific ARARs would be waived (TBCs aren't waived – but wouldn't be included in Table 5-4). All of the groundwater standards in Table 5-4 would instead be moved to Table 5-6 and cited as both monitoring standards and the basis for requiring LUCs.

Navy Response: Comment acknowledged.

Comment No. 55: Table 5-5 – See comments for Table 4-3. Activities, such as installing, sampling, and maintaining monitoring wells may occur within regulated resource areas (Coastal Zone, Coastal Floodplain).

Navy Response: See responses to Comments Nos. 29 and 30.

Comment No. 56: Table 5-6 – (a) in addition (if a TI waiver is invoked) move the chemical-specific standards to the Action-specific table,

Navy Response: Comment acknowledged.

(b) include the appropriate Federal and State Requirements listed in the OU9 ROD (including those pertaining to monitoring wells).

Navy Response: Pertinent requirements from the OU9 ROD are already on Table 5-6.

(c) On the first page revise the last listed ARAR as follows:
Rules and Regulations for Hazardous Waste Management, Hazardous Waste Determination, DEM OWM-HW01-07, Rule 5.3 / Applicable / Standards for determining whether a waste is hazardous waste. Under Rule 3 of the regulations, hazardous wastes are defined as any hazardous waste as defined in 40 CFR 261.3. The standards also apply to "Rhode Island Wastes," which are defined as any wastes meeting the definition of R001 through R005 and R010 under the Rule and that do not meet any of the federal definitions of a hazardous waste. / These regulations would apply when determining whether or not a solid waste generated during remedial activities is hazardous, either by being listed, exhibiting a hazardous characteristic, or meeting the definition of a Rhode Island Waste.

Navy Response: See Response to Comment No. 34.

Navy Response to RIDEM Comments on Draft Focused Feasibility Study for CED Area of the Former Naval Construction Battalion Center Davisville North Kingstown, RI (RIDEM Correspondence Dated August 14, 2015)

Comment No. 1: Page 1-11, Section 1.2.5.2, Fate and Transport, Paragraph 3, Sentence 1 – Please change "The average naphthalene concentration in the groundwater sample and duplicate collected from MW02-10S was 2.7 micrograms per liter (ug/l)..." to "The naphthalene concentration in groundwater collected from well MW02-10S ranged from 2.6 to 2.8 micrograms per liter (ug/l)..." RIDEM does not accept averaging of results.

Navy Response: The text will be revised to include the range of the results.

Comment No. 2: Page 1-12, Section 1.2.6, Summary of Risks, Paragraph 1, Sentence 2 – Please change "one-in-one hundred thousand" to "one-in-one million". 1×10^{-6} is one-in-one million.

Navy Response: Agree. The text will be revised.

Comment No. 3: Page 1-12, Section 1.2.6, Summary of Risks, Paragraph 4, Sentence 1 – This sentence notes that there is an unacceptable risk if groundwater is used for residential purposes. In addition to the groundwater being used for residential purposes it should also be noted there would be a concern with vapor intrusion, which could also be a concern under recreational, industrial and commercial land uses.

Navy Response: The subject paragraph summarizes the results of the human health risk assessment. The risk estimate associated with vapor intrusion is included in Appendix C, and the conclusion is that there is no unacceptable risk associated with the *shallow* groundwater via the vapor intrusion pathway. Although VOC concentrations in the intermediate and deeper groundwater exceed vapor intrusion criteria, it is the *shallow* groundwater that is most critical from a vapor intrusion pathway and site conceptual model perspective because it is the contamination in the *shallow* groundwater that migrates to the vadose zone. So while there may be a concern about vapor intrusion should the deeper contamination migrate to the shallow zone, there is no current unacceptable risk. Monitoring would also verify whether groundwater migration has created a vapor intrusion problem.

Comment No. 4: Page 1-13, Section 1.2.6, Summary of Risks, Paragraph 2, Sentence 1 – Please change "During the 2014 sampling event, naphthalene was detected in one well (MW02-10S) at a concentration (2.7 ug/l) greater than its USEPA tap water RSL (0.17 ug/l)." to "During the 2014 sampling event two samples (one of which was a duplicate) were collected from well MW02-10S and ranged from 2.6 to 2.8 ug/l which is greater than the USEPA tap water RSL of 0.17 ug/l." RIDEM does not accept averaging of results, see comment #1.

Navy Response: The text will be revised to include the range of the results.

Comment No. 5: Table 2-1, Federal and State Chemical Specific ARARs, Page 3 of 3 – For the RIDEM Remediation Regulations, 2011 (DEM_DSR-01-93, Section 8.02(A)(i) and Table 1 citation

please also include Table 2 (Leachability Criteria) as there is a GB leachability groundwater standard for PCBs.

Navy Response: The leachability criteria was excluded because none of the concentrations exceeded the leachability criteria. Therefore, the subject criteria will not be included.

Comment No. 6: Table 2-4, Summary of RIDEM DEC Exceedances and Rule 8.10 Analysis – For Site 01 subsurface manganese under residential the "No" for meeting Rule 8.10 should be changed to "Yes" as only one sample (1-B12A-S2-2-3) of 29 exceeded the RDEC of 390 at 535 mg/kg. In addition, the Action needed column should be changed from "Yes" to "No". For residential purposes RIDEM combines surface and sub-surface soils above the water table as noted in section 8.02(A)(i)(2) of the RIDEM Remediation Regulations, 2011.

Navy Response: The "No" is triggered because there are less than 20 samples. (There are 9 subsurface samples, not 29.) As shown on Figure 2-1 of the FFS and Table 3-12A of the HHRE, there are two samples with a manganese concentration greater than the RIDEM criterion, so more than 10% of the samples are greater than the RIDEM DEC. Regarding the second part of the comment, the analysis of the data will remain as-is because combining the surface and subsurface data sets does not affect the final conclusions and action of some type is needed at the Sites.

Comment No. 7: Table 2-2, Federal and State Location Specific ARARs – Please include DEM-DSR-01-93, Section 8.08(B)(i) &(ii) Points of Compliance for Groundwater – This establishes how and where points of compliance will be determined for both GA and GB groundwater. While OU-7 is wholly located in a GB designated area, a portion of the groundwater flows from a GB groundwater area to a GA groundwater area.

Navy Response: Disagree. This citation has not been included before, such as at Site 16. The monitoring well network, including points of compliance will be determined at a later date. The specifics of long-term monitoring will also be influenced by the final remedy at the former Nike Site.

Comment No. 8: Table 2-2, Federal and State Location Specific ARARs – In the OU9 ROD DEM_DSR_01-93, Section 8.09 (Institutional Controls) is located in the Action Specific ARARs, not the Location Specific ARARs as done for this Operable Unit. Please explain the rationale for this change.

Navy Response: Agree. The subject ARAR will be moved from the location-specific table to the action-specific table. (The CED FFS ARAR tables used the Site 16 FS Addendum ARAR tables as a starting point. The subject ARAR was transferred from the location-specific table to the action-specific table per an EPA comment on the Site 16 Draft ROD.)

Comment No. 9: Page 2-8, Section 2.6.1, General Response Actions, Ex-Situ Treatment – It should be noted that if this alternative is selected the substantive requirements of a RCRA Corrective Action permit may be required.

Navy Response: Disagree with the inclusion of this text. Section 2 only identifies the General Response Actions, not alternatives. Individual processes and ARARs are described and evaluated in Sections 3 and 4. Please note that in order to avoid the creation of a long list of ARARs with irrelevant entries, the ARAR tables in Section 2 are the result of the analysis of the alternatives in Section 4. While it is true that the substantive requirements of a RCRA Corrective Action permit may be required, it is also true that the substantive requirements of an NPDES permit or a RCRA storage permit may be required. However, such statements are premature at this stage of the analysis.

Comment No. 10: Page 2-9, Section 2.7.1, Volume of Contaminated Soil, Paragraph 1, Sentence 1 – Please change ".... COC concentrations are greater than PRGs is shown on Figures 2-1 thru 2-4, which identifies..." to

Navy Response: The comment is incomplete, but is interpreted to mean to change "Figure 2-1.." to "Figures 2-1 through 2-4..". If that is the intent of the comment then, it is agreed that the revision will be made.

Comment No. 11: Page 3-2, Section 3.1, Preliminary Screening of Soil Technologies and Process Options – Please explain why In-Situ and Ex-Situ treatment (treatment alternatives) of Soils is not carried forth in this section of the study as well as Section 3.2, Detailed Screening of Soil Treatment Technologies and Process Options.

Navy Response: Table 3-1 is used to screen technologies and processes. The processes that were retained for additional evaluation are listed at the end of Section 3.1 and are further discussed and evaluated in Section 3.2. In-situ and ex-situ processes were screened out in Table 3-1.

Comment No. 12: Page 3-5, Section 3.2.3, Containment, Effectiveness – Since it is intended to develop this site perhaps a sentence or two should be added that would indicate that a soil management plan would be part of this alternative which would allow for the development of this site and insure that soils are handled and addressed properly to minimize risks when exposing contaminated soils below the cover.

Navy Response: The primary objective of Section 3 is to develop an appropriate range of remedial technologies and process options. The details of the processes, including a soil management plan, are provided in the development of the alternatives in Section 4. Therefore, no changes to the text are proposed.

Comment No. 13: Sections 3.2.4 (Removal) and 3.2.5 (Disposal) – These two options should be combined because if one is removing the soil, clearly is must be disposed of somewhere, i.e. if there is removal then there is disposal, conversely if there is no disposal then there is no removal.

Navy Response: The discussion of disposal was separated from the discussion of excavation because there are multiple disposal options as noted in Table 3-1. Therefore, no changes to the text are proposed.

Comment No. 14: Page 4-8, Section 4.2.2.1, Alternative S-2: LUCs, Description, Paragraph 1, Last Sentence – "These restrictions include use of the property only for the development or operation of a port facility." Please change to "These environmental restrictions will only allow for the use of the property for industrial/commercial uses. Because of how the Land Reuse Authority is obtaining the land the Navy will place a separate deed restriction on the property (not an ELUR) only allowing for the development or operation of a port facility." RIDEM Remediation Regulations, 2011 does not have standards or a definition for port related facilities, thus it would not be enforceable under an ELUR. In this specific case RIDEM will only make a determination if the proposed use is industrial/commercial or not. The Maritime Administration and possibly the Navy are the entities that need to determine if the proposed activity is port related or not. As noted above, the Navy can place a separate deed restriction on the property limiting it to port related activities.

Navy Response: The last two sentences will be deleted. The subject sentence refers to the existing lease restrictions, not the environmental LUC component of the alternative. The intent of

the last two sentences was to note that there are existing restrictions on the land use and that these restrictions would be kept in place.

Comment No. 15: Page 4-10, Section 4.2.2.2, Detailed Analysis, Implementability, Paragraph 1, Sentence 2 – Please change "Performance of regular site inspections for LUC enforcement and five-year reviews could readily be accomplished." to "Performance of annual site inspections for LUC enforcement and five-year reviews could readily be accomplished." The RIDEM ELUR requires annual certifications.

Navy Response: The text will be revised as described.

Comment No. 16: Page 4-12, Section 4.2.3.1, Description, Component 2: LUCs, Paragraph 1, last sentence – See Comment 14 regarding restriction on use of the property for port related activities.

Navy Response: See response to Comment No. 14.

Comment No. 17: Page 5-3, Early Action for Groundwater, Paragraph 3 – This paragraph discusses particulars of a monitoring program. While RIDEM concurs with a groundwater monitoring program as part of the early action for groundwater it is not prepared at this time to concur with the particulars of said program, i.e. how many wells to be monitored, specific constituents to be monitored and at what frequency the wells will be sampled. It should be noted in this paragraph that the specific parameters of the monitoring program will be worked out at a later date.

Navy Response: Comment acknowledged. In recognition of the uncertainties in the scope of the long-term monitoring program, the second sentence in the subject paragraph begins with "For estimating purposes".

Comment No. 18: Page 5-5, Section 5.5, Short-Term Effectiveness, Paragraph 2, Last Sentence – "The Early Action could be implemented within 1 year of finalization of the OU7-CED Area Proposed Plan in which the Early Action would be presented for public comment." Please state if the Early Action implementation will be finalized within one year of the proposed plan or ROD.

Navy Response: Because of the USEPA recent change in position and new requirement to develop groundwater alternatives (based on their comments on the FFS), this comment is moot. The ELUR will be filed when the property is transferred.

Comment No. 19: Page 5-5, Section 5.6, Implemetability, Paragraph 2, Sentence 2 – This sentence states that continuation of the early action controls is dependent on the future landowner filing an ELUR. Please note that the Navy can place an ELUR on the property prior to transfer as the ELUR runs with the land. In this manner continuation of the early action controls remain in place irrespective to who the future landowner is.

Navy Response: Comment acknowledged.

Comment No. 20: General Comment – Preliminarily, ARARs seem acceptable, however, once an alternative is selected RIDEM will provide a more thorough review.

Navy Response: Comment acknowledged. Please note that ARARs were derived from Site 16 FS and FSA.

Comment No. 21: Appendix G, Page 1-3, Section 1.2.3, Geology and Hydrogeology, Paragraph 4 – This paragraph states that groundwater flow is generally to the east though a small component flows to the northeast in the Drum Removal Area. Based on Figure 1-3 (Groundwater Flow Direction and Groundwater Classification) groundwater flow in the Drum Removal Area and Site 4 appears to be to the southeast, easterly at Sites 1, 2 and 3 and turns almost northeast immediately to the east off Sites 1 and 2.

Navy Response: The subject text is a *general* discussion of the groundwater flow and is accurate. No change is proposed.