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LETTER AND COMMENTS FROM RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL
MANAGEMENT REGARDING DRAFT FEASIBILITY STUDY SITE 12 TANK FARM 4 NS
NEWPORT RI
3/27/2012
RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

27 March 2012

Roberto Pagtalunan
NAVFAC MIDLANT (Code OPTE3)
Environmental Restoration
Building Z-144, Room 109
9742 Maryland Avenue
Norfolk, VA 23511-3095

Re: Draft Feasibility Study
Site 12, Tank Farm 4, NETC

Dear Mr. Pagtalunan,

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 comments on the Draft *Feasibility Study* dated October 2011 for Tank Farm 4 (Site 12), Naval Station Newport, located in Newport, RI. As a result of this review, this Office has generated the attached responses.

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
Kymberlee Keckler, EPA Region I
Deb Moore, NSN
Steve Parker, Tetra Tech

**RIDEM's Evaluation of Navy's Response (2/24/12)
to RIDEM's Comments (12/12/11)
on the Draft Feasibility Study
Site 12, Tank Farm 4, NAVSTA Newport**

2. Page ES-2, Executive Summary; 2nd paragraph, 3rd sentence.

"Analytical results from current soil and groundwater samples were compared with these remediation goals."

Please note that all existing data for this site, including older data obtained prior to the Data Gaps Assessment, must be included in this Feasibility Study to ensure that all areas that may require remediation, land use controls, etc. are being addressed. The remedial alternatives proposed in this Feasibility Study are solely based on the data obtained during the Data Gaps Assessment. Please revise this FS to include all historical investigations.

Navy's Response:

As provided on page 5 of the March 2010 Final Sampling and Analysis Plan, much of the data from previous investigations were not considered usable for a risk assessment. The Team agreed to collect new data to be reflective of current conditions at this site. However, to address more recent concerns about the usability of historic data, a separate comparison of old data (pre-2010) has been provided to the reviewers in response to comments associated with the draft final data gaps assessment report. Further discussion will be held in regards to that comparison, and resolutions will be documented separately.

Evaluation of Response:

Based on the conference call on March 20, 2012, several areas remain within Decision Unit 4-1 which have not been thoroughly investigated. The Navy must clearly define these areas in this FS and indicate how these will be addressed. Therefore, as RIDEM stated above, the inclusion of older data obtained prior to the DGA will ensure that all areas are being addressed as necessary.

10. Page 1-4, Section 1.4, Tank Farm 4 Background Information; last paragraph, last sentence.

"Confirmation sampling for CERCLA contaminants was not conducted during this removal action."

This statement is not correct. Please replace with *"Limited confirmation sampling for CERCLA contaminants was conducted during this removal action."*

Navy's Response:

The statement will be corrected as described above. For clarity, the following will be added to the end of the suggested sentence "however; analytical results were not sufficient for performing a risk assessment."

Evaluation of Response:

RIDEM does not agree with the additional language. Please do not include the portion the sentence starting with the word "however".

12. Page 1-6, Section 1.4.1, 2004-2007; Bullet.

Please include a more thorough discussion of the investigation and removal action performed at the former burn chamber/OWS, including but not limited to, a description of the size of the removal and

backfill areas, the locations where confirmatory samples were collected, and the results of the investigations conducted to determine the extent of the remaining contamination.

Navy's Response:

A more thorough description will be provided, taken from available documentation from previously published reports.

Evaluation of Response:

Please include this more detailed description in the response to comments, prior to the issuance of the draft final document.

13. Page 1-13, Section 1.8, Nature and Extent of Contamination; last paragraph.

RIDEM does not concur with the background comparison in this report. Please be advised that RIDEM, to date, has not accepted the "Basewide Background Study Report". Contaminants cannot be screened out based on background if there is not an EPA and RIDEM approved background study. The background study must meet the requirements of RIDEM's Remediation Regulations. It is suggested that a site-specific background study be conducted for these sites.

Navy's Response:

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 after review and comment in 2008, and RIDEM offered no comments and did not dispute it at that time. This document is being used, where applicable, to evaluate background soil conditions at the IR sites at NAVSTA Newport.

Evaluation of Response:

The Navy has stated that the background study was performed in accordance with EPA and/or Naval guidance. Be advised that RIDEM's Remediation Regulations (Sections 8.06 & 12.0) specify how a background study must be performed and as such the study needs to conform to these regulatory requirements. As discussed in previous correspondence and in meetings, the background study as conducted does not meet regulatory requirements. As such RIDEM did not concur with the study, although it was noted that certain aspects of the study may be used at certain sites. It was recognized that issues associated with background studies may, depending upon the site, have no affect to either the remedial investigations and/or alternatives for a particular site. In recognition of this fact and in an effort to move the projects forward, formal dispute resolution was not chosen. Instead, background issues would be resolved on a site by site basis. Therefore, RIDEM is reiterating its comment; however, please be advised that RIDEM arsenic requirements have been recently revised. Further, background issues may be addressed without the need for a background study depending upon the remedial action which is implemented.

14. Page 1-14, Section 1.8, Nature and Extent of Contamination; 2nd & 3rd paragraphs.

Regarding the RSLs for tap water, please state in this section whether they are based on federal MCLGs, federal risk-based standards or Rhode Island's groundwater standards.

Navy's Response:

RSLs are screening values published by EPA that are risk based values. They are based on toxicological literature, and not based on regulatory criteria. This will be clarified in the revised document.

Evaluation of Response:

Please note which values are more conservative in the response to comments.

15. **Page 1-15, Section 1.9, Fate and Transport Characteristics of Site Contaminants; 1st paragraph.**

Please indicate if lead was detected in surface or subsurface soil at levels exceeding federal RSLs or RIDEM RDEC or Leachability Criteria. Be advised that RIDEM lead standards (Res.-150 mg/kg, I/C-500 mg/kg) are more stringent than EPA's (Res.-400 mg/kg, I/C-800 mg/kg).

Navy's Response:

Lead does not exceed RIDEM RDEC: The maximum concentration detected in the data gaps assessment was 63.5 mg/kg at DU4-1.

Evaluation of Response:

Please confirm in the response to comments that this evaluation includes all historical data.

16. **Page 1-15, Section 1.9, Fate and Transport Characteristics of Site Contaminants; 2nd paragraph.**

Please include a comparison of detected groundwater concentrations to RIDEM Groundwater Criteria in this paragraph.

Navy's Response:

All groundwater concentrations measured are below state groundwater criteria. This comparison is provided in Table 6-7 of the Data Gaps Report.

Evaluation of Response:

Please confirm in the response to comments that this evaluation includes all historical data.

22. **Page 2-3, Section 2.1.4, Identification of Applicable or Relevant and Appropriate Requirements; whole section.**

Please ensure that all of the State ARARs listed on the attached table are included in the list of ARARs in Tables 2-1, 2-2 and 2-3 of this Feasibility Study.

Navy's Response:

The Navy has reviewed the ARARs table provided by RIDEM. We have incorporated some of RIDEM's suggested ARARs (some with edits). We have not incorporated the others because (1) they are not pertinent (i.e., neither "applicable" nor "relevant & appropriate") to this cleanup, or (2) they are much too broadly cited in their current form to qualify as an ARAR, as more fully discussed below.

ARARs consist of two sets of requirements, those that are "applicable" and those that are "relevant and appropriate." CERCLA Section 121(d)(2) specifies that remedial actions shall attain any standard, requirement, criteria, or limitation under federal environmental law or any more stringent promulgated standard, requirement, criteria or limitation under state environmental or facility siting law that is legally "applicable" to the hazardous substance (or pollutant or contaminant) concerned or is "relevant and appropriate" under the circumstances of the release.

In short, ARARs are enforceable substantive standards, requirements, criteria or limitations taken from federal or state environmental statutes and regulations that guide in the selection of cleanup levels and implementation of the CERCLA response action.

In the state ARARs table provided by RIDEM for Tank Farm 4, for many proposed ARARs the state has listed entire regulations or entire sections of its regulations. Navy's position is that in many cases these citations are too broad to serve as ARARs. In accordance with the requirements of CERCLA and the National Contingency Plan (NCP), a state must identify specific provisions within its regulations that are both (1) more stringent than federal requirements and (2) are either applicable or relevant and appropriate to the actual circumstances at the Tank Farm 4 site. According to EPA in the preamble to the 1990 revisions to the NCP:

[T]he language of CERCLA Section 121 (d)(2)(A) makes clear, and Program expediency necessitates, that the specific requirements that are applicable or relevant and appropriate to a particular site be identified. It is not sufficient to provide a general "laundry" list of statutes and regulations that might be ARARs for a particular site. The state, and EPA if it is the support agency, must instead provide a list of requirements with specific citations to the section of law identified as a potential ARAR, and a brief explanation of why that requirement is considered to be applicable or relevant and appropriate to the site. [Emphasis added]

The NCP requires that when identifying a requirement as an ARAR, the lead and support agencies "shall identify their specific requirements" and shall include a citation to the statute or regulation from which the requirement is derived. [40 C.F.R. §300.400(g)(5), emphasis added]. Typically, the regulation is not "the specific requirement" – rather, a requirement is found within a regulation.

For example, the state includes in its table the "Rhode Island Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations)." Under the Media column, RIDEM asserts that this "ARAR" is pertinent for hazardous materials, soil, groundwater, surface water, and sediments. It purports to offer the entire regulation as the enforceable ARAR for all these media in this cleanup, without further explanation. There is much within this regulation that is either not pertinent to this cleanup or is inapplicable in a CERCLA context. It is Navy's position that, if pertinent to this cleanup, ARARs based on requirements contained in this regulation should be enumerated specifically, focusing on identified standards, requirements, criteria, or limitations within the regulation that have relevance to this cleanup.

In light of the above, rather than citing to RIDEM's various regulations in full, it is the Navy's position that RIDEM needs to identify specific citations to exact regulatory provisions within state regulations which represent either applicable or relevant and appropriate (1) state versions of a federally-delegated/authorized environmental requirement, or (2) more stringent standards, requirements, criteria or limitations promulgated under state environmental or facility siting laws. Doing so comports with the requirements of the FFA, CERCLA § 121 (d)(2)(A)(ii), the NCP, and OSWER Directive 9234.2-05/FS, *CERCLA Compliance with Other Laws Manual (CERCLA Compliance with State Requirements)*. All parties agreed to identify ARARs in accordance with these requirements at the conclusion of the recent dispute resolution.

Specific comments to the RIDEM Suggested ARAR Table are embedded on Attachment B-2.

Evaluation of Response:

It is acknowledged that in certain cases specific portions of the regulations may be cited. In other cases, the remedial action will warrant compliance with numerous sections and subsections of a regulation, which may change depending upon how the action is implemented; therefore, in this case it is not possible to delineate the specific subsections that may be appropriate for the various contingencies and citing the entire regulation is appropriate.

RIDEM reviewed the Navy's comments on RIDEM's ARAR table and did concur with the Navy to delete several of the original ARARs listed. Please see the attached table that includes the State ARARs which must be retained in this FS. Please note that upon review of these comments, it

appears that the RIDEM regulations for leaking underground storage tanks were not included in the original ARAR table. Please include these regs as ARARs in this FS.

29. Page 2-10, Section 2.2.3, Background Concentrations; whole section.

RIDEM does not concur with the background comparison in this report. Please be advised that RIDEM, to date, has not accepted the "Basewide Background Study Report".

Navy's Response:

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.

Evaluation of Response:

Please see response to comment #13.

30. Page 2-12, Section 2.2.4.2, Risk Management for Groundwater, Cobalt

"...cobalt in groundwater may be ubiquitous in the area since a source has not been identified, is likely a result of naturally occurring cobalt in the bedrock and bedrock derived soil".

Cobalt concentrations in groundwater could be present due to the use of No. 6 Fuel Oil at these tank farms. Please include this statement in this section.

Navy's Response:

The lack of PAHs in the location indicates a lack of fuel contamination to which the cobalt could be attributed. Furthermore, concentrations of cobalt in groundwater is low (1.2 to 12.6 ug/L), and is typical of cobalt concentrations in groundwater in populated areas which is cited at 1 to 10 ug/L by the World Health Organization (WHO, CICAD 69, 2006). There is no evidence that cobalt is present as a result of the storage of no. 6 oil at the site. The only revision proposed to this section is to add the WHO reference provided above to give the reader perspective on the concentrations of cobalt detected in groundwater at the site.

Evaluation of Response:

The WHO study for cobalt may not be applicable to the geology on Aquidneck Island. Further, the Navy has not produced documentation that the various fuels used at the site were tested for and not found to contain cobalt. Therefore please incorporate the comments as requested.

32. Page 2-15, Section 2.3.1, Remedial Action Objectives for Soil; 1st paragraph.

"...the estimated risks associated with ingestion of and dermal contact with vadose zone soils by future residents (PAHs and arsenic in soil) and construction workers (manganese in soil dust) exceed RIDEM's target cancer risk of 1×10^{-5} ."

Please develop a remedial action objective (RAO) to protect construction workers from exposure to manganese in soil dust and include this RAO in this FS.

Navy's Response:

For construction workers, the RME HI is 3, and CTE HI is <1. Both the RME and CTE risk use an EPC=1,065 mg/kg, which is a 95% UCL of the available data. The Background values range from 50 mg/kg – 1,330 mg/kg. There is no indication that manganese is related to the CERCLA releases at the

site. It is acceptable at this step to use risk management to consider use of the CTE risk instead of the RME, consider background conditions, and conclude that a remedy to reduce or prevent exposure to manganese is not appropriate.

Evaluation of Response:

RIDEM does not concur with the proposal to use the CTE since the RME represents an unacceptable risk at this site. Please develop a remedial alternative for the construction worker scenario.

33. Page 2-15, Section 2.3.1, Remedial Action Objectives for Soil; 2nd paragraph.

"The Navy has indicated that the Site should be available for industrial use and limited recreational use after the remedial action has taken place."

Please be advised that industrial/commercial use of the Site will require restrictions enforceable by RIDEM, including an ELUR, which must be clearly defined in the ROD. If an ELUR limiting the site to industrial/commercial use is placed on the Site, all surface soil that does not meet industrial/commercial criteria will need to be addressed by a remedial alternative(s) that may involve capping, removal, treatment, etc. Regarding recreational use, please see Section 3.62, "Recreational Facility for Public Use" of the RIDEM Remediation Regulations (revised Nov 2011).

Navy's Response:

If necessary, the Navy will implement land use controls under CERCLA to restrict specific exposure scenarios for which the site conditions pose unacceptable risk. Specifically, land use controls may be implemented as part of the remedial action to prevent residential use of the site.

Note that Navy is unable to impose an ELUR on Federally owned property. Federal agencies are not authorized to record deed restrictions, restrictive covenants, etc. on the deeds to federal property that are still in active federal use. Only GSA has the authority to take such an action, as such restrictions are considered a "disposal" of an interest in federal property. Instead, Navy captures all necessary engineering controls and institutional controls ("land use controls") in a Land Use Control Remedial Design (LUC RD), which is an enforceable primary document under the FFA. If federal property including this site is proposed for transfer out of federal control in the future, and if restrictions are considered still necessary at that time, Navy will coordinate appropriate deed restriction language with RIDEM and EPA as part of the transfer documentation.

Evaluation of Response:

Please be advised that in order for RIDEM to agree to institutional controls, RIDEM must have full enforcement power independent of the USEPA. Further, the limited recreational concerns must be addressed if this is to be proposed for the site.

34. Page 2-16, Section 2.4.1, Soil; 1st paragraph.

"...the area and volume estimate for soil was calculated for soils associated with the hot spot only."

Remedial alternatives for soil in this FS should include alternatives for addressing all soil at the Site exceeding residential and commercial/industrial criteria. Therefore, the Navy must calculate the volumes of soil for all areas that exceed PRGs and present this in this section of this FS.

Navy's Response:

Concur. Volume estimates will be provided for soils in excess of PRGs.

Evaluation of Response:

Please include these estimates in the response to comments, prior to the issuance of the draft final document.

36. Page 3-6, Section 3.3.2, Land Use Controls/Deed Restrictions; Whole Section.

Please note in this and any other section dealing with land use controls that said controls must meet all of the requirements of RIDEM Remediation Regulations and shall be subject to independent enforcement by the State. Further, annual cost such as yearly inspections, production of an annual report to be submitted to RIDEM, maintenance cost associated with any restrictions such as fences, etc must be included in the cost analysis for this alternative. Finally, be advised that if elevated levels of contaminants are found in surface soils, fencing alone is not considered a viable remedial alternative. Typically, capping, demonstration that natural attenuation is occurring and will be achieved in a timely manner, phytoremediation, etc is incorporated into the remedy.

Navy's Response:

First sentence – Land use controls will comply with all ARARs identified in the ROD. Second sentence – Annual costs are included in the appropriate cost estimates. Third sentence – Fencing alone is not included as a remedial alternative in this FS. Fourth sentence – Capping, natural attenuation and other processes are already discussed elsewhere in Section 3.

Evaluation of Response:

Please confirm that institutional controls will be independently enforceable by the state. Please confirm that the annual cost includes all the listed items. In order to demonstrate that natural attenuation is an occurring trend, a number of requirements must be met, such as trend analysis, modeling to predict when the site will meet objectives, etc. This must be included in the report in order for the alternative to be considered viable.

38. Page 3-6, Section 3.3.2, Land Use Controls/Deed Restrictions; Groundwater Monitoring.

Although elevated levels of contaminants have been found in the soils, this report has proposed not to include groundwater monitoring at the site. Please be advised that groundwater monitoring will be required if the concentration of any contaminants, including TPH, exceed RIDEM leachability standards, unless wells located in the areas of exceedance, with a sufficiently long sampling history, covering all quarters, demonstrate that no exceedances have been observed. Further, independent of the concentration in the soils, if concentrations of any contaminants exceed standards and/or product such as TPH is found in groundwater, then groundwater monitoring will be applied. This comment applies to this and any other section dealing with groundwater monitoring.

Navy's Response:

Groundwater Alternative 2 (Section 5.1.2) includes groundwater monitoring at the site. However monitoring groundwater for TPH is not included because it is not pertinent to this CERCLA action. Please refer also to the response to comment 4, above.

Evaluation of Response:

Please be advised that monitoring for TPH will be required since the TPH standards in RIDEM's Remediation Regulations are ARARs for this Site. Monitoring for TPH is consistently applied throughout all of Rhode Island Superfund sites. Further, the report must reflect the fact that the monitoring period will be in place as long as contaminants are present.

39. **Page 3-9–3-16, Sections 3.3.3-3.3.6, Soil Containment, Removal, Ex-Situ Treatment, & Disposal.**

How will the Navy address soil proposed to be left in place with concentrations exceeding PRGs? Please reevaluate the options presented in this FS and include another soil alternative which considers capping, covering and/or treatment of soils in areas exceeding EPA and/or RIDEM criteria, as these options could be more cost effective than excavation and off-site disposal.

Navy's Response:

Treatment, covering and capping soils are eliminated in Section 3. Any soils that remain at concentrations of PRGs will be addressed with Land Use Controls, as described in Sections 4.1.2 and 4.1.3.

Evaluation of Response:

Please be advised that in terms of direct exposure criteria, if concentrations of contaminants are present in surface soils at elevated levels, land use controls by themselves are not sufficient. Land use controls also will not address leachability issues. Therefore, RIDEM reiterates its comment.

40. **Page 3-11, Section 3.3.2, Land Use Controls/Deed Restrictions; Permeable/Impermeable Cap**

This report concludes that due to logistics associated with managing the isolated areas of contaminated soils, an impermeable or permeable cap will not be retained in the Feasibility Study. RIDEM would consider concurring with this provided that all areas which exceed RIDEM's standards, including TPH, are subject to removal or other active remedial alternatives.

Navy's Response:

Section 3 is for the screening of processes and technologies. The processes and technologies that are retained in Section 3 are assembled into site – specific alternatives which are further developed and described in Section 4.

Evaluation of Response:

Please revise this report to retain subjecting these areas to removal actions or propose impermeable caps.

44. **Page 5-2, Section 5.1.2, Component 1: Monitoring; 3rd paragraph.**

Please be advised that long-term monitoring may include the establishment of new wells based on the requirements of the long-term monitoring plan.

Navy's Response:

Comment noted.

Evaluation of Response:

Please include this contingency in this paragraph of the FS.

State of Rhode Island ARAR Table

Media	Requirements	Requirements Synopsis	Specific Applicability	Legal Citation
Air Quality	Rhode Island Air Pollution Control Regulation 5 – Fugitive Dust, RIDEM, 7/19/07	<p>Reflects that reasonable precautions be taken to prevent particulate matter from becoming airborne.</p> <p>Agree. This is relevant and appropriate. Refer to Action-specific ARAR tables.</p>	Action Specific	RIGL Section 23-23, as amended 1992`
Air Quality	Rhode Island Air Pollution Control Regulation 7 – Emissions Detrimental to Persons or Property, RIDEM, 7/19/07	<p>Prohibits emissions of contaminants which may be injurious to human, plant, or animal life or cause damage to property or which unreasonably interferes with the enjoyment of life and property.</p> <p>Agree. This is relevant and appropriate. Refer to Action-specific ARAR tables.</p>	Action Specific	RIGL Section 23-23, as amended 1992
Groundwater	Rules and Regulations for Groundwater Quality, RIDEM, 7/26/10	<p>Incorporated RI Groundwater Standards. Intends to protect and restore quality of groundwater resources for use as drinking water and other beneficial uses, to assure protect of public health and welfare and the environment</p> <p>These rules set numerical criteria for contaminants in certain aquifers classified as potential drinking water sources (such as the aquifer at the Site), and require that such groundwater be maintained at a quality that does not have any reasonable potential to cause a violation of surface water quality standards.</p> <p>Disagree. Groundwater quality is addressed in the Remediation Regulations. Additional groundwater quality regulations do not need to be cited.</p> <p>These regulations are designed to protect GA aquifers and contain requirements to restore these aquifers to drinking water quality. Therefore, please retain these regulations as ARARs in this FS.</p>	Action, Chemical and Location Specific	RIGL 46-12, 46-13.1, 23-18.9, 23-19.1, 42-17.6, and 42-17.1, 1956 as amended

State of Rhode Island ARAR Table

Media	Requirements	Requirements Synopsis	Specific Applicability	Legal Citation
Groundwater	Rules and Regulations for Groundwater Quality, RIDEM, 7/26/10, Appendix 1	<p>These rules prescribe design requirements for construction of monitoring wells, how monitoring shall be undertaken, and how wells shall be abandoned once monitoring is complete.</p> <p>Agree that Appendix 1 may be relevant and appropriate. These monitoring well installation and abandonment portions of these regulations will be included. Refer to Action-specific ARAR tables.</p>	Action Specific	RIGL 46-12, 46-13.1, 23-18.9, 23-19.1, 42-17.6, and 42-17.1, 1956 as amended
Hazardous Waste	Rhode Island Rules and regulations for Hazardous Waste Management Sections 1 through 5, RIDEM 6/7/10	<p>These rules apply to generators, transporters and treatment/storage facilities dealing with hazardous wastes. The statutes require disposal of solid waste and hazardous waste at licensed facilities.</p> <p>Outlines requirement for general waste analyses, security procedures, inspections, safety, etc.. Sets design, construction, and operational requirements for hazardous waste containers and tanks, and closure requirements for hazardous waste facilities.</p> <p>Agree in part. This is a broad citation, and pertinent parts will be cited as noted below. Only portions of the regulations that are appropriate for on-site activities, such as hazardous waste identification and generator requirements should be cited as ARARs used (5.2, 5.3, 5.4, and 5.8). Other portions of the regulations only apply to off-site activities and will not be included, as they are neither applicable nor relevant and appropriate. Refer to Action-specific ARAR tables.</p>	Action, Specific	RIGL 23-19.1-10, 23-19.14-18, 42-17.1-2, 42-35, RIDEM 1956 as amended
Hazardous Waste	Rhode Island Rules and Regulations for Hazardous Waste Management, Section 8, RIDEM 6/7/10.	<p>Outlines operational requirements for all hazardous waste treatment, storage, and disposal facilities.</p> <p>Disagree. The provisions of this regulation are not pertinent to any of the remedial alternatives or circumstances of the site. The site is not a TSDF. None of the on-site remedial activities would be regulated by these requirements for a permitted facility.</p>	Action and Location Specific	RIGL 23-19.1-10, 23-19.14-18, 42-17.1-2, 42-35, RIDEM 1956 as amended

State of Rhode Island ARAR Table

Media	Requirements	Requirements Synopsis	Specific Applicability	Legal Citation
		<p>Releases of waste oil (a hazardous waste) occurred at this Site; therefore, Section 8 of the Hazardous Waste Management Regulations is applicable. Please note that Section 8 was recently revised to include all requirements for hazardous waste management, including groundwater monitoring requirements. Please retain this as an ARAR in this FS.</p>		
<p>Hazardous Materials, Soil, Groundwater, Surface water, Sediments</p>	<p>RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (<u>Remediation Regulations</u>), as amended November 2011.</p>	<p>Applicable for removal actions involving reporting, investigation, and remediation of contaminated sites. These rules establish criteria for cleanup of contamination caused by a release of hazardous material.</p> <p>Disagree that the entire state remediation regulation should be cited as an ARAR. Specific standards, requirements, criteria or limitations within this regulation which pertain to the contaminants at issue for this cleanup may be relevant and appropriate ARARs. These more precise chemical-specific ARARs (8.02 A and B and 8.03 A and B) need to be identified and included. Refer to Chemical-specific ARAR tables.</p> <p>This entire regulation must be cited as an applicable ARAR in this FS since different subsections could apply depending on the circumstances (i.e., Section 12 would apply to arsenic in soil).</p>	<p>Chemical Specific</p>	<p>RIGL 23-19.1-11.1, 23-19.14-18, 42-17.1-2, 42-35, 46-12-3 and 46-12-5, as amended</p>
<p>Hazardous Materials, Soil, Groundwater, Surface water, Sediments</p>	<p>RIDEM Rules and Regulations for Underground Storage Facilities Used for Petroleum Products and Hazardous Materials; Sections 12, 13 & 15</p>	<p>Applicable to existing and abandoned tank facilities. These rules contain requirements for reporting, investigating and cleaning up any spills, leaks or releases for hazardous materials and tank closure requirements.</p>	<p>Action, Chemical and Location Specific</p>	<p>RIGL 23-19.1-11.1, 23-19.14-18, 42-17.1-2, 42-35, 46-12-3 and 46-12-5, as amended</p>
<p>Solid Waste</p>	<p>Rhode Island Rules and Regulations for Solid Waste Management, RIDEM Solid Waste Regulation No. 1, 10/25/05</p>	<p>Applicable for the minimization of environmental hazards associated with operation of solid waste facilities, including management and disposal of dredged material</p> <p>Disagree, not pertinent to any of the remedial alternatives or circumstances of the site. None of the on-site remedial activities would be regulated by these requirements for</p>	<p>Action, Chemical and Location Specific</p>	<p>RIGL 23-19.1-11.1, 23-19.14-18, 42-17.1-2, 42-35, 46-12-3 and 46-12-5, as amended</p>

State of Rhode Island ARAR Table

Media	Requirements	Requirements Synopsis	Specific Applicability	Legal Citation
		<p>solid waste disposal facilities.</p> <p>This regulation must be retained if there are any areas on site containing more than 3 yds of solid waste debris.</p>		
Solid Waste	Rhode Island Rules and Regulations for Solid Waste Management, RIDEM Solid Waste Regulation No. 2, 10/25/05.	<p>Applicable for the construction of final covers and leachate collection systems; and Applicable for all monitoring plans that result from on-site remedial actions.</p> <p>Disagree, not pertinent to any of the remedial alternatives or circumstances of the site. None of the on-site remedial activities would be regulated by these requirements for solid waste disposal facilities.</p> <p>This regulation must be retained if there are any areas on site containing more than 3 yds of solid waste debris.</p>	Action, Chemical and Location Specific	RIGL 2-1, 2-22, 2-23, 5-51, 23-18.8, 23-19, 23-19.1, 23-23, 23-63, RIDEM 1956 as amended
Surface Water	Regulations for Rhode Island Pollutant Discharge elimination System (RIPDES), RIDEM, 2/25/03.	<p>Applicable for discharges to surface waters and to protect waters from discharges of pollutants</p> <p>Disagree, not pertinent to any of the remedial alternatives or circumstances of the site. No surface water discharge is proposed. The disturbed area is less than 1 acre, so it is outside the applicability range for storm water regulations. However, the Erosion and Sediment Control Handbook will be proposed as a TBC. Refer to Action-specific ARAR tables.</p> <p>The 1-acre limitation does not apply to artificially imposed Decision Unit boundaries. Therefore, please retain this as an applicable ARAR in this SAP.</p>	Action, Specific	RIGL 46-13.1, May 1992

State of Rhode Island ARAR Table

Media	Requirements	Requirements Synopsis	Specific Applicability	Legal Citation
Wetlands	Rules and Regulations governing the enforcement of the Freshwater Wetlands Act, RIDEM, 4/23/98; and amendments thereto 12/10.	<p>Applicable to actions required to prevent the undesirable drainage, excavation, filling, alteration, encroachment, or any other form of disturbance or destruction to a wetland. These rules require that all wetlands and wetland functions be protected to the maximum extent possible, including by preventing pollutants, sediment, direct discharges of stormwater runoff, or any material foreign to a wetland or hazardous to life from entering any wetland. The rules also require that hazardous material remediations fully protect, replace, restore and/or mitigate harm to any affected wetlands</p> <p>Agree. Activities will be very close to fresh water wetlands, and impacts on the wetlands will be avoided. Refer to Location-specific ARAR tables.</p>	Location Specific	RIGL 2-1-18 et seq., as amended 1994
Surface Water and Groundwater	Oil Pollution Control Regulations, RIDEM, 1/3/91	<p>Establishes guidelines for the prevention of discharge, escape or release of oil into the waters of the State and to preserve and protect the quality of the waters of the State, consistent with the purposes of the Clean Water Act</p> <p>Disagree. The provisions of this regulation are neither applicable nor relevant and appropriate to the circumstances of this cleanup. Oil (petroleum) is not a CERCLA hazardous substance, pollutant or contaminant. Petroleum cleanup must be dealt with outside the CERCLA process.</p> <p>These regulations are applicable to any petroleum releases, including waste oil, to the waters of the state, including groundwater. Once commingled, petroleum must be dealt with during the CERCLA cleanup process.</p>	Action and Location Specific	RIGL 46-12, 42-17.1 and 42-35, 1956 as amended
Other	Rhode Island Hazardous Substance Community Right-to-Know Act, RIGL 23-24.4	<p>Establishes rules for public right to know concerning hazardous waste storage, discharge, emissions and transportation. Applicable if remedial action involves the off-site disposal or on-site treatment of hazardous substances.</p> <p>Disagree, not pertinent to any of the remedial alternatives</p>	Action, Chemical and Location Specific	RIGL, Title 23, Chapter 24.4 Public Right to Know Requirements as amended in 1989.

State of Rhode Island ARAR Table

Media	Requirements	Requirements Synopsis	Specific Applicability	Legal Citation
		<p>or circumstances of the site. CERCLA provides for informing the public of the cleanup. This is not an environmental or a facility siting regulation.</p> <p>Alternative SO₃ involves offsite disposal; therefore, please retain this as an applicable ARAR in this SAP.</p>		
Other	Rhode Island Endangered and Threatened Species Act	<p>To be considered if remedial alternative affects any plants or animals of special concern</p> <p>Disagree, not pertinent to any of the remedial alternatives or circumstances of the site. There are no endangered or threatened species at the site.</p> <p>Since a full Baseline Ecological Risk Assessment was not conducted for this site, please ensure that the Navy has thoroughly investigated the species at this Site to make this statement.</p>	Location Specific	RIGL 20-37