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U S NAVY RESPONSE TO U S EPA REGION I COMMENTS ON REDLINE DRAFT FINAL
FEASIBILITY STUDY SITE 17 OPERABLE UNIT 6 (OU 6) BUILDING 32 AREA GOULD
ISLAND NS NEWPORT RI
1/27/2014
TETRA TECH

**NAVY RESPONSES TO COMMENTS FROM U.S. EPA
REDLINE DRAFT FINAL FEASIBILITY STUDY
SITE 17 – GOULD ISLAND (AUGUST 27, 2013)
NAVAL STATION NEWPORT, RHODE ISLAND
COMMENTS DATED DECEMBER 17 AND 18, 2013 (EPA)**

The U.S. Navy (Navy) is pleased to provide the US Environmental Protection Agency (U.S. EPA) with responses to the December 17 and December 18, 2013 comments on the redline draft final FS for Site 17, Building 32 at Gould Island, which is part of Naval Station (NAVSTA) Newport in Newport, Rhode Island. Comments are presented first (*italics font*), followed by the Navy's responses.

Comments dated 12/17/13

p. ES-6 If contamination is stabilized in place, long term monitoring is required to ensure the contamination does not migrate.

Response: Long term monitoring for stabilized COCs in soils should not be necessary if the pilot tests show that the solidification/stabilization is effective. Given that Alternative S03 is not the preferred soil remedy, and since this a new comment at a late stage in the FS review process, the fifth paragraph of Section 4.1.3 will be revised as follows (new text in *italics*):

In-Situ S/S: Areas of contaminated soil that are not excavated (Areas 4, 5, and 6) would be treated in-situ using S/S as the treatment process. Treatment at Areas 4 and 5 would take place within the upper 2 ft of soil, where the COC exceedances occurred, while the soil at Area 6 (SB304B) would be treated to a depth of 8 ft, where naphthalene exceeded its PRG. For the purpose of this FS, it is assumed that a total estimated 537 cy of soil (in-place volume) would be stabilized/solidified in-situ at these three areas, as detailed in Table 4-13. It is noted that some amount of long term monitoring of groundwater to assure that contaminants do not disassociate from the stabilized matrix is appropriate and this monitoring can be included as part of the monitoring conducted as part of the groundwater remedy.

In addition, the description of alternative SO3 on page ES-6 will be revised to include "and possible groundwater monitoring".

p. 1-29, §1.10.5, ¶1 The statement added to the end of this paragraph is not adequate to address the lack of vapor intrusion data. There needs to be a trigger to evaluate the vapor intrusion risk or to design and construct any building to prevent vapor intrusion. None of the groundwater remedies presented address this issue. Please edit the groundwater remedies to include a requirement to evaluate vapor intrusion risk in the land use controls should site development occur or to design and construct any building to prevent vapor intrusion.

Response: The LUC portions of sections 6.1.2 and 6.1.3 which describe the Groundwater Alternatives 2 and 3 have been revised with the following statement: "LUCs would include a requirement to evaluate vapor intrusion risk should site development occur before groundwater PRGs for organic compounds are achieved."

p. 2-5, §2.1.4.1, ¶1 Based on the response, it appears that the Navy does not know whether the water in the test pits is groundwater. Therefore the text in the FS stating that there is no hydraulic connection between the test pits and the groundwater should be deleted unless the Navy has documented that no hydraulic connection exists. EPA agrees that the most appropriate way to evaluate groundwater at the test pits would be to sample local groundwater. The FS should reflect the intent.

Response: The statement that no hydraulic connection between the test pits and groundwater has been removed. Groundwater monitoring is included in both groundwater alternatives GW2 and GW3 which will address any need for follow up on groundwater monitoring in the test pit areas where soil contaminants and risk from "shallow groundwater" to the construction



worker are to be addressed.

p. 2-10, §2.2.1.3, ¶1 Please refer to EPA's comment on p. 2-5, §2.1.4.1, ¶1.

Response: The statement that no hydraulic connection between the test pits and groundwater has been removed. Groundwater monitoring is included in both groundwater alternatives GW2 and GW3 which will address any need for follow up on groundwater monitoring in the test pit areas where soil contaminants and risk from "shallow groundwater" to the construction worker are to be addressed.

p. 4-5, §4.1.2, ¶2 Please refer to EPA's comment on p. 1-29, §1.10.5, ¶1.

Response: On page 4-5 the section that describes LUCs will include the following statement: "Language would be included to state that the vapor intrusion pathway was not evaluated in the RI or addressed as part of this FS, and that design and construction of any future buildings at the Site shall be conducted with this consideration."

p. 5-1, §5.0 Please include the response information relative to SD-2 in the FS.

Response: The description of alternative SD2 will be revised with the information provided in the Response (11/22/13) to comments (10/30/13).

p. 5-12, ¶1 Please delete the citation in the partial sentence at the top of the page.

Response: The typo will be corrected.

p. 5-12, Table Please either add a footnote for this and other tables noting that the five-year review costs are included with the soil alternative costs, or edit the description of the five-year reviews for the soil alternatives to acknowledge that those costs also include five-year reviews for the sediment alternatives.

Response: The five year review line item costs should not have been deleted as was done in response to the request in previous comments. These line items have been included again, and they will remain, such that costs for five year reviews are included in each of the alternatives for each of the media.

p. 5-12, §5.2.3 How does the response address the comment? Please include the appropriate discussion in the evaluation of the alternative.

Response: The previous comment (10-30-13) & response (11-22-13) is stated below (underlined):

p. 5-12, §5.2.3 The impacts from transportation and material handling on the island (sediment dewatering; building/upgrading a ramp; any material handling facilities needed on the island; potential permitting of an off-loading ramp at Davisville) also need to be evaluated as part of this alternative.

Response: It is most likely that transportation systems will be utilized that are compatible with currently available dock and ramp systems.

To expand and to clarify, the items described in the comment, including ramps for loading and unloading, material dewatering and handling space are identified in the FS and noted mostly in the implementability sections of the evaluation of alternatives. In addition, ARARs for bulkhead and dredging work are identified and evaluated. It appears that the comment seeks additional details on these items. Section 5.1.3 will be expanded to add more detail about the dredging, staging, dewatering, water treatment, and transportation aspects of the alternative. However, the Navy would defer additional details to the design and RA Work



Plans. Most importantly, adequate information and evaluation is provided in the FS to justify the selection of the preferred remedy from the alternatives described.

p. 5-12, §5.2.3 Please specify whether a sediment dewatering operation or stockpiling area needs to be established on the island under this alternative. Descriptions of any island operations (and any associated ARARs requirements) need to be discussed and evaluated.

Response: It is currently anticipated that sediment will be dewatered on the former Building 32 foundation. The revised FS, dewatering portion of Section 5.1.3 has been revised to state:

“Dewatering: Excavated sediment would be partially dewatered using dewatering barges or a scows, then transported to a constructed dewatering pad on the island using sealed container trucks. The material will then undergo further dewatering, and then be characterized for transportation and disposal. Gravity drainage of water from sediment on the barge will pass through filter media prior to draining within the active dredge area. Residual water from dewatering at the dewatering pad on the island will be captured, stored and treated using a mobile package treatment plant prior to discharge back to the dredge area. In addition, an absorbent polymer (e.g. sodium polyacrylate) may be added to each lined container or truck to absorb any additional free water generated during transportation to the landfill. Other passive sediment dewatering techniques may be better suited to the material and such details will be addressed in the design documentation. Considerations as to the use of the island for dewatering and the elevation of the pads to the 100 year flood zone will be made during the design effort.”

Action specific and location specific ARARs have been updated and are provided in the revised Tables 5-8 and 5-9 attached.

Appendix D The cost estimate for each soil alternative includes pre- and post excavation sampling, but there is no discussion of pre-excavation sampling. Why have Areas 2 and 4 been selected for pre-excavation sampling? Pre-excavation sampling would be warranted at Areas 2 and 6 that are defined only by one sample. Please clarify each alternative to discuss where pre-excavation sampling will be conducted and why. Explain why pre-excavation sampling is not warranted at other areas. Please also submit the calculation sheets if they changed since the December 2012 Draft Final FS or state that they have not been revised since then, if correct.

Response: Pre-excavation sampling at areas 2 and 4 were selected for different reasons – Area 2 was identified for pre-excavation sampling because target soils are at significant depth and are within close proximity to the ocean, and design-step sampling is wise to identify the expanse of the excavation. Area 4 was identified for pre-excavation sampling because there are limited samples and few physical features in this area to bound the excavation. Area 5 is well bounded by samples, Area 3 is bounded by physical features (the bulkhead, pier, and ocean) and area 1 is bounded by the sidewalls and bottoms of the sumps. Area 6 was not initially identified as an excavation area, it was added at a later date because of an exceedance of leachability criteria (though leaching does not appear to be occurring). It is agreed that pre-excavation sampling may be appropriate at area 6. This will be added to the cost estimate for alternative SO4, and this information will be provided in Section 4.1.4 (Excavation subsection) of the FS.

Comments dated 12/18/13

1. *Since there are risks from arsenic for clam/mussel ingestion for the fisherman, we will need to say in the ROD that the arsenic cleanup goal we selected is protective of both human health (fisherman*



receptor) and the environment.

Response: The ROD will be clear that the cleanup goal is protective of human health and the environment.

2. *The ROD will have to be clear about the soil/debris wording and that the soil action is limited to the sumps and trenches. EPA will be preparing an internal risk memo for this action using only the sump/trench data.*

Response: The soil action is described to address six areas, including the sumps and trenches as well as other soil removal areas. The ROD will be clear on what the soil action will address.

3. *We need to broaden the groundwater RAOs. We should have one to restore the groundwater to its beneficial reuse, one that prevents residential exposure, and one that protects the construction worker. MNA and LUCs will achieve these three RAOs.*

Response: The Navy will agree to add the RAO to “restore groundwater to beneficial reuse” as is consistent with the Tank Farms 4 and 5 RODs. Additionally, the Navy will add the RAO to “prevent residential exposure”. These two should replace the last RAO currently in the Redline August FS, which was included per a previous EPA request. It is agreed that MNA and LUCs will achieve these two RAOs.

The third RAO requested above can be included, but to be correct, it would need to be stated as follows: “Prevent construction worker exposure to COCs exceeding PRGs in trapped water in former building sumps, in contact with the sump debris and in test pits (“shallow groundwater”).

To be clear, the remedial action will address this new third groundwater RAO by excavating contaminated soils, dewatering and removing soil/debris from within the sumps & cleaning the sumps.



TABLE 5-8
ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs –
SEDIMENT ALTERNATIVE 3: SEDIMENT REMOVAL, OFFSITE DISPOSAL, LIMITED MONITORING
SITE 17 – FORMER BUILDING 32, GOULD ISLAND, FEASIBILITY STUDY
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Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
Clean Water Act -Section 404 (b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material	40 Code of Federal Regulations (CFR) 230 and 33 CFR 322 and 323	Applicable	These rules regulate the discharge of dredge and fill materials in federal jurisdictional wetlands, vegetated shallows, and navigable waters. Such discharges are not allowed if practicable alternatives are available. Sets forth criteria for obstructions or alterations of navigable waters. For discharges, the Navy must identify a remedial alternative that is the Least Environmentally Damaging Practicable Alternative (LEDPA) for protecting wetlands and aquatic habitat resources. The Navy will solicit public comment as part of the Proposed Plan as to its LEDPA determination.	Dredging operations including sediment dewatering would be conducted in a manner that will minimize impacts to navigable waters. <u>Water will be treated prior to discharge within the dredge area to meet applicable standards.</u> <u>There is no practicable alternative to the discharge of treated water to navigable waters.</u> The dredging and dewatering components would meet the substantive environmental requirements of these standards. The Navy has identified Alternative SD3 as the Least Environmentally Damaging Practicable Alternative with respect to the aquatic ecosystem because it provides the best balance of addressing contaminated sediment within the marine waterway (permanent removal) and minimizing alteration of the aquatic habitat (both SD2 and SD3 would alter the habitat over the short term).
Harbors and Rivers Act, Section 10	33 USC 403, 33 CFR 320-323	Relevant and Appropriate	Sets forth criteria for obstructions and alterations of navigable waters.	Installation of access restriction markers during dredging activities or during construction/ upgrade of shoreline ramps or work on bulkheads, if necessary, will be performed in compliance with the substantive requirements of the statute.
Fish and Wildlife Coordination Act	16 United States Code (USC) 661 <i>et seq.</i>	Applicable	Requires that the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS), and related state agencies be consulted prior to structural modification of any body of water, including wetlands.	Dredging will impact the waters of the United States. Federal and state fish and wildlife officials would be consulted on how to minimize impacts of any remedial activities on any fish, wildlife and endangered species.

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Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal (continued)				
Endangered Species Act (ESA)	50 CFR 200 and 402	Applicable	Remedial actions may not jeopardize the continued existence of federally-listed endangered or threatened species, or adversely modify or destroy their critical habitat. <u>The Atlantic Sturgeon has been listed as an Endangered Species in the region including Narragansett Bay.</u>	The Navy will consult with the appropriate federal resource agencies to ensure that dredging will be conducted to minimize disturbance to aquatic habitats in Narragansett Bay that may be used by <u>the federally endangered Atlantic Sturgeon</u> <u>endangered species.</u>
Floodplain Management and Protection of Wetlands	44 CFR 9	Relevant and Appropriate	FEMA regulations that set forth the policy, procedure and responsibilities to implement and enforce Executive Order 11988, Floodplain Management, and Executive Order 11990, Protection of Wetlands.	Remedial activities conducted within the 100-year coastal storm floodplain or within federal jurisdictional wetlands and aquatic habitats will be implemented in compliance with these standards. During the remedial design stage, the effects of <u>sediment remedial actions -soil remedial actions</u> on federal jurisdictional wetlands will be evaluated. <u>Such wetlands include the inter-tidal area and vegetated shallows south (outside) of the dredge area.</u> All practicable means will be used to minimize harm to the wetlands. Wetlands disturbed by <u>soil-sediment</u> remediation <u>and limited monitoring</u> will be mitigated in accordance with requirements. The Navy will solicit public comment as part of the proposed plan on the measures taken through the remedial action to protect floodplain and wetland/aquatic habitat resources.
Coastal Zone Management Act	16 USC Parts 1451 <i>et. seq.</i>	Applicable	Requires that any actions must be conducted in a manner consistent with state-approved management programs.	The site is located within a coastal zone management area; therefore, applicable coastal zone management requirements need to be addressed.

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Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Coastal Resources Management	Rhode Island General Laws (RIGL) 46-23-1 <i>et seq.</i>	Applicable	Sets standards for management and protection of coastal resources. Jurisdiction includes areas within 200 feet of coastal features, within 50 feet of wetlands under the jurisdiction of the CRMC, and floodplains.	The entire site is located in a coastal resource management area, <u>identified as a Type 2 shoreline and</u> therefore, activities conducted under this alternative would be <u>coordinated with CRMC and</u> conducted in compliance with applicable coastal resource management requirements.

TABLE 5-429
 ASSESSMENT OF ACTION-SPECIFIC ARARs AND TBCs –
 SEDIMENT ALTERNATIVE 3: SEDIMENT REMOVAL, OFFSITE DISPOSAL, **LIMITED MONITORING**
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Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
Toxic Substances Control Act - PCB Remediation Waste	40 Code of Federal Regulations (CFR) 761.61(c)	Applicable	Risk-based standards for the sampling, cleanup, or disposal of PCB remediation waste. Written approval for the proposed risk-based clean-up will be obtained from the Office of Site Remediation and Restoration, EPA Region 1.	Standards apply to sampling, cleanup, and disposal. The Navy will solicit public comment in the Proposed Plan about the finding that the proposed remedy for PCB contamination at the Site will not pose an unreasonable risk of injury to health or the environment. An EPA finding that the remedy meets these standards will be included in the Record of Decision. Removal of the sediment containing PCBs will address the standards.
CWA, Section 402, National Pollution Discharge Elimination System (NPDES)	33 USC 1342; 40 CFR 122 through 125	Applicable	Sets standards for discharging of dewatering liquid to surface waters at the site. These standards govern point source discharges of pollutants to surface water.	<u>Water generated by dewatering operations will be treated using a portable package treatment plant to meet these standards prior to discharge back to the dredge area.</u>
Contaminated Sediment Remediation Guidance for Hazardous Waste Sites	OSWER 9355.0-85, (December 2005)	To be Considered	This document provides technical and policy guidance for making remedy decisions for contaminated sediment sites. Issues addressed include: Chapter 4, Monitored Natural Recovery; Chapter 5, In-situ Capping; Chapter 6, Dredging and Excavation; Chapter 7, Remedy Selection; and Chapter 8, Long-term Monitoring	<u>Sediment dredging, dewatering, and disposal will be conducted in a manner that meets the standards established in this guidance.</u>
Clean Water Act, National Recommended Water Quality Criteria (NRWQC)	33 USC 1251 <i>et seq.</i> ; 40 CFR 122.44	Relevant and Appropriate	Used to establish water quality standards for the protection of aquatic life.	These are standards for water quality monitoring that would be conducted to ensure that these criteria are not exceeded during dredging and dewatering activities.

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ASSESSMENT OF ACTION-SPECIFIC ARARs AND TBCs –
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Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Standards for Identification and Listing of Hazardous Waste	Rules and Regulations for Hazardous Waste Management, Code of Rhode Island Rules (CRIR), 12-030-003, Rule 5.8	Applicable	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. Defines the listed and characteristic hazardous wastes.	These regulations apply to all waste generated during actions at the site, such as dredged sediment and investigation-derived waste (IDW) from monitoring. Will be used when determining whether or not a solid waste is hazardous.
Standards for Generators of Hazardous Waste	Rules and Regulations for Hazardous Waste Management, CRIR 12-030-003, Rule 5.2, 5.3, and 5.4	Applicable	Establishes manifesting and pre-transport requirements for hazardous waste.	These regulations would apply to all waste generated at the site during dredging and monitoring and sampling IDW, if hazardous.
Rules and Regulations for Dredging and the Management of Dredged Material	DEM-OWR-DR-02-03, Sections 5, 6, 7, 8, 9, and 11	Applicable	Standards to ensure that dredging in the marine environment and management of the associated dredged material is conducted in a manner which is protective of groundwater and surface water quality so as to ensure the continued viability and integrity of drinking water and fish and wildlife resources. Establish standards and criteria governing the dewatering of dredged material for upland use or disposal.	Dredging operations, including dewatering, will be conducted in accordance with the substantive requirements of these standards.
Clean Air Act - Fugitive Dust Control	CRIR 12-31-05	Applicable	Requires that reasonable precautions be taken to prevent particulate matter from becoming airborne.	Removal, processing, and temporary storage of debris and sediments during dewatering and before shipment would be implemented to prevent material from becoming airborne.

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Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State (continued)				
Clean Air Act - Emissions Detrimental to Persons or Property	CRIR 12-31-07	Applicable	Prohibits emissions of contaminants which may be injurious to humans, plant or animal life or cause damage to property or which reasonably interferes with the enjoyment of life and property.	Monitoring of air emissions during dredging and dewatering will be used to assess compliance with these standards if threshold levels are reached.
Clean Air Act - Air Toxics	CRIR 12-31-22	Applicable	Prohibits the emission of specified contaminants at rates which would result in ground level concentrations greater than acceptable ambient levels or acceptable ambient levels as set in the regulations.	Emissions of hydrogen sulfide during dredging, dewatering, and stockpiling would be controlled.
Water Quality Regulations	Water Quality Regulations, CRIR 12-190-001	Applicable	Establishes water use classification and water quality criteria for waters of the state.	Dredging will be conducted in a manner as to minimize degradation of water quality. Any drainage from the temporary sediment storage area and any dewatering discharge would be treated as required to meet this requirement and discharged into Narragansett Bay.
Water Pollution Control – Pollutant Discharge Elimination System (PDES)	Regulations of Rhode Island Pollutant Discharge Elimination System	Applicable	Contains applicable effluent monitoring requirements, and standards and special conditions for discharges.	Discharge of water to surface water from remedial activities, such as dewatering of sediment will meet these standards.
Rhode Island Soil Erosion and Sediment Control (SESC) Manual	None	Applicable	RIGL Erosion and Sediment Control Act places enforcement of soil erosion and sediment control at the local level. The SESC Manual is the primary guidance document.	An erosion and sediment control plan will be prepared according to the SESC Manual for all activities with land disturbance.
Identification and Management of Aquatic Invasive Species	None	To be considered	Guidance on addressing aquatic invasive species in Rhode Island.	Remedial work in the Bay will be conducted in a manner to prevent the establishment or spread of aquatic invasive species.