



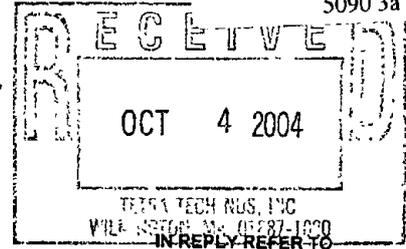
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**DEPARTMENT OF THE NAVY**

ENGINEERING FIELD ACTIVITY, NORTHEAST  
NAVAL FACILITIES ENGINEERING COMMAND  
10 INDUSTRIAL HIGHWAY  
MAIL STOP, #82  
LESTER, PA 19113-2090

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NAVSTA NEWPORT RI  
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5090  
Code EV23/CF  
October 1, 2004

Ms. Kymberlee Keckler, Remedial Project Manager  
Federal Facilities Superfund Section  
USEPA Region 1  
1 Congress Street, Suite 1100  
Boston MA, 02114-2023

67470

Mr. Paul Kulpa, Project Manager  
Office of Waste Management  
Rhode Island Department Of Environmental Management  
235 Promenade St.  
Providence Rhode Island, 02908-5767

Dear Ms. Keckler/ Mr. Kulpa:

SUBJECT: DRAFT WORK PLAN FOR SEDIMENT AND GROUNDWATER  
MONITORING, SITE 09, OLD FIRE FIGHTING TRAINING AREA,  
NAVAL STATION NEWPORT, NEWPORT, RHODE ISLAND

The Navy's responses to EPA and RIDEM comments on the subject Work Plan are provided as enclosure (1) and (2), respectively. If additional discussions are necessary, please notify us by October 14, 2004 in order to facilitate finalizing the Work Plan and scheduling the offshore effort.

If you have any questions, please do not hesitate to contact me at (610) 595-0567 extension 142.

Sincerely,

*Curtis A. Frye*  
CURTIS A. FRYE, P.E.  
Remedial Project Manager  
By direction of the  
Commanding Officer

5090  
Code EV23/CF  
October 1, 2004

Enclosures:

1. Responses to USEPA Comments, Draft Work Plan for Sediment and Groundwater Monitoring, Site 09, Old Fire Fighting Training Area, Naval Station Newport, Newport, RI, June 2004 (Comments dated August 5, 2004)
2. Responses to RIDEM Comments, Draft Work Plan for Sediment and Groundwater Monitoring, Site 09, Old Fire Fighting Training Area, Naval Station Newport, Newport, RI, June 2004 (Comments dated September 2, 2004)

Copy to:

C. Mueller, NSN  
J. Stump, Gannett Fleming  
S. Parker, TtNUS

**Responses to Comments From the  
U.S. Environmental Protection Agency on the  
Draft Work Plan for Sediment and Groundwater Monitoring for the  
Old Fire Fighting Training Area  
Comments Dated August 5, 2004**

**1. General Comment:**

*A better description of specifically how the data will be evaluated should be provided. Given the limited data set, it is not clear that the proposed comparison methodology will have much value, given the statistical uncertainty.*

**Response:** The work plan will be revised to more clearly state the use of the data.

**2. General Comment:**

*The representativeness of individual sediment samples collected for this work plan - based on the potential dynamic nature of the sediment topography and the ability to relocate prior sample collection locations accurately - may be questionable. Please clarify if topographic data and survey or GPS data were collected for previous sediment sampling locations that will be resampled for this work plan. If not, please discuss why the Navy believes samples to be collected will be representative of previous sediment sampling locations.*

**Response:** All sediment sample stations were marked and surveyed through GPS at the site as described in previous reports. Most locations still have buoys affixed to the stations. All sample stations can be revisited to within three feet of the previously collected sample points. This will be clarified in the revised work plan.

**3. General Comment:**

*The Navy may wish to consider collection of bioaccumulation data (e.g., indigenous bivalves, deployed blue mussels) to evaluate short-term effects during the soil excavation. These data could provide direct evidence of operational impacts, or lack of impacts, in a relatively timely and cost effective manner.*

**Response:** Due to the short timeframe of the removal event and because the majority of the site contaminants do not bioaccumulate, the Navy does not believe that tissue collection is warranted for this effort.

**4. General Comment:**

*Because removal of the western-most mound is planned, EPA recommends that you add an additional sediment station near this mound to evaluate any effects from erosion during excavation (e.g., between the mound and the eelgrass bed and between OFF-1 and OFF-2).*

**Response:** The Navy concurs, and the contingency sediment station described on Table 3-1 will be assigned as suggested.

**5. General Comment:**

*Lastly, I understand that you will be using forensic techniques to evaluate various contaminant sources. EPA has written several letters on the previous forensic studies performed at this site and hereby incorporates those letters by reference (see letters dated October 8, 2002; November 7, 2002; and December 2, 2002). While other sources may be contributing contaminants to the sediment offshore of the OFFTA site, EPA continues to believe that fire training activities contributed to the sediment contamination.*

Enclosure (1)

Response: The comment is noted. The Navy will continue efforts to gain a better understanding of the potential sources of PAHs in and around the sediments adjacent to OFFTA site.

Specific Comments

Page

Comment

6. p. 2-12, §2.4.5.1 *Please clarify the second sentence.*

Response: The second sentence is an erroneous statement, and will be struck from the work plan.

7. p. 2-13, §2.4.5.3 *Please clarify how the chemical data and the eelgrass data will be used to determine whether a change has occurred from previous analyses. Where a difference truly exists in the chemical data, it will be difficult to identify it because of the statistical uncertainty inherent in a small data set. Please clarify how this problem will be overcome.*

Response: There is no opportunity to overcome the limited data set that is available for previous rounds. Slight differences in the data sets will therefore not be evident. However, a substantial difference will be evident through the comparisons described in the text.

8. p. 2-15, §2.4.7 *In the second paragraph, the text states that sediment samples will be collected from the same depth interval as for previous samples. It is possible that the sediment topography at the previous sample locations has changed so that the samples collected for this work plan will not be representative of samples collected previously. Is there data to determine whether the topography has changed?*

Response: Topography of the intertidal and subtidal slope was surveyed to an elevation of -3.0 feet in January 2004.

It is likely that there is erosion and replacement of sediment in the intertidal stations, considering the dynamic nature of some of the shoreline. The subtidal slope is less likely to have changed, because there is less energy in this area. Topography is likely to stay the same, given the same physical features, and forces acting on them do not change. It is not possible to determine conclusively if the sediments present in the subtidal area are the same as those that were present in 2002, due to this mixing and exchange. The effort described in this plan is to measure any short term impacts due to the mound removal action, and to provide another data set to better understand the baseline condition before the remaining soil removal action. The work plan will be revised to clarify this fact.

9. p. 3-2, §3.2 *In the first paragraph, the text states that if station identifiers are no longer present, GPS will be used to locate previous sample locations. Is GPS or survey data available for all the previous sediment sample locations? If not, please explain how the GPS location will be established for the previous sample locations.*

Response: All sample stations were surveyed in 2002 with GPS to submeter accuracy. In addition, all of the stations were buoyed, and many of these bouys are still present. There is a high confidence in the reproduction of the sample stations in the field.

10. p. 3-4, Figure 3-1 *To provide a control for the forensic testing, EPA recommends an additional sampling location that could be the twelfth location requested in Table 3-1. Please collect a sample from the manhole located west of the central mound, between the vitrified clay pipeline and the reinforced concrete pipeline. Samples from this location and the one upgradient (OTS-OF075) should compare favorably if there is no other contributing source.*

Response: The Navy concurs with this suggestion. This station will be evaluated for presence of adequate material for sample collection.

*Sediment sample location 471 is within the eelgrass bed. Please reconsider the proposed surface and deep sample from location 471 as the disturbance to the eelgrass from the core sampling activity does not appear to be justified by the data that will be collected. Both deep and surface sediment samples were collected in 2001 and 2002 from location 471.*

Response: The Navy concurs with this suggestion. A new station shoreward of the eelgrass bed will be considered as a replacement for this station.

*Collection of sediment from location OFF-2 could serve the monitoring purpose of assessing whether there is a change in concentrations from soil excavation. Please evaluate the need for surface sediment samples from locations 410 and 475 within the eelgrass. The disturbance to the eelgrass from the sampling activity may not be justified by the additional data that will be collected.*

Response: The Navy concurs with this suggestion. Stations 411 and OFF-2 will be considered as replacement stations.

*Since eelgrass beds grow and shrink annually, EPA recommends that you map the bed directly before-and-after the actual soil removal. Comparison to the 2002 survey may give misleading results.*

Response: The Navy would concur, however, the beds are also best measured the same time each year (in 2002, it was August). The next opportunity will be August 2005. The Navy also may undertake this effort at that time.

11. p. 3-6, Table 3-2 *Quality control samples should include matrix spikes and matrix spike duplicates too (identified in Section 4.1.2.4.). Please revise the table accordingly. Also, please correct note #2; there are no grid or supplemental samples for this work.*

Response: The Navy concurs, these corrections will be made.

12. p. 3-7, Table 3-3 *Regarding Note #4, it is conceivable that the use of two different laboratories for the forensic analyses could result in different interpretations of the data and different conclusions. Is there any evidence of that based on previous analyses? If so, it would be appropriate to send split samples to both laboratories for analyses and compare their results as a component of the quality assurance program.*

Response: The Navy is considering this possibility, along with possibly using the same laboratory under a sole source subcontract structure.

13. p. 4-2, §4.1.1.1 *The text in this section states that precision and accuracy will be estimated but that a formal validation for precision and accuracy will not be performed. Please clarify the difference between an estimate of precision and accuracy and a formal validation of the data for precision and accuracy. Also, please further explain why formal validation should not be conducted.*

Response: A Tier 2 validation will be conducted as described in Section 4.6. The statement regarding precision and accuracy only is intended to state that some of the variables cannot be quantified in the validation process. This will be clarified in the revised work plan.

14. p. 4-3, §4.1.1.3 *The text in the second paragraph of this section states that a single data point would not jeopardize the attainment of the study objectives. It is not apparent that this statement is correct. Based on the sampling design and data assessment plan, it seems possible that a single data point could interfere with attainment of the project objectives. Please either explain why this statement is accurate or delete it.*

Response: The statement and the context will be reconsidered and revised if necessary.

15. p. 4-3, §4.1.2 *The reference to Table 3-1 at the bottom of the page should be to Table 3-2.*

Response: The Navy concurs and this will be revised.

16. p. 4-4, §4.1.2.4 *Matrix spike/matrix spike duplicates are discussed here but are not included in Table 3-2 that presents the quality control samples.*

Response: The Navy concurs and Table 3-2 will be revised.

17. p. 4-8, §4.3.1 *It is noted that the protocol for identifying the quality control samples differs from the protocol presented in the SOPs in Appendix A. This should also be noted in the work plan text.*

Response: The Navy concurs and the text will be revised.

18. p. 4-9, §4.5 *The reference to Table 3-1 at the bottom of the page is not correct. The reference should be to Table 3-2 or 3-3. Please correct as appropriate.*

Response: The Navy concurs and the text will be revised.

19. p. 4-10, §4.5 *The reference to Table 3-2 should probably be to Table 3-3 which provides a more detailed presentation of the analytical methods.*

Response: The Navy concurs and the text will be revised.

Enclosure (1)

**Responses to Comments From  
Rhode Island Department of Environmental Management on the  
Draft Work Plan for Sediment and Groundwater Monitoring for the  
Old Fire Fighting Training Area  
Comments Dated September 2, 2004**

**1. General Comment:**

*The work plan calls for the monitoring of sediments adjacent to the Old Firefighting Training Area to ascertain, if the contaminants are degrading in the sediments, whether the planned removal action to be conducted at the site will result in a reduction in contamination observed in the adjacent sediments, and potential sources of sediment contamination. As the Navy is aware, the Office of Waste Management in previous correspondence and meetings has noted that the Navy has failed in the previous submittals to demonstrate that contaminants adjacent to the site are degrading at an appreciable rate and that source of contamination is unrelated to the Old Fire Fighter Training Area. The proposals presented in this work plan either mirror similar submittals, which were found to be inadequate and/or fail to address the issue.*

Response: The comment is noted. The Navy will continue efforts to gain a better understanding of the potential sources of PAHs in and around the sediments adjacent to OFFTA site.

**2. General Comment**

*The Navy's position that the source removal may result in a reduction of contamination observed in the sediment contradicts previous statements made by the Navy. The Navy has noted that groundwater at the site is not a source of contamination for the sediments, that is the groundwater did not contain contaminants, which are found in the sediments. Further, the site is well vegetated thus negating the overland erosion route. In contrast, when the Fire Fighting Training center was in operation there were direct discharges into the sediments from the site's oil water separators and direct overland flow across the site, which at the time was not vegetated.*

Response: The Navy does not disagree with the history of the site. However, the Navy has previously collected and evaluated data which has shown that PAHs presently in sediments are more similar in nature to those found in storm drains than PAHs in the soil or oil at the site.

**3. General Comment**

*In consideration of the above, the Office of Waste Management questions both the need and the utility of the proposed monitoring plan. The Navy has already demonstrated that the sediments adjacent to the site represent an unacceptable risk. Removal of the contaminated sediments at the same time as the onshore removal action will be cost effective. Conversely, removal of the contaminated sediments adjacent to the McAllister Point Landfill site after completion of the onshore remedial activities greatly complicated and increased the cost of the offshore dredging. Therefore, the Office of Waste Management strongly recommends that the Navy direct its limited funds towards the removal of contaminated sediments concurrent with the onshore action.*

Response: The comment is noted. The removal or monitoring of the sediments is being discussed through other avenues. This work plan is intended to direct collection of sediment samples after the removal of the mounds to verify that no further degradation to the sediment has occurred as a result of the mound removal and to better understand the baseline condition before the remaining soil removal action.

Enclosure (2)

**4. Section 1.1, Scope and Objective, Page 1-1.**

*"In addition, sediment data will also be used to support previous findings that the sediment concentration is not only site related but also a result of urban inputs from onshore storm water sewers and offshore sediment bay concentrations."*

*The validity of the inputs from the storm water sewers has been questioned. In addition, the Office of Waste Management has not accepted the reference stations employed at this site. Further the concentration of contaminants at the site is above the accepted reference stations in Jamestown. Since the results of the previous findings have not been accepted the above should be modified as follows:*

*In addition, sediment data will also be used to ascertain whether there are other sources of contamination to the area such as, storm sewers or general inputs from the bay.*

Response: The use of the data will not change based on the revision described above. Therefore the sentence will be revised to state that the data will be used to help determine sources of contamination to the area.

**5. Section 2.2, Site History, Page 2-6, Second Paragraph**

*This section of the report describes the use of the site since firefighting training activities were discontinued. The site was also used as a day care facility. Please modify the report to include this fact.*

Response: The full history of the site is not provided in this document, only a summary of the items pertinent to the groundwater and sediment evaluations to be conducted. Therefore, this change is not necessary.

**6. Section 2.4.5, Forensic Data, Page 2-13, Whole Section.**

*The report states that a forensic analysis, similar to the previous study, will be performed at the site. In previous correspondence and meetings the Office of Waste Management raised a number of questions concern the validity of the original study and the conclusion generated by the report. Accordingly, the report was rejected, and the Office of Waste Management stated that conclusions presented in the report could not be used as a foundation for decisions made at the site. The Navy now proposes to perform a second similar study. Please be advised that the Office of Waste Management position concerning this matter has not changed. Specifically, the Office of Waste Management does not approve the proposal of performing a similar forensic study, nor will it accept any conclusions generated from this study or any positions based upon such a study.*

Response: Please refer to the response to General Comment No. 1 above.

**7. Section 3.2, Sediment Sample Collection, Page 3-2, Whole Section**

*This section of the work plan delineates the proposed sample collection locations. It is known that beach environments are dynamic, in that sediments adjacent to the beach shift and areas are built up or eroded away. Previously the Navy acknowledged that this typical behavior has been observed in the sediments adjacent to the Old Fire Fighting Training Area. It is also the Navy's position that the PAHs at the site are degrading. Therefore, in order to ascertain whether contaminants in the sediments are being degraded, as opposed to being redistributed, a more intense sampling effort will have to be implemented. The sediment sampling will consist of a near shore element and an offshore element. Near shore sediment samples shall be collected on a vertical line extended outward from the shore every twenty-five feet. The terminus will be the outward extent of the area of concern depicted in the Feasibility Study for the site. This outward vertical profiling will occur at one hundred foot intervals along the shoreline of the site. Adjustment can be made in the*

Enclosure (2)

sampling effort so that the twelve areas identified in the work plan are sampled. To address hydrographic movement, sediment samples will be collected from the 0-6 inch interval. To address degradation, sediment samples will be collected at all locations at the depth or depths that contamination above PRGs was observed.

In regards to the offshore element, the Ecological Risk Assessment notes that localized depositional areas may exist at the site, which were not identified due to the separation distance in the hydrographic study. Therefore, a hydrographic study needs to be performed in order to identify these depositional areas. Once identified these areas would be sampled at the same horizontal and depth interval specified for the near shore sediments.

Response: The reviewer is referred to Section 1.1, Paragraph 1 of the work plan. The objective is to verify that no further degradation of the sediments is occurring, but also to better understand the baseline condition before the remaining soil removal action. The suggested approach described in the comment above is not necessary for this purpose.

#### **8. Section 3.2, Sediment Sample Collection, Page 3-2, Whole Section**

The Navy has proposed conducting a long term monitoring program at the site to monitor degradation of contaminants in the sediments and the effects of the source removal. In addition, the Navy has noted that a revetment will be installed at the end of the removal action. It is known that beach environments are dynamic. Further, the installation of a revetment may have unforeseen consequences, such as the beach erosion observed at McAllister Point Landfill. Therefore, in consideration of the above the Navy needs to measure the baseline topographical features at the site. The study area should extend out from the beach into coaster harbor. Once this baseline is established periodical sampling will have to be performed to access the changes in the typography of the site. This information will be used to modify where sediment chemistry samples will be taken.

Response: Please refer to the response to Comment No. 7, above. Baseline topography of the intertidal and subtidal slope was measured in January 2004, as provided in the Soil Pre-design Investigation Report (TtNUS April 2004). The protective revetment will be designed in a later phase of the removal action. Long term monitoring stations will be determined after the removal action design is completed.

#### **9. Section 3.2, Sediment Sample Collection, Page 3-2, Whole Section**

The Navy has stated that PAHs in the sediments are degrading. In support of this position the work plan must include a section on PAH degradation. Specifically, the work plan must depict the degradation pathway and breakdown products for each PAH. These degradation breakdown products must be added to the SVOCs list for at the site. In addition, as has been done at other sites where degradation is occurring indicator parameters associated with degradation must be tested for.

Response: Please refer to the response to Comment No. 7, above.

#### **10. Section 3.4, Groundwater Sample Collection, Page 3-9, Whole Section**

The report notes that the wells will be purged prior to sample collection. In order to determine the appropriate location to place the low flow sampler, the purge water will be screened with a FID during the purging process. That is, the wells will be purged by slowly lowering the purge tubing in set increments. The discharge water will be screened with a FID or PID. The groundwater resample will be collected in the zone, which exhibited the highest reading.

Response: This request was made of the TtNUS field sampling staff by the RIDEM representative during sample collection. After conferring with the TtNUS project manager, the requested approach was used. However, no readings were detected using the PID.

Enclosure (2)

**Table 3-2 Field Quality Control Table Summary, Page 3-6.**

*The table notes that sediment samples will be analyzed for SVOCs using method 8270c and VOCs by 8260 b. The report is a public document, therefore the compounds associated with each test method must be included in the report.*

Response: An Appendix will be included providing contaminant lists for each method.

**Table 3-2 Field Quality Control Table Summary, Page 3-6.**

*The table notes that TPH groundwater samples will be analyzed using 8015A. This method is only applicable to volatile TPH fractions. It is known that a wide range of petroleum products was used at the site, and that the heavier fractions have a higher probability of still being present. Therefore, TPH analysis should include both volatile and extractable fractions. This will require two different test procedures for TPH. The work plan must be modified to include both test procedures.*

Response: The method cited reports both GRO and DRO, quantified to C-36 extractable hydrocarbons. This will be clarified in the revised work plan.

**Table 3-2 Field Quality Control Table Summary, Page 3-6.**

*The table specified TAL analysis for sediment samples collected at the site. Although not listed it is assumed that the TAL includes cadmium, chromium and copper. Please confirm.*

Response: The TAL list includes cadmium chromium and copper.

**Table 3-2 Field Quality Control Table Summary, Page 3-6.**

*It is the Navy's position that the parking lot is a contributor of contaminants in the sediments. Therefore sediments samples should undergo analysis for constituents associated with parking lots such as VOCs (BTEX, etc), MTBE (slowly degraded gasoline additive) and metals (associated with automobile brakes, catalysts, etc)*

Response: Please refer to the response to Comment no. 1 above. The sample analysis is intended to determine the source of site COCs and to verify that there is no further degradation of the sediment from the site during removal actions.

**Table 3-2 Field Quality Control Table Summary, Page 3-6.**

*Samples from the storm drains in the parking lots and site storm drains should be collected to demonstrate that these drains are the source of contamination in the adjacent sediments. Storm drain samples should be analyzed for metals, TPH, VOCs (including MTBE), SVOCs and metals.*

Response: Sample analysis includes metals, TPH and PAHs. Other contaminants are not site related, and should not be pursued.

**Table 3-2 Field Quality Control Table Summary, Page 3-6.**

*The Navy has stated that PAHs are degrading in the adjacent sediments. In support of this position the sediments must be analyzed for all of the degradation product associated with PAHs, as well as the indicator parameters associated with degradation.*

Enclosure (2)

Response: Please refer to the response to Comment no. 1 above. The sample analysis is not intended to determine that PAHs are degrading in the sediment, but to support previous determinations, and to verify that there is no further degradation of the sediment (contaminant transfer to the sediment) from the site during removal actions.

***Table 3-3, Analytical Methods, Sample Container, Preservation and Holding Times, Page 3-7.***

*EPA Method 5035 must be applied to all VOC, and TPH volatile range, sediment samples and storm drain samples.*

Response: EPA method 5035 for preservation will be used for the organic samples collected at this site.

Enclosure (2)