



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND, MID-ATLANTIC
9742 MARYLAND AVENUE
NORFOLK, VA 23511-3095

IN REPLY REFER TO

5090
Code OPNEEV4/JLC
September 14, 2007

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

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

Dear Ms. Keckler & Mr. Kulpa

Subject: Final Removal Action Work Plan, Soil Removal Actions,
and Response to Comments, Draft Final Removal Action
Work Plan, Old Fire Fighting Training Area, Naval
Station, Newport Rhode Island

The Navy is forwarding 4 copies (2 paper and 2 CDs) of the Final Removal Action Work Plan for Soil Removal Actions at the Old Fire Fighting Training Area (OFFTA) at Naval Station Newport, in Newport, Rhode Island. The Final Work Plan incorporates comments and Navy responses, as appropriate, to the Draft Final version of the Work Plan submitted on May 1, 2007.

Also enclosed, you will find responses to your comments regarding the Draft Final Work Plan dated 6/25/07 and 6/29/07, respectively.

Section 12 of the FFA for Naval Station, Newport provides that once the need for a removal action has been determined, various documentation including a work plan, for the proposed action, will be submitted to EPA and the State for review. Section 12.5(f) further states that after the Navy responds to regulatory comments on the work plan, the EPA and State must then declare whether they disagree or concur with the proposed removal action. Statements provided by both the EPA and RIDEM in their letters of 6/25/07 and 6/29/07, respectively, both indicate concurrence with the need for this removal action.

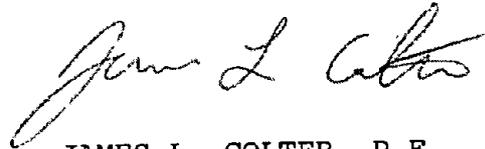
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As far as the Navy can tell, most of the concerns expressed by RIDEM are over the completeness of the removal action as it pertains to the final remedy for the site. Please note that at this time, the Navy is not considering this as the final remedy for the OFFTA site. That determination will be made as part of the discussions regarding the upcoming Feasibility Study.

As such, the Navy will not respond to any further comments that may be issued regarding this work plan and will begin efforts to mobilize into the field for the purpose of implementing the work plan. A project schedule will be provided to you shortly.

If you need to discuss this issue further, you can contact me by phone at (757) 444-4217 or by email at james.colter@navy.mil.

Sincerely,



JAMES L. COLTER, P.E.
Remedial Project Manager
By direction of the
Commanding Officer

Enclosures

Copy to: (w/encls.)
NOAA, Ken Finkelstein (1 paper, 1 CD)
Gannett Fleming, Paula Loht (1 paper, 1 CD)
NAVSTA Newport, Cornelia Mueller (1 paper, 1 CD)
NAVSTA Newport FEAD, Bob Krivinskas (1 paper, 1 CD)
NAVSTA Newport RAB, c/o Cornelia Mueller (4 CD)
NAVFAC Atlantic, Dave Barclift
TtNUS, Steve Parker
Admin Record/Information Repository

**ATTACHMENT A
RESPONSES TO COMMENTS FROM THE USEPA TO THE
DRAFT FINAL REMOVAL ACTION WORK PLAN
OLD FIREFIGHTING TRAINING AREA
NAVSTA NEWPORT, NEWPORT RI
COMMENTS DATED JUNE 25, 2007**

General Comment:

EPA reviewed the draft final Work Plan for Non-Time Critical Removal Action at the Old Fire Fighting Training Area, Newport, RI, dated May 2007 in light of its completeness, technical accuracy, and consistency. In an effort to support the Navy's goal to begin the removal action in summer 2007, provide responses to these comments as an addendum to the work plan. A revised work plan is not necessary.

Response: The Comment is noted. Due to the volume of comments from both USEPA and RIDEM, a final document will be prepared.

Specific Comments:

Page Comment

1. p. 5-2, §5.1 *The last bullet discusses the ten test pits to be selected by EPA and RIDEM. The text states that the volume of each test pit is expected to be 62 cubic yards whereas the anticipated volume for each of the ten excavations as noted in the draft work plan was of 85 cubic yards, which EPA generally accepted but without dimensional restrictions. EPA anticipates cooperation during the test pitting.*

The partial paragraph at the bottom of the page states that Foundations 1, 2, and 3 will only be excavated if time and funding permits; however, the Action Memorandum states that excavation of the three foundations is a part of the proposed removal action. Foundation 1 appears to be associated with training stations 134 and 135; Foundation 2 appears to be one of two oil-water separators; and Foundation 3 appears to be a fuel (gas) storage tank. Consequently, all three foundations are areas where petroleum would have been used or stored and therefore these structures (especially Foundations 2 and 3) are important components of this removal action. EPA believes that excavation of these three foundations should be a higher priority than excavation of the concrete apron

Response: The comment is noted, and the Navy also anticipates cooperation with the the regulatory parties during the field efforts conducted. Removal of the foundations is noted to be based on time and funding because the final size and thickness of the foundations is still unknown. It is agreed that they will each be opened and evaluated, however, if the wall thickness and the construction shows that they are not likely to harbor contaminants at significant concentrations, it may be unnecessary to remove them.

2. p. 5-3, §5.2 *This section discusses FID and Petroflag screening of excavated soil. A table is provided in this section to classify soil based on TPH concentrations. It is presumed that the TPH concentration is based on the Petroflag screening. Please edit the text to clarify what threshold concentration levels will be used for the FID screening. For example, how will soil be classified if the Petroflag screening results were less than 2,500 ppm TPH but the FID screening result was off the scale? Will a calibration task be implemented before conducting the excavations that will correlate the FID and Petroflag results? To make the FID screening useful, threshold values should be established to facilitate decision-making.*

Response The FID will be used as a qualitative instrument, the petroflag results will take precedence with regards to field instrument readings. During excavation, an attempt will be made to correlate FID readings to petroflag results, but it is recognized that different soil conditions, humidity and temperature will have an effect on FID readings, so the petroflag results will take precedence.

3. p. 5-4, §5.2 *Sampling and laboratory analysis of the stockpiles classified by screening as reusable for backfill must confirm that the soil destined for reuse on site does not exceed 2,500 mg/Kg.*

Response: Comment is noted, this is the approach intended, and will be clarified.

4. p. 6-1, §6.2 *The Construction Quality Control (CQC) Plan was not provided. If the CQC Plan will not be incorporated into the work plan then please submit it for review. As proposed in this work plan, the CQC Plan contains information critical to the conduct of the proposed work (including a description of the full sampling and analysis program and protocol for locating and marking before sample locations).*

Response. The CQC Plan will be prepared and submitted as a separate document.

5. p. 7-1, §7.2.1 *All catch basins must be protected with filter fabric and hay bales or silt fence. Catch basin locations should be clearly identified in the field.*

Response: The comment is noted, this will be included in the CQC plan.

6. p. 7-4, §7.4 *The work plan does not describe how the results of the laboratory samples collected to confirm the screening results (10% of the screened samples) will be used to modify the screening procedures. What action will the Navy take, if any, if the laboratory analyses do not confirm the Petroflag screening results? What are the confirmation criteria?*

Please confirm that no soil will be reused for backfill until samples of each stockpile proposed for reuse on the site have been analyzed and found to satisfy the reuse goals.

Response: A correlative record will be kept for the 10% split samples. A target correlation is will be within a RPD of 50%. If this is not met, another approach will need to be devised. This will be clarified in Section 9 of the final RAWP. This will be clarified in the final document.

7. p. 7-4, §7.4 *The excavation volumes presented in the second paragraph on this page are not consistent with the volumes presented in Section 5.1. For example, Section 5.1 states that approximately 1,000 cubic yards will be excavated at the soil hot spot area and 286 cubic yards will be excavated in conjunction with the removal of the concrete apron. The other soil volumes discussed in this section are similarly inconsistent with Section 5.1 and the volumes in both sections have inconsistencies as compared to the volumes presented in the Action Memorandum. Please review and correct for consistency.*

Response: The Text will be checked against the volume estimates in the appendix and revised as needed.

8. p. 7-6, §7.6 *This section states that four separate stockpiles will be staged in the temporary staging area while Section 7.3 states that the temporary staging area will be segregated into five separate areas. Because Section 7.7 states that clean backfill will be unloaded at the temporary staging area, it is not clear if these two statements are consistent. The table provided in Section 5.2 suggests there will be four distinct types of excavated soil or debris requiring stockpiling. It is presumed that the 200 cubic yards of soil excavated to create the temporary stockpile area would be stockpiled at a separate, unspecified location at the site. Please clarify.*

Response Four areas will be set aside for contaminated stockpiled material. A clean area separated from the stockpile area will be set up for clean and backfill material as needed.

9 p. 7-7, §7.7 *If clean backfill will be staged in the temporary staging area where excavated materials will also be staged, the clean backfill should be separated from waste by jersey barriers and staged at the end of the temporary staging area so that it is adjacent only to the concrete rubble/structural debris*

Response: The comment is noted, and this approach will be followed as needed.

10 p. 8-1, §8.0 *Regarding the fifth bullet, because trucks hauling excavated material will also travel on the haul road (see bullet number 1), the haul road cannot be considered clean. All trucks leaving the site should be decontaminated at the wheel wash area.*

Response: The comment is noted, and this approach will be followed as needed.

11. p. 9-1, §9.0 *The QAPP was not provided in this work plan. Will the QAPP be submitted for review and concurrence before initiating work at the site?*

Response: A QAPP for sample collection and analysis will be included in the CQC plan.

12 p. 9-2, §9.2 *Regarding the example in the last paragraph of this section, please note that with sidewall samples collected on 20-foot centers, each sample represents a 20-foot length so for a sample that exceeds the TPH goal, a 20-foot section (not a 10-foot section) would have to be excavated. Please edit the work plan accordingly*

Please clarify the proposed sampling. Excavating an additional area of 10x5x5 (actually 20x5x5, see above) to remove contaminated soil would create an additional excavation with three sidewalls and a bottom. Please confirm that the intent is to apply the same sampling protocol for this new excavation; that is, each of the three sidewalls would be sampled and the bottom would be sampled on a 10-foot grid with a minimum of four bottom samples

Response: The minimum sampling would be one per 20 feet of side wall. Some excavations are anticipated to be less than 20 feet in length. If visual information suggests a tighter sampling protocol, this will be applied.

13. p. 9-2, §9.3 *The first sentence is not correct. The excavated soil and structures will be temporarily placed in 10 cubic yard cast piles based on visual observation and BEFORE any screening. The screening would only occur after the cast piles are created (see Sections 5.2 and 7.4). Please clarify the intent.*

Response: Concur, this will be revised

Please clarify the screening protocol for the 10 cubic yard cast piles. (A 10 cubic yard cast pile would be a 10-foot diameter by 10-foot high cone.) A description similar to that provided in the third and fourth sentences of Section 9.5 for the waste characterization sampling is expected.

Response: The comment is noted.

14. p. 9-3, §9.5 *Please revise the second sentence of the second paragraph to clarify the intent. Excavated soil that is placed in the stockpile area must either be placed in a stockpile that has not yet been characterized or into a new stockpile*

Response Concur The sentence will be revised.

15. p. 10-3, §10.7 *The discussion in this section mentions the 200-foot buffer zone but does not mention the 100-foot buffer zone that the Navy said was also applicable to this site. Please explain.*

Response: The 100 foot zone is applicable to the project. A note of the 200 foot zone is not found in this section

16. p. 11-1, §11.0 *The description of the Removal Action shall also include drawings showing where removals occurred (based on survey data), dimensions for each excavation location, descriptions of materials removed at each excavation, and discussion of materials (e.g., pipes, structures, concrete) left in place and where these materials are located.*

Response. Concur, this information will be provided as recorded.

17. Figure 1-1 *This figure previously depicted the 200-foot buffer zone associated with tidal waters but did not depict the 100-foot buffer zone that the Navy said was also applicable to this site and work plan. Now however, neither buffer zone is depicted on this or any other figure in the work plan. Please explain or revise the figure to include the boundary of each applicable buffer zone.*

The extent of contamination depicted in this figure is not accurate because it does not include sampling results obtained before 2003 and the shading incorrectly identifies the contamination level of some samples at the selected kriging slice elevation, presumably owing to limitations in the kriging process. Furthermore, by only including one kriging elevation, greater contamination concentrations that exist at some locations are not identified. However, there are no locations omitted that are known to exceed the 30,000 ppm TPH threshold. This figure should more accurately depict historical results if it is included in future reports.

Response. The Kriging slice presented was selected as it provides the largest extent of contamination of petroleum in the soil based on the best data available in 2005. Additionally, it is provided only for informational purposes as the excavation is not targeted for this petroleum. Thus there is no reason to change the depiction in this work plan.

18. Figure 1-3 *Please note that Foundation 1, shown as a red box on this figure, very likely corresponds with the simulated ship structures identified as buildings 134 (based on TP1C and TP-10) and 135 (based on TP1A and TP1B) and when these structures are excavated the proposed haul road would be destroyed. The temporary storage area as well as the support trailer should be located somewhere where no historical subsurface structures were located because EPA is interested in investigating these locations during this removal action.*

Response: The comment is noted. Using the best information possible, the haul road will be established in an area that is not likely to be impacted by excavation.

Based on the proposed locations shown in this figure, the temporary staging area is located directly above historical structures and the haul road immediately abuts the two historical fuel storage tanks, located near TP-12 and TP-11, all of which EPA expects to investigate. It would be best to locate the support facilities and haul road on the western portion of the site

Response: The comment is noted. Using the best information possible, the haul road will be established in an area that is not likely to be impacted by excavation

19. Appendix F EPA will work with RIDEM and the Navy regarding the location and size of the approximately ten additional excavations required to further assess areas of concern at the OFFTA site. EPA is interested in the former oil-water separators and fuel storage tanks and associated piping that are not addressed by the scope of work proposed by the Navy. While EPA agrees that some limitation on the size of these additional excavations is warranted, the purpose of these excavations will be to determine the presence or absence of these structures and the potential for residual TPH contamination in excess of the 30,000 ppm threshold. Because the exact location of these structures is not known, the excavations will have to be constructed to provide the best opportunity to find the structures or confirm that they are no longer present. As such, any limitations on these excavations will be understood to be guidelines only. If funding restrictions prevent an adequate investigation of these areas of concern then further investigations can be postponed until additional funding is acquired.

Response: The comment is noted.

21. pp. 14-16 Review of the historical drawings in conjunction with the previously conducted subsurface exploration locations (see Figure 1-3) indicates that: 1) Foundation #1 is apparently the remnants of both building 134 and 135; 2) Foundation #2 is the remnant of one of the two oil-water separators used to treat water discharged from the training structures; and 3) Foundation #3 is one of five fuel storage tanks used to provide fuel to the various training stations. As such, the estimated size of the structures appears correct (based on historical drawings) for Foundations #2 and #3, but is too small for Foundation #1.

Response: The Comment is noted. Any additional information gathered on the features prior to demolition of the training area will be utilized to direct excavations accordingly.

**ATTACHMENT B
RESPONSES TO COMMENTS FROM THE RIDEM TO THE
DRAFT FINAL REMOVAL ACTION WORK PLAN
OLD FIREFIGHTING TRAINING AREA
NAVSTA NEWPORT, NEWPORT RI
COMMENTS DATED JUNE 29, 2007**

General Comments:

As the Navy is aware, while the Office of Waste Management fully supports the removal of contaminated soil, and surface and subsurface structures at the site, it is this Office's position that the proposed limited scope of the remedial effort in terms of contaminants of concern and remedial endpoints does not meet the State's regulatory requirements, as outlined in Section 8 of the Site Remediation Regulations, as well as, the applicable requirements of the Oil Pollution Regulations and the Leaking Underground Storage Tank Regulations. Accordingly, in order to achieve compliance with State regulations the Navy needs to expand the remedial effort.

The Office of Waste Management also questions the Navy's proposed approach, as it will necessitate the need to conduct additional Risk Assessments and Feasibility Studies, which will further delay addressing this site under the Federal Facilities Agreement. Finally, be advised as the proposed limited action fails to meet State regulatory requirements, the Office of Waste Management may take regulatory action against the Navy to ensure compliance with State regulations independent of the current CERCLA process.

Response: As stated in prior correspondence, the Navy is pursuing the approach that was presented at the Tiger Team meeting held April 13, 2006 at which RIDEM was represented. The limitations of the effort were explained at that time, particularly in regards to removal of metals that are naturally occurring and in regards to the pursuit of petroleum, which is not actionable under CERCLA. The removal action is being conducted to address petroleum at concentrations above UCLs, and to remove structures that may be continuing sources of contamination. The Navy fully understands that the pursuit of this removal will not preclude any future remedial efforts that are found to be required during the revision of the FS. As such, the Navy would suggest that RIDEM not take any further regulatory action against the Navy with respect to the OFFTA site until the Navy has had a chance to complete the CERCLA process in order to determine which, if any, regulatory issues still remain.

RIDEM must understand that this is a removal action and is not intended, at this time, to be the final remedy for the site. That determination will be discussed as part of the upcoming FS that is currently being developed. Please note that the Navy recognizes RIDEM's opinion regarding this matter.

Specific Comments:

**1. Section 2-4, Regulatory Agency Personnel Site Visits
Page 24**

As has been done in other work plans please include a statement concerning regulatory notification of field activities. Typically one-week notification is given prior to the start of activities, when possible 24-hour notification is given for the cancellation of activities. Further, since work schedules are dynamic a weekly schedule of upcoming activities is emailed to the regulators. Finally, the entity responsible for notifying the regulators must be specified in the work plan.

Evaluation of Response and Draft Final Report

Comment has been addressed.

**2. Section 4.0, Regulatory Objectives
Page 4.0**

Please modify the report to include all of the Site Remediation Regulations, not just Section 8

Evaluation of Response and Draft Final Report

Navy has stated that they will not expand the list of contaminants. Please be advised that by this stance the Navy will not meet the requirements of the Site Remediation Regulations.

Response: Please refer to the response to the general comments above. RIDEM must understand that this is a removal action and is not intended, at this time, to be the final remedy for the site. That determination will be discussed as part of the upcoming FS that is currently being developed. Please note that the Navy recognizes RIDEM's opinion regarding this matter

**3. Section 4.0, Regulatory Objectives
Page 4.2**

"Rhode Island UST and LUST requirements- Underground tanks and support systems will be removed."

Please modify the above as follows:

Rhode Island UST and LUST requirements- Underground tanks and support systems will be removed in accordance with these requirements

Evaluation of Response and Draft Final Report

Navy has stated that they will remove UST in accordance with procedures describe in the work plan. Please be advised that by this stance the Navy will not meet the requirements of the Underground Storage Tank Regulations, and the Oil Pollution Control Regulations.

Response: The RIDEM is referred to the Navy's correspondence dated November 6, 2006 in regards to the interpretation of NAPL. Please also refer to the response to the general comment above

**4. Section 5.0, Removal Overview
Page 5.0**

The proposed clean up criteria for petroleum is conditions, which exceed the UCL. Accordingly, the report should note that free product in the soil and groundwater will also be removed.

Evaluation of Response and Draft Final Report

The response and draft final document states that only mobile NAPLs will be addressed. Please be advised that by this stance the Navy will be in violation of the Oil Pollution Control Regulations, the Site Remediation Regulations and the Leaking Underground Storage Tank Regulations.

Response. The RIDEM is referred to the Navy's correspondence dated November 6, 2006 in regards to the interpretation of NAPL. Please also refer to the response to the general comment above.

5. **Section 5.0, Removal Overview**
Page 5.0

The proposed clean up criteria for the site will not address concerns associated with petroleum contamination below the UCL or the presence of other contaminants such as lead. Accordingly, at this time the Office of Waste Management does not concur with the proposed clean up standards and additional remediation will be required.

Evaluation of Response and Draft Final Report

The Navy has acknowledged that the remedial action will not meet RIDEM requirements.

Response: The comment is noted. Please refer to the response to the general comment above.

6. **Section 5.0, Removal Overview**
Page 5.0

This section of the report deals with the removal of subsurface structures. The report states that if evidence of petroleum contamination is encountered the structure and any associated structure will be removed. It was the Office of Waste Management understanding that all underground structures are to be removed. Please modify the report to reflect this requirement.

Evaluation of Response and Draft Final Report

It is agreed that concrete or pipes, which is not contaminated or does not have contaminated soil adjacent to it can remain in place. To this end please modify Figure 5-1 to state that all pipes will be tracked and sampled to determine if contamination is present. Further, the report states that continuing sources of contamination will be removed. This may cause confusion in the field. As an illustration an intact tank or vault full of oil, which has not leaked, is not a continuing source of contamination. To avoid this problem in the field simply state that all structures, pipes, soil, etc which exceed criteria will be removed.

Response: All pipes, which could include water pipes, sanitary pipes, electrical conduit, as well as fuel lines should not need to be tracked, sampled and removed. The goal of this removal action is not to perform "housekeeping" activities that are more appropriately handled by the Installation.

The Navy concurs that any vault, tank, or void full of oil that has not leaked is a potential source of contamination and will be removed.

7. **Section 5.0, Removal Overview**
Page 5.0

The report states that if evidence of petroleum contamination is encountered the structure and any associated structure will be removed. If it is the Navy's intent to remove underground objects based upon field observations it will be necessary to inspect the entire underground object. As an illustration if a pipe is encountered, using the above criteria it will be necessary to inspect the length of the pipe for oil contamination. Further, in certain situations, visual observations alone will not be sufficient to ascertain if petroleum contamination is present. As an illustration, soil in a pipe may contain concentrations of TPH above the criteria for the removal action. Therefore, the work plan must stipulate that the entire underground object will be inspected and samples will be collected and analyzed as necessary to confirm the presence of contamination.

Evaluation of Response and Draft Final Report

It is agreed that all underground structures and pipes will be inspected and sampled and removed as necessary. The statements that the removal action will be limited to items and structures, which are anticipated to be source of contamination, may cause confusion in the field. As an illustration, an old sewer line may have served as a preferential pathway for contaminants and the soil around it may exceed criteria and soil therefore must be removed, even though the line never was anticipated to be a source of contamination.

Response: The comment is noted Use of the decision tree provided as Figure 5-1 will address findings that are unpredictable at this time.

**8. Section 5.0, Removal Overview
Page 5.0**

Based upon the information provided in this report the underground structures to be removed in addition to the ones cited, include the four underground storage tanks associated with the above ground oil tanks and Christmas trees, the oil tank north of Building 144 which is connected to the two structures (oil water separators?) on the southern end of the site, the pipes from Building 133 and 132 which connect to the aforementioned oil water separator. Areas which the work plan mentioned but was not clearly identified in the figure include the two oil water separators, and the manifold piping system from the ASTs and Christmas trees, which discharged into the oil water separators.

Evaluation of Response and Draft Final Report

The intent of the comment was simply to note potential source areas in the report.

Response The comment is noted.

**9. Section 5.0, Removal Overview
Page 5.0**

A review of historical plans and aerial photographs of the site will assist in the demarcation of potential areas of concern. Please provide historical plans for all of the former structures at the site and aerial photographs available from the engineering office at Naval Station Newport. In addition please indicate what was the function of Buildings 126, 130, 131. and 137.

Evaluation of Response and Draft Final Report

The Navy has addressed the comment

**10. Section 5.0, Removal Overview
Page 5.0**

The report notes that ten test pits will be dug to ascertain the locations of suspect underground structures. The work plan also calls for the removal of the manhole structure and any associated piping. This structure appears to be part or a remnant of the former concrete pad, which housed the AST and Christmas trees. If a sufficient portion of this remnant is still in place, removal of the associated piping may lead to other underground structures such as the oil water separators or USTs. Therefore the report must specify that prior to removing this remnant, the extent of the remnant will be uncovered. Then soil will be excavated along the perimeter of the remnant to a depth sufficient to locate buried pipes which leads to other structures such as the oil water separators, USTs, etc. These pipes or other structures will be tracked prior to the removal of the remnant. If piping is not present the outline of the remnant can still be used to locate other structures, such as the underground storage tanks, oil water separators, etc. This will

necessitate taking measurements from the perimeter of the remnant (both GPS and scaled field measurements from existing structures) prior to its removal. This information will be used along with the historic scaled plans to outline the extent of the concrete pad and possible locations for the underground structures.

Evaluation of Response and Draft Final Report

Please revise the work plan to state that prior to removing this remnant, the extent of the remnant will be uncovered. Then soil will be excavated along the perimeter of the remnant to a depth sufficient to locate buried pipes which leads to other structures such as the oil water separators, USTs, etc. These pipes or other structures will be tracked prior to the removal of the remnant. If piping is not present the outline of the remnant can still be used to locate other structures, such as the underground storage tanks, oil water separators, etc. This will necessitate taking measurements from the perimeter of the remnant (both GPS and scaled field measurements from existing structures) prior to its removal. This information will be used along with the historic scaled plans to outline the extent of the concrete pad and possible locations for the underground structures.

Response See response to Comment 6 plus planned utilization of the flow chart for decision-making purposes provided in the work plan

**11. Section 5.0, Removal Overview
Page 5.0**

The report notes RIDEM will be consulted to determine the location of test pits. It is likely that removal of the remnant and the associated piping will lead to a number of the USTs, the drainage to the oil water separators and the drainage associated with Building 133 and 132, as well as Buildings 132, 133 and 134. If this is the case, these areas, will not have to undergo test pit investigation. At this time areas which require test pitting include: USTs not associated with remnant of the pad and the large circular concrete structure immediately west of the pad, visible in aerial photographs demolition of the site. Additional locations will be provided after the requested material in this comment package is provided.

Evaluation of Response and Draft Final Report

The Navy has addressed the comment.

**12. Section 5.0, Removal Overview
Page 5.0**

The location of the various structures is depicted in numerous scaled engineering drawings and aerial photographs. Unfortunately it is not known whether any of the drawings reflect as built. Therefore, the Navy must determine the location of these structures in the field based upon information from both the scaled drawings and the aerial photographs. The locations will be demarcated using GPS and direct ground field measurements from structures still existing on the site (as an illustration the distance from the remnant of the pad and the former day care building will be measured in the field and compared to historical engineering plans). Finally, a metal detector must be employed to fine-tune the location of objects in the field.

Evaluation of Response and Draft Final Report

The intent of the comment was to employ standard practices when performing the removal action. If one has scaled engineering drawings one routinely takes measures from known sites to see if the scaled drawing reflects site conditions. In regards to a metal detector this is a low cost tool, which is routinely used by responsible parties to locate pipes and tanks.

Response: Use of a metal detector can lead to numerous false positives which result in wasted labor and equipment costs. If pipes are tracked, they will be tracked using the historic drawings and findings on the ground.

**13. Section 7.4.1, Non Aqueous Phase Liquids
Page 7-4, Paragraph 6.**

"The presence of sheen on standing water is not considered as a measurement of NAPLs. Measure NAPLs is anticipated to be the thickness of liquid 1/4 or greater measured by the oil water interface probe Appendix F."

Sheen is considered NAPLs therefore please remove the above and the procedures outlined in Appendix F

Evaluation of Response and Draft Final Report

As stated in previous correspondence NAPLs are not limited to measurable product via an oil water interphase probe. Therefore the presence of NAPLs in any media is considered an exceedance of UCLs. The proposal to use pumping, absorbent pads booms etc is acceptable to control NAPLs observed on water during construction. Removal or other measures are necessary to address sources of NAPLs. If this action is not taken the proposed remedial action will not meet the Navy's stated objective of remediating to UCLs.

Response: Please refer to the response to the general comment above.

**14. Section 7.4.1, Non Aqueous Phase Liquids
Page 7-5, Paragraph 3.**

"The process will be repeated at the Navy's discretion if NAPLs continue to accumulate "

Please add the following to the above

To address this problem additional excavation will have to be performed.

Evaluation of Response and Draft Final Report

The Navy has stated that if sidewall samples exceed 30,000 ppm in an area where free product is observed the excavation will continue. Please be advised that due to geology, type of oil, etc. free product may be generated at TPH concentrations below 30,000 ppm. In recognition of this fact the UCL has provisions for free product independent of TPH concentrations. Therefore, it is inappropriate to rely solely on the 30,000 ppm criteria and source removal should continue until the NAPL problem has been addressed. It appears that the Navy will conduct additional removal actions up to three cycles before installing crush stone. Please confirm.

Response: In regards to determining the presence of NAPL, please refer to the response to the general comment, above. It is confirmed that three cycles of NAPL removal will take place prior to backfilling with stone, as stated in the work plan.

**15. Section 7.7, Backfill
Page 7-6, Paragraph 3.**

The Navy has agreed to backfill with crushed stone as to allow for infiltration galleries, etc. Please modify this section accordingly.

Evaluation of Response and Draft Final Report

The Navy has proposed backfilling with crushed stone at all locations where free product has not been addressed by the remedial action. It is strongly recommended that all areas exceeding the remedial the RIDEM direct exposure criteria for TPH be backfilled with crushed stone, as this would allow for the low cost remedial alternatives such as insitu oxidation, to be employed at a later date. Please be advised that if the Navy elects not to take advantage of the opportunity to backfill these areas with crush stone at this time, the Navy cannot use cost associated with reexcavating these areas to place crush stone in them as a factor in a future Feasibility Study.

Response: The comment is noted.

**16. Section 9.2, Confirmatory Sampling
Page 9.1, Paragraph 3**

"A PID reading less then 100 PPM will indicate that "

Typically a 20 ppm criteria is employed therefore please modify the above as follows:

A PID reading less then 20 PPM will indicate that

Evaluation of Response and Draft Final Report

Navy has addressed the comment.

**17. Section 9.2, Confirmatory Sampling
Page 9.1, Paragraph 3**

Field screening with a PID is typically conducted at horizontal intervals of one every five horizontal feet with each sidewall being field screened. Please include requirement in the report.

Evaluation of Response and Draft Final Report

Navy has addressed the comment.

**18. Section 9.2, Confirmatory Sampling
Page 9.1, Paragraph 3**

At the Tank Farms and other sites at NETC where petroleum contamination was present field screening with Petro Flag kits or immuno assay were employed. These kits greatly facilitated the removal process. Therefore, please include the use of TPH field kits in the removal work plan.

Evaluation of Response and Draft Final Report

Navy has addressed the comment.

**19. Section 9.2, Confirmatory Sampling
Page 9.1, Paragraph 4**

The work plan proposes collecting confirmatory samples at a rate of one sample per 20 linear feet. Although not stated it is assumed that it was the intent to test every sidewall. Therefore in order to avoid confusion in the fields please modify the work plan to state that each sidewall will undergo confirmatory sampling.

Evaluation of Response and Draft Final Report

Navy has addressed the comment.

**20. Section 9.2, Confirmatory Sampling
Page 9.1, Paragraph 4**

"Bottom samples will be collected on a 20 foot grid"

Please modify the above as follows:

Bottom samples will be collected on a 10-foot grid

Evaluation of Response and Draft Final Report

Navy has addressed the comment.

**21. Section 9.2, Confirmatory Sampling
Page 9.1, Paragraph 4**

"In addition the standing water in the excavation will be evaluated to ensure that no NAPLs remains."

The above implies that measures will be taken to ensure the free product is not present in the standing water. Please be advised that free product must also be removed from the soils and sediments. Therefore please revised the report to state that free product in soils, sediments and groundwater will be removed.

Evaluation of Response and Draft Final Report

Navy has not addressed the comment.

Response Please refer to the response the general comment, above