

File: 000963-3.1

C: Parker

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RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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February 11 2009

Winoma Johnson
NAVFAC MIDLANT (Code OPNEEV)
Environmental Restoration
Building Z 144, Room 109
9742 Maryland Avenue
Norfolk, VA 23511-3095

Re: Evaluation of Response to Comments on the Draft Sampling and Analysis Plan for Sites 12 & 13, (Tank Farms 4 & 5). NETC

Dear Ms. Johnson,

The Rhode Island Department of Environmental Management, Office of Waste Management (RIDEM) has reviewed the Response to Comments on the Draft Sampling and Analysis Plan for Sites 12 & 13, (Tank Farms 4 & 5), January 12, 2009. Attached is an evaluation of these responses.

In the submitted comments on the Draft Sampling and Analysis Plan for Sites 12 & 13, (Tank Farms 4 & 5), dated November 21, 2008, RIDEM has provided detailed rationales for the specific concerns associated with each comment. This information is provided so that the Navy can adequately evaluate the State's position. In the majority of the response to comments the Navy has not provided a justification for its position and simply has stated that decisions concerning RIDEM issues were made in a meeting between the United States Environmental Protection Agency and the Navy. As the grounds for the decisions have not been included, it is not possible for RIDEM to evaluate the Navy's response to the comments and ascertain the validity of the stance. In regards to the comments submitted by the USEPA, the Navy has elected to provide detailed rationales in the response to comments from the USEPA, irrespective of the fact that the USEPA was present in the aforementioned meeting. Accordingly, similar to that provided to the USEPA, please submit a written rationale justifying the Navy's position on the RIDEM's comments.

If the Navy has any questions concerning the above, please contact this Office at (401) 222-2797. Ext. 7111.

Sincerely,


Paul Kulpa, Project Manager
Office of Waste Management

cc: Mathew DeStefano, DEM OWM
Richard Gottlieb, DEM OWM
Robert Lim, EPA Region I
Cornelia Mueller, NETC

**Comments on
Draft Sampling and Analysis Plan for Sites 12 & 13
Tank Farms 4 & 5**

1. General Comment

During the last investigation the approach, which was applied, was to simply identify areas, which exceeded RIDEM residential standards, delineate these areas, and conduct a concurrent removal action. This approach avoided many of the problems and time delays associated with traditional approaches. In addition to greatly expediting the process, the overall cost of the investigation/remedial effort was reduced, and the sites moved closer to site close out. The Office of Waste Management strongly recommends that this approach be used during this phase of the investigation.

Evaluation of Response to Comment

The Navy has stated that the intent of the current investigation is gather information in support of a risk assessment. The Office of Waste Management acknowledges this point. The intent of the comment was to alert the Navy to the fact that the previous remedial investigation/removal action approach which was put on hold due to lack of funds had not been completed. This approach had been implemented in order to expedite the process and achieve site close out. The Office of Waste Management is requesting that the Navy complete the remaining aspects of the approved remedial investigation/removal action work and consider using this approach in investigation of the rest of the site.

**2. Section 11.3, Identification of/ Study Boundaries
Page 39.**

The intent of this Work Plan is to identify areas where exceedances were observed during past investigations as well as other areas where additional investigation is warranted. In support of the former, please submit a map depicting all areas on the tanks farms where exceedances were observed during past investigations.

Evaluation of Response to Comment

The Navy noted that the requested information was summarize in a DQO meeting between the USEPA and the Navy and is available in other documents. Typically, regulatory evaluation of maps which summarize the investigation conducted to date is not limited to a review during a meeting. As these maps would have been created to support the proposed sampling locations the request is simply to incorporate these maps into the work plan and not limit regulatory evaluation to a cursory review during a meeting.

3. Section 11.3, Identification of Study Boundaries
Page 39.

The Work Plan proposes dividing the Tank Farms into three or four exposure unit boundaries for the human health risk assessment. These boundaries are quite large and are not reflective of typical exposure scenarios. Locations with elevated risk are considered hot spots and they must be addressed as such. These areas cannot be diluted by averaging the concentrations observed in the hot spots with large areas where contaminants were not found. Accordingly, please modify the work plan to state that any locations, which exceed standards or benchmarks, will be delineated and addressed in the Feasibility Study and/or remediated through a concurrent removal action.

Evaluation of Response to Comment

The Navy has noted that the exposure boundaries were proposed during a meeting between the USEPA and the Navy. Further, modifications may be made based upon USEPA comments. Please be advised that EPA is not the sole regulatory authority at this site and as such boundary units must meet the requirements of both regulatory agencies. Further, prior to the cited DQO meetings the Office of Waste Management broached it's concern with respect to study boundaries and there was consensus that large boundaries should not be used at the site. Accordingly, RIDEM requests that this issue be revisited prior to submission of the draft final document. Further, as the Office of Waste Management has provided a rationale for it's position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow this Office to evaluate whether the Navy's position is appropriate).

4. Section 11.3, Identification of Study Boundaries
Page 39.

Area 3 in Tank Farm # 5 has been designated as an area not requiring additional investigation. In order to ascertain whether this designation is appropriate, please delineate on a map, the location of both discharge pipes from the oil water separator. In addition, the Work Plan must stipulate that in order to confirm that no discharge pipes, and/or releases have occurred in the wetlands in this area, the area will be inspected for signs of a release. Finally, please delineate the location of the fuel line, which serviced the Tank Farm (additional investigation is warranted on this fuel line).

Evaluation of Response to Comment

It is not clear from the response whether both discharge pipes from the oil water separators will be included on the figures. In regards to the inspection, as this is standard practice, please include this provision in the work plan.

**5. Section 11.3, Identification of Study Boundaries
Page 39.**

The Work Plan notes that surface soil is defined as 0-1 feet and subsurface soils are defined as 1-10 feet. Please be advised that under the State Regulations surface soil for industrial commercial is 0-2 feet, surface soil for residential is the vadose zone. Please modify the work plan to reflect these delineations.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the decision to use the 0-1 foot interval was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final, RIDEM requests that this issue be revisited prior to submission of the draft final document. Further, as this Office has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow RIDEM to evaluate whether the Navy's position is appropriate).

**6. Section 11.3, Identification of Study Boundaries
Page 40.**

The Work Plan proposes limiting sediment samples to the 0-6 inch interval. During the removal action conducted at Tank Farm # 4, at certain locations the top 0-6 or 0-12 inches or greater of sediments was clean, however, heavily contaminated sediments were found below these depths which required remediation. Accordingly, as contamination was found at the site beneath clean sediments, the 0-6 inch interval limit must be removed and the work plan must stipulate that both shallow and deep sediment samples will be collected and analysis will be conducted on the interval which exhibits the greatest degree of contamination.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the decision to use the 0-6 inch interval was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management requests that this issue be revisited prior to submission of the draft final document. Further, as RIDEM has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow this Office to evaluate whether the Navy's position is appropriate).

**7. Section 11.3, Identification of Study Boundaries
Table 11-1, Page 41.**

Exposure to sediments and surface water is not included as an exposure route under the residential scenario. Residents will be exposed to these areas, especially children as they are typically attracted to surface water. Therefore, please modify the residential scenario to include exposure to these media.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the decision to limit the evaluation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management requests that this issue be revisited prior to submission of the draft final document. Further, as the Office of Waste Management has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow RIDEM to evaluate whether the Navy's position is appropriate).

**8. Section 11.3, Identification of Study Boundaries
Table 11-1, Page 41.**

Please include residential exposure to vadose soils in this table.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the decision not to limit the residential exposure in vadose soils was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final RIDEM requests that this issue be revisited prior to submission of the draft final document. Further, as the Office of Waste Management has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow this Office to evaluate whether the Navy's position is appropriate).

**9. Section 11.3, Identification of Study Boundaries
Paragraph 1, Page 41.**

This paragraph proposes the use of exposure boundaries in the risk assessment. Please remove this provision and simply state that any locations which exceed the acceptable risk range will be further delineated and identified as an area of concern which requires remediation.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the decision to use exposure boundaries was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management requests that this issue be revisited prior to submission of the draft final document. Further, as this Office has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that a decision with respect to this matter was made during a meeting does not allow RIDEM to evaluate whether the Navy's position is appropriate).

**10. Section 11.3, Identification of Study Boundaries
Paragraph 1, Page 41.**

The Work Plan proposes limited exposure areas for residential, industrial, trespasser, etc to certain portions of the site. Please be advised that the entire site is applicable for each of these exposure scenarios. Please modify the work plan to include this provision and state that any locations which exceed the acceptable risk range will be further delineated and identified as an area of concern which requires remediation. Finally, the residential and recreational scenarios are equivalent under Office of Waste Management Regulations. Please modify the work plan to reflect this equivalency.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the decision for the exposure routes and parameters was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management requests that this issue be revisited prior to submission of the draft final document. Further, as this Office has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow the Office of Waste Management to evaluate whether the Navy's position is appropriate).

**11. Section 11.4, Develop the Analytical Approach, Decision Rules, Statement
1
Page 42, First Bullet.**

The decision matrix states that if the cancer risk is greater than 1×10^{-4} then a Feasibility Study will be performed, otherwise no action is warranted under CERCLA. Please be advised that under CERCLA action may be deemed necessary if the risk falls within the range of 1×10^{-4} - 1×10^{-6} . Please modify the work plan to reflect this requirement.

In addition, the Office of Waste Management regulations stipulate that an individual contaminant cancer risk greater than 1×10^{-6} , and a cumulative risk greater than 1×10^{-5} is considered an exceedance of regulatory standards, which require remediation. Therefore,

as the States regulations are applicable to the site please also include this provision in the decision statement as a requirement for delineating areas of concern for the Feasibility Study.

Evaluation of Response to Comment

Navy has indicated that this cumulative risk is under consideration. Please notify the Office of Waste Management once a decision has been made.

**12. Section 11.4, Develop the Analytical Approach, 42 Decision Rules,
Decision Statement # 1
Page, Second Bullet.**

The Work Plan states that if the human health risk assessment is greater than 1×10^{-6} but less than 1×10^{-4} the assumptions of the risk assessment will be reviewed to further evaluate the risk and evaluate the cost effectiveness of the mitigation. Further, if it is determined that it is not cost effective to mitigate an area then no further action will be deemed necessary.

The risk assessment is a stand alone evaluation. It is not modified in order to assess whether remediation is required. The risk management process is used to review the results of the risk assessment and to determine the appropriate remedial action. Accordingly, please remove this provision to modify the risk assessment.

Please be advised that under the EPA cost effectiveness is one of the nine criteria used to evaluate a site. Therefore, please remove this statement and stipulate that under the EPA the nine criteria will be evaluated to ascertain whether action is warranted.

Finally, please be advised that under the State's Regulations, which are applicable to the site under CERCLA, exceedances must be addressed. Please include this provision in the Work Plan

Evaluation of Response to Comment

Comment has been addressed.

**13. Section 11.4, Develop the Analytical Approach, Decision Rules, Decision
Statement # 1
Page 43,4 th Bullet.**

The Work Plan states that for the ecological risk assessment if the HQ is between 1-10, and it is determined that it is not cost effective to mitigate an area, then no further action will be deemed necessary. Similar to the human health risk assessment, the ecological risk assessment is a stand-alone evaluation. Risk management is used to ascertain the form of any remedial action. Accordingly please remove this provision from the decision statement.

Please be advised that under the EPA cost effectiveness is one of the nine criteria use to evaluate a site. Therefore, please remove this statement and note that under the EPA the nine criteria will be evaluated to ascertain whether action is warranted.

Please be advised that under the State Regulations, which are applicable to the site, exceedances must be addressed. Please include this provision in the Work Plan.

Evaluation of Response to Comment

Comment has been addressed.

**14. Section 11.4, Develop the Analytical Approach, Decision Statement # 1,
Page 43 4 th Bullet.**

The Work Plan notes that if the risk assessment determines that there is no risk at the site, however the concentration of contaminants in the vadose soils and/or sediments exceed RIDEM Residential Standards then the parties will meet to ascertain whether the State's regulations are applicable to the site. Please be advised that in the past State's regulations have been found applicable and applied to all other sites on the base. At the Tank Farms risk assessments have been conducted under the CERCLA program. These assessments have found that both sites represent an unacceptable risk. Further, during the Phase II investigation of the these sites, which are considered RI sites under the FFA, the sites were investigated and remediated using the Office of Waste Management of Rhode Island Remediation regulations and standards. Therefore, as the Office of Waste Management regulations have been found applicable at all other sites on the base, and as State's regulations have been found applicable at these sites, please remove this statement and simply note that the Office of Waste Management's regulations are applicable to the site.

Evaluation of Response to Comment

Comment has been addressed

**15. Section 11.4, Develop the Analytical Approach, Decision Rules, Decision
Statement # 2
Page 43.**

The Work Plan notes that concentration will be plotted on a map and locations exceeding RIDEM Residential standards and/or ecological benchmarks will be identified. Although not stated it is assumed that historical data will also be plotted in a similar fashion. Please confirm.

Evaluation of Response to Comment

Comment has been addressed

**16. Section 11.4, Develop the Analytical Approach, Decision Rules, Decision Statement # 2
Page 43, 1 st Bullet.**

The Work Plan states that if concentrations in the vadose zone exceed residential standards then additional soil samples will be collected, however, this additional sampling will be limited to the vadose zone. There are a number of cases in which this limitation may not be appropriate. As an illustration, low levels may be found in the smear zone at the water table, however, higher concentrations would be found at the source of the release, which may be at the bottom of the tank below the water table. Borings at this location would reveal higher concentrations below the water table (i.e. at the bottom of the tank). Since the intent is to determine the nature and extent of contamination, boring into the water table and taking samples at depth is the appropriate course. In light of the above please remove this limitation and simply state that additional samples may be taken in the saturated zone as warranted.

Evaluation of Response to Comment

Navy has indicated that the approach to determine the nature and extent of contamination is under consideration. Please notify the Office of Waste Management once a decision has been made.

**17. Section 11.4, Develop the Analytical Approach Decision Rules, Decision Statement # 2,
Page 44, 3 rd Bullet.**

The Work Plan notes that additional sediment samples will be collected if the concentrations of contaminants exceed RIDEM residential standards. As the focus of this investigation also includes ecological impacts please modify the above to also state that if an exceedance of ecological screening criteria are found, then additional samples will be collected.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the decision with respect to this matter was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management requests that this issue be revisited prior to submission of the draft final document. Further, as the Office of Waste Management has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow the Office of Waste Management to evaluate whether the Navy's position is appropriate).

**18. Section 11.4, Develop the Analytical Approach Decision Rules, Decision Statement # 2
Page 44, Paragraph 3.**

The Work Plan notes that the Base Wide Background Study will be used to ascertain whether the concentrations of inorganics are representative of background. Please be advised that as the Base Wide Background Study was not accepted by RIDEM, and as specific background values were not listed in the report, any comparison to background values used within the study will have to meet all of the requirements of RIDEM regulations.

Evaluation of Response to Comment

The Navy has stated that the comment is noted. It is therefore assumed that concerns with respect to this matter will be addressed between the Office of Waste Management and the Navy when and if necessary. Please confirm.

**19. Section 11.5, Specify Performance Criteria, Determining the Minimum Number of Samples
Page 46, Paragraph 3**

This section of the report refers to Table 2 (a-c), which provides the minimum number of samples for the various decision errors. Please indicate where Table 2 (a-c) can be found.

Evaluation of Response to Comment

Comment has been addressed.

**20. Section 11.5, Specify Performance Criteria, Determining the Minimum Number of Samples
Page 46, Paragraph 3.**

The document notes that data from the 0-10 foot interval was used to determine the number of sampling points. Significant contamination in the vadose zone was found at depths deeper than ten feet. Please modify the approach to include these samples.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the decision for the depth limitation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final RIDEM requests that this issue be revisited prior to submission of the draft final document. Further, as the Office of Waste Management has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect

to this matter was made during a meeting does not allow this Office to evaluate whether the Navy's position is appropriate).

**21. Section 11.5, Specify Performance Criteria, Determining the Minimum Number of Samples
Page 46, Paragraph 3.**

The document notes that exTPH was used in determining the sample size. Exceedances were found for PAHs, metals, etc at the site. Accordingly, please modify the approach to include all of the contaminants of concern in the process for determining the minimum number of samples.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the proposed limitation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management requests that this issue be revisited prior to submission of the draft final document. Further, as this Office has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow the Office of Waste Management to evaluate whether the Navy's position is appropriate).

**22. Section 11.5, Specify Performance Criteria, Determining the Minimum Number of Samples
Page 46.**

Please confirm that all locations with dated results will be resampled.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the proposed limitation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management requests that this issue be revisited prior to submission of the draft final document. Further, as the Office of Waste Management has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow the Office of Waste Management to evaluate whether the Navy's position is appropriate).

**23. Section 11.6, Optimize the Sampling Design, Soil Samples, Tank Farm 5
Page 48.**

The document notes that samples in Area 2 of Tank Farm # 5 will not be sampled for TPH, as TPH was not found there in the past. Sampling will be limited to TCL and TAL. Petroleum is the main contaminant of concern at the site. The source of the TAL or TCL

contaminants is probably from either petroleum releases or petroleum sludges. Therefore, please modify the work plan to state that TPH will be collected at this and all other locations at the site.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the proposed limitation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management requests that this issue be revisited prior to submission of the draft final document. Further, as RIDEM has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow the Office of Waste Management to evaluate whether the Navy's position is appropriate).

**24. Section 11.6, Optimize the Sampling Design, Soil Samples
Page 48.**

The document refers to TPH contamination on the site and areas where additional samples will be collected. Please confirm that samples will also be collected at locations where exceedances for PAHs, metals (including lead), PCBs or any other contaminants were observed.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the proposed limitation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management requests that this issue be revisited prior to submission of the draft final document. Further, as the Office of Waste Management has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow this Office to evaluate whether the Navy's position is appropriate).

**25. Section 11.6, Optimize the Sampling Design, Soil Samples
Page 48.**

Typically, when creating a data gap work plan, figures and tables are created with the compiled results from the previous investigations which exhibited concentrations of contaminants above benchmarks. These figures are used to guide the next phase of the investigation. In order to ascertain whether the proposed sampling locations are appropriate, please submit figures and tables with the results from the previous investigations which exhibited concentrations of contaminants above benchmarks. A separate figure for each matrix: soil, sediment and groundwater should be submitted.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the proposed limitation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management requests that this issue be revisited prior to submission of the draft final document. Further, as RIDEM has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow the Office of Waste Management to evaluate whether the Navy's position is appropriate).

26. Section 11.6, Optimize the Sampling Design, Soil Samples Page 48.

The proposed sampling design does not include sampling at locations, which previously exhibited elevated levels of lead. Please modify the Work Plan to include collection of samples at these locations.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the proposed limitation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management requests that this issue be revisited prior to submission of the draft final document. Further, as this Office has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow the Office of Waste Management to evaluate whether the Navy's position is appropriate).

**27. Section 11.6, Optimize the Sampling Design,
Page 48.**

As noted, a figure has not been submitted with the results of the previous investigations. As such the following are preliminary recommendations for sample locations. Final recommendations will be submitted once the aforementioned figures are incorporated into the document.

Tank Farm 4

Area 1

Oil Water Separator Removal Action (Southwestern corner of site)

The remnants of a berm exist along the southern edge of the removal action. TPH is present in this location. Please collect additional soil samples in the berm at the depth of the observed TPH.

Please confirm that a number of the proposed samples along the western end of the removal action reflect locations, which previously exhibited TPH above standards.

Please confirm that a number of the proposed soil samples along the western edge of the removal action are in the former drainage swale, which serviced the tank farm.

Oil Water Separator Tank # 41

An oil water separator serviced Tank # 41. The separator discharged into a stream south of the separator. Please depict the location of the discharge pipe on the map.

Please clearly depict the location of the stream on the map (this will allow one to access the location of the stream and proposed sediment samples).

During the previous investigation the streambed was inspected and test holes 0-2 feet deep were dug to find areas of contamination. If these locations were documented please indicate whether the proposed sampling locations represent these documented areas. If these areas were not documented please incorporate the aforementioned inspection procedure into the proposed sampling plan.

A drainage swale, which previously exhibited elevated levels of TPH in the soil, was found down gradient of Tank 41. Please collect two samples from this swale and sample them for TPH.

A wetland was created in the former location of the oil water separator, which served Tank # 41. As this wetland received water from the ring drain of Tank # 41 it should be inspected for the following:

Evidence of contamination.
Status of constructed wetland.

Area 2

Please indicate whether the wells located on the western edge of the tank farm, which previously exhibited elevated levels of contamination, were found. Also indicate when they were last sampled. If these wells have not been recently sampled please look for them and sample them as part of this investigation.

Please confirm that the PCB Transformer Building adjacent to the access road was sampled for PCBs.

Area 3

Based upon experience gained at the other tanks farms the Office of Waste Management recommends additional borings around each tank. The entire perimeter should be

examined. In lieu of standard boring the SCAPs unit may be employed as it was found effective during a study of Tank #50 at Tank Farm # 5.

Area 3 A/B

Prior to installing the proposed wells the Navy may elect to employ the SCAPs unit.

Please depict the location of the pipeline from the tanks to the loop and shunt piping as this would represent a preferential flow path.

A number of the wells shallow and deep are located cross gradient from the tanks, a distance away from the tanks. Unless there is evidence of contamination in these areas it is recommended that the wells be installed closer to the tanks within the area of backfill around each tank.

It would be helpful if known areas of contamination around each tank were depicted.

Areas 1-3

Please confirm that all locations, which were not remediated and previously exhibited elevated levels of contaminants, are being investigated as part of this study.

Tank Farm 5

Area 2/3

Please depict the location of both discharge lines from the oil water separator on a map (this is necessary to access the locations of the proposed sampling points).

Please depict the location of the discharge pipe from the piping chamber to confirm that it is located in Area 2 and to allow one to access the proposed locations of the sampling point with respect to the discharge pipe and adjust as necessary.

During the previous investigation the streambed was inspected and test holes 0-2 feet deep were dug to find areas of contamination. If these locations were documented please indicate whether the proposed sampling locations represent these documented areas. If these areas were not documented please incorporate the aforementioned inspection procedure into the proposed sampling plan.

Please depict the location of the pipeline, which serviced the tank farm. Samples should be collected in the wetlands in the vicinity of this fuel line.

Please include sampling along the fuel line which serviced Tank Farm # 5, (sampling would follow the same protocol which was used for the rest of the fuel line located in the tank farm).

Please include a provision for the inspection of any access chambers in the fuel line, which serviced Tank Farm # 5. If evidence of contamination is present appropriate samples should be collected. If drains or sumps are present they need to be tracked to their final discharge point and sampled accordingly. The stripper line should be inspected to ascertain if it still contains fuel.

Please include a provision to collect three sediment samples north of the stream in the wetlands which contain the fifty-five gallon drum.

Please include a provision to inspect the stream/ wetlands in Area 3 for signs of a release, discharge pipes etc. If signs of a release or potential sources are evident sediment samples should be collected.

Areas 4a-d

Please include provision to install borings (SCAPs unit may be used) around Tanks 49, 55, 57, 58, 59.

Areas 1-4

Please sample the following:

Locations, which previously exhibited, elevated levels of lead along the fence line.
Locations, which were not remediated, and previously exhibited elevated levels of contaminants.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the proposed limitation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management requests that this issue be revisited prior to submission of the draft final document. Further, as RIDEM has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow the Office of Waste Management to evaluate whether the Navy's position is appropriate).

28. Section 11.6, Optimize the Sampling Design, SAP Work Sheet 17, Sample Design and Rationale, Page 103.

Please modify the report to state that soil samples will be examined in the field for evidence of contamination, (visual, olfactory, etc) and the most contaminated intervals will be sent to the lab for analysis.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the proposed limitation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final RIDEM requests that this issue be revisited prior to submission of the draft final document. Further, as the Office of Waste Management has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow the Office of Waste Management to evaluate whether the Navy's position is appropriate).

**29. Section 11.6, Optimize the Sampling Design,
SAP Work Sheet 17, Sample Design and Rationale,
Page 103. Paragraph 3**

The Work Plan states that the 0-1, 2-4 and 8-10 foot interval will be sent to the lab for the risk assessment and that this will also be the interval for contamination delineation in Areas 1 and 2. While it is acceptable to propose intervals for analysis, the intervals, which are ultimately sent to the lab, are biased towards areas which exhibit field evidence of contamination. In order to avoid confusion in the field, please modify the report to state that the final interval to be sampled will be based upon field evidence of contamination.

Finally, please specify that all borings in the vicinity and/or down gradient of the tanks, must at a minimum go to the depth of the tanks.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the proposed limitation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management request that this issue be revisited prior to submission of the draft final document. Further, as RIDEM has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow the Office of Waste Management to evaluate whether the Navy's position is appropriate).

**30. Section 11.6, Optimize the Sampling Design,
SAP Work Sheet 17, Sample Design and Rationale, Analytical Groups
Page 102.**

The Work Plan proposes using the low flow method to collect groundwater samples. Please be advised that as the main contaminant of concern at the site is petroleum the following procedures must be applied to groundwater sample collection:

The well will be assessed for NAPLs prior to purging the well using both an oil water interface probe and a bailer.

If NAPLs, including sheens, are present they will be collected via a bailer.

Groundwater samples will be collected via a bailer.

The Navy may elect to collect additional samples via low flow. During the purging process the purge water will be analyzed with a FID as the purge pump is raised through the well screen interval. The low flow sample device will be placed at the interval, which exhibits the highest FID reading. Depending upon the location of the well, and the nature of the petroleum contamination, the FID may have limited utility in determining which interval to sample. In these cases the results of the boring logs will be accessed to determine the sample interval to set the low flow device. If LNAPLs are encountered the groundwater sample will be collected by placing the device immediately below the groundwater surface.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the proposed limitation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final RIDEM request that this issue be revisited prior to submission of the draft final document. Further, as the Office of Waste Management has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow this Office to evaluate whether the Navy's position is appropriate).

31. Section 11.6, Optimize the Sampling Design, SAP Work Sheet 18, Sample Locations and Methods, Page 109.

This section of the Work Plan designated certain sample intervals that will be subject to analysis, 0-2, 2-4, 8-10, 14- 16, etc. It is assumed that these intervals were proposed based upon contaminant distribution observed during the previous investigations. Please confirm.

While it is acceptable to propose sample intervals for analysis, the intervals which are ultimately sent to the lab are based upon field observations. As an illustration, the work plan may propose samples from the 14-16 foot interval, however, if heavy contamination is observed in the 16-18 foot interval and the 14-16 intervals is clean, obviously the 16-18 foot interval will be sent to the lab. It is assumed that this is the intent of the work plan. In order to avoid confusion in the field please stipulate that continuous split spoon samples will be collected at all locations and the intervals to be sent to the lab will be biased towards the intervals, which exhibit the greatest evidence of field contamination.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the proposed limitation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final RIDEM requests that this issue be revisited prior to submission of the draft final document. Further, as RIDEM has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow the Office of Waste Management to evaluate whether the Navy's position is appropriate).

**32. Section 11.6, Optimize the Sampling Design,
SAP Work Sheet 18, Sample Locations and Methods,
Page 109.**

The work sheet contains a typographical error in that Tank # 50, and Area 2, does not include a provision of TPH analysis of groundwater. Petroleum is the main contaminant of concern at the site; therefore please include petroleum analysis at these locations and all other samples for all media at the site.

Evaluation of Response to Comment

The Navy has acknowledged the comment and noted that the proposed limitation was made during a DQO meeting between the USEPA and the Navy. As decisions made during these meetings are not final the Office of Waste Management request that this issue be revisited prior to submission of the draft final document. Further, as this Office has provided a rationale for its position in writing, it is requested that the Navy provide a similar rationale in writing (simply noting that the decision with respect to this matter was made during a meeting does not allow the Office of Waste Management to evaluate whether the Navy's position is appropriate).