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Environmental Solutions through Technology

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January 19, 1993

Mr. Francisco LaGreca, P.E.
Remedial Project Manager
US Navy, Northern Division, Code 1823
Naval Facilities Engineering Command
10 Industrial Highway
Mail Stop #82
Lester, PA 19113-2090

Hand delivered to EPA and State on 21 JANUARY 93.

RE: Responses to Comments
Draft Phase II RI/FS Work Plan
Naval Education Training Center (NETC)
Newport, Rhode Island
TRC Project No. 6760-N81

Dear Mr. LaGreca:

Enclosed please find two (2) copies of the suggested responses to comments received on the draft Phase II RI/FS Work Plan completed by TRC Environmental Corporation (TRC-EC) for the NETC. The comments were received from the United States Environmental Protection Agency (EPA) Region I office (dated December 1, 1992) and the Rhode Island Department of Environmental Management (RIDEM), Division of Air and Hazardous Waste (dated December 2, 1992).

The attached responses address those comments which required a detailed explanation, justification, or further information. In order to expedite the comment/response period, responses to comments which did not require any clarifications (e.g., corrections, typographical errors) or could easily be addressed in the revision of the Phase II RI/FS Work Plan are not included.

We trust this provides you with the information you require at this time. Should you have any questions or revisions, please call me or Jim Peronto. We will finalize the comment responses after we have received your input.

Sincerely,

TRC ENVIRONMENTAL CORPORATION

Robert Smith

Robert Smith, P.E.
Program Manager

c: J. Peronto/TRC-EC
R. Marino/US Navy NETC

U.S. EPA - REGION I
U.S. NAVY - NETC NEWPORT, RHODE ISLAND
PHASE II RI WORK PLAN COMMENTS & RESPONSES

GENERAL COMMENTS

2. Neither the QAPjP nor the Field Sampling Plan for each of the individual sites nor the Field Sampling Methodology Plan provide information on the filtration of water samples for dissolved metals. Such samples should be immediately filtered on site at time of collection using a 0.45 micro filter, and preserved immediately after filtration. Also, no clarification is given in either the QAPjP or in the site sampling plans about the reason(s) for using only the top one foot of collected two-foot soil boring samples.

Response: *The method of filtering ground water samples will be added to Section 7.5 of Appendix B. The filtering of ground water samples will occur immediately on site with a dedicated 0.45 micron filter upon sample collection. The filtered ground water sample will be preserved with nitric acid to a pH of less than 2 after filtration.*

VOLUME II - Project Plan

14. Page 2-3, § 2.1 - Site 13 Tank Farm Five - Based on the recent results of the soil gas survey conducted around Tanks 53 and 56, it appears as though there may be VOC subsurface soil contamination in the vicinity of Tank 53. In addition, Phase I RI sampling activities at this site included the collection of subsurface soil samples from six boring location, none of which were near Tank 53. It is requested, therefore, that the scope of the Phase II investigation include the sampling and analysis of subsurface soils to confirm or deny the presence of VOC soil contamination.

Response: *The extent of subsurface soil contamination around Tanks 53 and 56 was investigated during a soil gas and subsurface soil investigation completed around the two tanks in October 1992. The scope of this investigation included the completion of forty three (43) borings around Tanks 53 and 56. The findings of this investigation will be presented in the report to RIDEM and the EPA in the near future. It is believed that no further subsurface soil sampling is necessary around these two tanks under the Phase II RI activities.*

VOLUME III - Field Sampling Plans

16. Consideration should be given to installing nested monitoring wells in both upgradient and downgradient locations at all sites to determine vertical gradients and the presence/absence of DNAPLs.

Response: *Nested monitoring wells are planned in both upgradient and downgradient locations at each of the sites under the Phase II RI activities. The following is a listing of such well nest locations at each of the sites: McAllister Point Landfill - upgradient = MW-14, MW-15, MW-16, and downgradient = MW-11, and MW-8; Old Fire Fighting Training Area - upgradient = MW-6 and downgradient = MW-2 and MW-11; Tank Farm Four - upgradient = MW-5, MW-7, MW-8, and downgradient = MW-1, MW-11, and MW-12; Tank Farm Five - upgradient = MW-15 and downgradient = MW-12 and MW-14.*

17. Since elevated levels of TPH have been detected in previous investigations (Tank Farm Four), why isn't TPH analysis being conducted throughout Phase II? Please explain.

Response: *TPH analysis were conducted on soil samples collected under previous investigations as an initial screening tool to aid in determining the need to perform any further site investigations. Given that full scan target compound/analyte list analyses have been or will be performed on samples from the sites previously found to have elevated TPH values, no further such analytical screening is considered necessary or useful. In addition, TPH results do not provide the information necessary to perfom quantitative risk assessments for the sites.*

19. It is stated that the 0'-1' interval from the 2' split-spoon sampler collected from test and well boring locations will be analyzed. However, there may be insufficient sample volume to fill all sample containers. If this occurs, how will the situation be handled?

Response: *EPA comments on the Phase I RI Report Risk Assessment requested that in Phase II the first soil boring sample only be collected from the 0 to 1 foot interval for use in surface soil risk assessment calculations. If there is insufficient soil sample from the first split spoon to fill all of the required containers, additional sample material will be collected from a location directly adjacent to the boring with a stainless steel spoon from the 0 to 1 foot interval in a manner similar to the collection of a surface soil sample.*

VOLUME III-1 - McAllister Point Landfill

20. Page 3, ¶ 4 - "The Navy routinely clears vegetation along overhead power lines." Is there any historical use of defoliants in this area?

Response: *Their is no documented use of defoliants by the Navy in this area.*

24. Page 14, § 3.5 - Given the fact that an incinerator operated at this site and that ash was likely disposed of in the landfill, soil samples should be collected for dioxin/furan

analysis. What is the status of the samples collected during Phase I activities? It is recommended that additional samples be collected and analyzed to confirm/deny the presence of dioxin/furan in and around the landfill area.

Response: *Samples collected under the Phase I RI of this site included soil samples which were archived for dioxins/furans analysis. Five of those archived soil samples were recently analyzed for dioxins/furans. The dioxins/furans analysis were completed after the draft Phase II RI report. The unvalidated dioxins/furans analysis results were presented and discussed with the EPA and RIDEM on December 10, 1992. As described in the Phase I RI report logs, some of these samples did contain what appeared to be ash. Low levels (low ppb) of dioxins/furans were detected in all of the samples. These dioxin/furan results are attached to this response letter. The results will also be included in the final RI report and risk assessment.*

Given the results of the completed dioxins/furans analysis, addtional soil samples will be collected from the site in Phase II for dioxins/furans analysis. Phase II soil samples proposed for dioxins/furans analysis include soil samples from the area of previously observed ash: SS-24, SS-25, SS-26, and borings B-15, B-16, B-17. In addition, options will be included in the Phase II sample analysis to allow for dioxins/furans testing of ash observed in other soil borings planned on the site.

25. Page 15, § 3.5.1 - The rationale for SS-29 and SS-30 is to investigate surface soil quality of the suspected site cap. Information presented in the site geology (Section 2.4) indicates the cover material or "cap" was noted in the central portion of the landfill around B-3, B-4, B-5 and B-6. "Cap" material was also encountered in the northern portion and southern end of the landfill. Are SS-29 and SS-30 actually located to determine the existence of the cap in this area, or is it known to exist here?

Response: *The locations of these two soil samples will be moved into the area that appeared to be the previously documented "cap" or cover material locations in the central portion of the site.*

26. Page 15, 3rd ¶ - It is stated that the 0- to 1- interval of the split spoon sample from the test borings and well borings will be analyzed for the full TCL/TAL list. It seems that the volume may not be sufficient to fill all the sample containers. How will TRC handle this situation if it arises?

Response: *As stated in response to Comment # 19, EPA comments on the Phase I RI Report Risk Assessment requested that in Phase II the first soil boring sample only be collected from the 0 to 1 foot interval for use in surface soil risk assessment calculations. If there is insufficient soil sample from the first split*

spoon to fill all of the required containers, additional sample material will be collected directly with a stainless steel spoon from the 0 to 1 foot interval in a manner similar to the collection of a surface soil sample.

27. Page 15, § 3.5.2, ¶ 3 - "Two test borings are planned at the northern and southern ends of the site to further investigate the site boundaries." Will two test borings be sufficient to completely assess the site boundaries?

Response: *Given the sites physical layout, historical information (aerial photos, maps) reviewed on the site, and the findings of the borings already completed in Phase I at both the northern and southern ends of the sites, it is believed that the two additional borings will be sufficient to confirm the site boundaries.*

30. Page 16, ¶ 4 - The text states that the two soil samples which will be submitted for laboratory analysis will include soil samples collected from the 0- to 2-foot interval (the 0- to 1-foot portion for analysis). Please give the rationale for this division of the soil sample.

Response: *As stated in response to Comment # 19, EPA comments on the Phase I RI Report Risk Assessment requested that in Phase II soil boring sampling the first soil boring sample only be collected from the 0 to 1 foot interval for use in surface soil risk assessment calculations.*

33. Page 17, Last ¶ - The text states that ground water samples will be collected from each of the monitoring wells. It is unclear, however, whether samples will be collected from Phase II wells only or from Phase I wells also. Please clarify this statement.

Response: *During Phase II, ground water samples will be collected from all of the existing monitoring wells (Confirmation Study, Phase I, and Phase II) installed at the McAllister Point Landfill site. However, given the absence of pesticides in the Phase I ground water samples, the resampling of the currently existing wells will not include pesticides analysis. This clarification will be added to the Phase II RI Work Plan.*

35. Page 18, ¶ 2 - What is the purpose for gathering information on total chloride in ground water?

The text states that five of the ground water samples will be field filtered for dissolved metals analysis. However, data in Table 12 of the QAPjP show that the dissolved metals will be determined from three additional filtered samples that are not part of the previously collected ground water samples. Please clarify these discrepancies.

The text states that samples collected for dissolved metals will also be used for the determination of BOD, COD, and total suspended solids. Please identify the methods for these determinations and indicate these analyses in Table 1. This last comment and the comment on the number of TAL samples in the text and in Table 1 also apply to comparable sections in Vols. III-2, III-3, and III-4 of the Work Plan.

Response: *Total chloride testing is being performed to provide an indication of the presence of any salt water intrusion on the site.*

As presented in the text, five of the ground water samples (three shallow and two bedrock) will also be field filtered for dissolved metals analysis. This correction will be made to Table 12 in the QAPP.

37. Page 18, ¶ 4 - Please indicate the proposed locations of the multi-level piezometers on a figure.

At each location, how many piezometers will be installed? Will the piezometers be surveyed such that hydraulic head data can be obtained? Will conductivity and salinity measurements be obtained using field monitoring devices (e.g., Horiba water quality meter).

As discussed in EPA comment letter on the Phase I RI report, it is recommended that a continuous water level monitoring network be installed to support the RI/FS activities underway at this site. Continuous water level measurements have been used at other Superfund sites to identify off-site factors which influence water level variations and ground water flow, such as pumping and injection wells. Off-site pumping may affect the rate and direction of ground water flow.

In addition, these measurements will be very useful for evaluating landfill cap performance for McAllister Point. Continuous water level measurements collected from landfill interior wells prior to and after cap installation can provide data to verify relaxation of the ground water mound and provide information with regard to the high water tide water level and its position with regard to waste materials. In addition, the comparison of water level response and precipitation events will provide data to confirm the integrity of any proposed cap design. As mentioned previously, if waste is to be left in place at this site, the landfill closure design will need to take into account not only sea level rise/tidal influence but the likely concurrent increasing severity of storms.

Although continuous water level measurements were collected during Phase I activities over a three-day period, baseline conditions can only be ascertained if the monitoring program is conducted for a minimum of three months. The water level measurement frequency should be at least every 15 minutes. After recorders are

installed, they should be checked weekly for two weeks (check measurement, data dump, hydrograph constructed) and then monthly thereafter.

At the end of the three months, hydrographs should be evaluated to determine the number and locations for continued water level recorder activity. The need for further monitoring can be reevaluated annually, based on proposed construction or land use changes.

Response: *The planned location for the four multi-level piezometers are shown on the attached revised Figure 5. Also attached is a new Figure 9 which depicts the planned construction details of the piezometers.*

The comment regarding the duration of monitoring is noted and needs to be discussed further. It may be appropriate to include continous monitoring in support of design studies to assist in the evaluation and design of a cap for the landfill.

VOLUME III-2 - Old Fire Fighting Training Area

39. The Field Sampling Plan for this site makes no reference to the investigation of the source of the oily sheen observed flowing from an outfall pipe on the northwest edge of the site during an EPA site visit last year (see EPA Phase I RI comment #24). The Navy stated in its response to comment package that the Phase II RI activities at this site would investigate the source of the oily sheen.

@ OUTFALL
@ MANHOLE

Response: *The pipe which flows through the site is a closed storm sewer pipe which received surface runoff from nearby streets and upland areas. Any oil which may have previously been observed in the pipe is not believed to be from this site. The source of the oily sheen reportedly observed by the EPA flowing from the outfall pipe is being investigated under a separate underground storage tank (UST) investigation being conducted by the Navy on Coasters Harbor Island. The details of this UST investigation will be presented to the EPA and RIDEM in the future.*

BMT

40. The Phase I RI reported elevated levels of BNAs in the soils and inorganics in the ground water in the southern (off-site) portion of the site. The Navy stated in its response to comment package that the source of these contaminants is unknown, but is most likely from an upgradient source. In efforts to confirm this "off-site" source, the Navy agreed to investigate potential upgradient contamination source in lieu of possibly redefining the "site" boundary. This issue must be incorporated into the draft Phase II RI/FS Work Plan.

Response: *The likely source of the previously observed upgradient ground water contaminants is being investigated under a separate UST investigation being*

performed on Coasters Harbor Island by the Navy. However, to further address this concern, an additional well nest (MW-6) is planned in Phase II upgradient of the off-site upgradient well (MW-5) where low levels of contamination were observed in Phase I. In addition, the well MW-5 will be resampled in Phase II to further investigate the ground water contamination detected at this location in Phase I.

43. Page 5, ¶ 1 - It is stated that one surface soil sample exhibited PCBs at 80 ppb. Was this the highest PCB reading? If so, it should be stated as such. In addition, PCBs are not listed in Table 2 in the Appendix for this location. Please explain.

Response: *As presented in the RI report, PCBs were detected in only one site soil sample (SS-01) at the concentration of 80 ppb. This will be clarified in the revised Phase II Work Plan. PCBs are listed in Table 2 in the rationale for the collection of Phase II surface soil samples SS-13, SS-14, and SS-15. The rationale for the collection of these samples will be clarified by referencing Phase I surface soil sample SS-01.*

50. Page 12, § 3.4.3, ¶ 1 - Was a geophysical survey conducted on the mound located in the western corner of the site? Please note the results in the section to justify the lack of test pitting versus test pitting of the central mound.

Response: *As shown on the site magnetic contour map on Figure 2-6 of the RI report, a magnetic anomaly was detected on the mound in the western corner of the site. Given these findings and the presence of the mound, this area will be investigated with an additional test pit at that location to assess the source of the anomaly.* safety concern

51. Page 13, ¶ 3 - Will TCL/TAL detection limits be affected by the presence of fill material (i.e., trash, debris, etc.) in the laboratory sample?

Response: *Yes, analytical detection limits may be affected by the presence of fill material in the laboratory samples. The types of fill collected within a sample will be recorded in a field notebook for assessing the sample data.*

52. Page 13, ¶ 4 - In the event that "oily waste" is encountered in a test pit, it is recommended that a sample of the "potentially contaminated soils" be submitted for laboratory analysis to determine if the material is CERCLA or RCRA hazardous waste. Upon receipt of the analytical results, the waste should be handled appropriately.

In addition, what is the rationale behind the replacement and or covering of excavated test pit soil with clean soils and the application of grass seed? The Navy should recognized that in the event that the remedial alternative chosen for this site involves

the excavation of "hot spot" locations, i.e. test pit locations, the "clean" soils and grass seeds may need to be removed. Please explain.

Response: *All oily soils planned for removal from the site will be appropriately characterized for removal and disposal. Such characterization is not planned on any site soils until it is determined to be necessary to perform any soil removal activities.*

The covering and revegetation plan ensures a reduced threat to human health and the environment as a result of any subsurface contaminated materials brought to the surface during the excavation activities.

53. Page 13, § 3.5 - Consideration should be given to installing a bedrock well in the upgradient position around MW-5 in order to fully assess upgradient conditions as well as vertical hydraulic gradient effects on contaminant migration (if any).

Response: *As discussed in Section 3.5 and shown on Figure 10, an upgradient well nest is planned at the site near well MW-5. This well nest along with the other planned wells will aid in assessing upgradient ground water conditions and vertical hydraulic gradients.*

56. Page 14, ¶ 4 - Slug tests should be able to be performed on water-table wells by doing a recovery test (rising head). The criteria for doing a slug test is to create an instantaneous change in head in the well. If the water column height is of a concern, possibly a small slug 1'-2' in length could be made so as not to interfere with the pressure transducer.

Response: *Rising head single well hydraulic tests will be performed in Phase II on site monitoring wells.*

VOLUME III-3 - Tank Farm Four

61. Page 1, § 1.1 - Since surficial dumping of sludge occurred over twenty years ago, it is likely that subsurface contamination has occurred as a result of the migration of surficial contaminants into the subsurface soils. This scenario is further supported by the evidence of TPH contamination detected in the subsurface soils across the site during Phase I RI activities. It is recommended, therefore, that the list of RI objectives be expanded to include the determination of the presence and nature of site subsurface soil contamination.

Response: *TPH was not detected in the subsurface soils across the site in Phase I or in any other previous site investigations. Although TPH was generally detected at low levels (10's of ppm) in site surface soils in Phase I, no indication of*

potential sludge disposal areas or subsurface petroleum-related soil contamination were observed at the site. In addition, the reported sludge dumping operations at this site is not documented and only reportedly occurred at the tank farms. There is no documentation of any tank sludge dumping operations actually occuring at Tank Farm Four. It is likely that the tank sludges were either burned in an on-site burning chamber or disposed of offsite.

66. Page 14, §§ 3.3.1 and 3.3.2 - Consideration should be given to adding TPH to the list of analytes required since tank bottom sludges were disposed of at the site.

Response: *TPH was analyzed for in the Phase I site surface soil samples. The findings of the Phase I TPH analyses indicated that generally low levels (10's of ppm) of TPH are present in the site surface soils. However, no other signs of potential petroleum-related contamination were observed in the site soils. The Phase I locations where higher TPH levels were detected are planned for resampling in Phase II for full TCL/TAL analysis. All of the Phase II soil samples are being analyzed for TCL/TAL parameters to provide the information necessary for risk assessment calculations.*

69. Page 15, § 3.4 - Since groundwater flow is affected by Norman's Brook, a bedrock well should be installed in the vicinity of MW-4, to more accurately assess ground water conditions.

Response: *A bedrock well will be installed in the vicinity of Phase I well MW-4 to more accurately assess site ground water conditions. This additional well will be added to the revised Phase II Work Plan.*

w. it will this bedrock well, too?

70. Page 16, ¶ 3 - Consideration should be given to adding TPH analyses to the ground water samples.

In addition, slug tests should be able to be conducted on water-table wells (note rising head only) if a short enough slug is used, and care is taken to avoid having the slug come in contact with the pressure transducer.

Response: *All of the ground water samples will be analyzed for the full list of TCL volatile organic compounds and semivolatile organic compounds to provide low-level (ppb), compound-specific information for contaminant and risk assessment purposes.*

Rising head slug tests will be performed on the site water-table wells in Phase II.

71. Page 16, ¶ 4 - Will physical parameters such as pH, temperature, conductivity, DO, redox potential, etc. be taken from the piezometers? If no, why not?

Response: *Physical parameter measurements were not planned for ground water in the well points or piezometers. It is believed that water from the well points will not provide representative ground water quality information.*

74. Page 17, ¶ 3 - Consideration should be given to adding TPH analyses to the surface water/sediment sampling analyses since the confirmation study showed the presence of TPH in surface water and sediment samples.

Response: *As in the Phase I surface water/sediment investigation, all of the Phase II surface water and sediment samples will be analyzed for all TCL/TAL parameters. This will include both TCL volatile and semivolatile organic compound specific information necessary for assessing site contaminants and associated human health and environmental risks.*

75. Page 17, § 3.6 - It is unclear how many "ground water" samples are to be collected from the ruins chambers. Please clarify.

Response: *Two water samples are planned for collection from the ruins. One sample from the location where water flows into the chamber (the north end) and one from the location where water flows from the chamber (the south end). This clarification will be added to the revised Phase II Work Plan.*

VOLUME III-4 - Tank Farm Five

82. Page 7, § 2.3, ¶ 4 - In the previously conducted surface water and sediment assessment, TPH was detected with levels increasing with distance downstream. Does this mean downstream locations offsite or in downstream locations onsite? (Was TPH detected in onsite stream samples?)

Response: *TPH was detected in the on-site sediment samples at increasing levels with distance downstream; however, the two highest TPH levels were detected in the furthest upstream and downstream off-site sediment samples. This will be clarified in the revised Phase II Work Plan.*

83. Page 10, § 2.5, ¶ 3 - The Ground Water Hydrology section states that six Phase I RI wells were installed and five additional wells were installed as part of the tank closure investigation. Then it states that water levels were measured in all 12 wells. Figure 4 shows 14 wells. Please clarify which wells were installed as part of each study.

Well clusters should be considered to determine vertical hydraulic gradients as in other sites.

Response: *A sentence will be added which accounts for the other eight pre-existing tank closure wells which are at the site and are shown on Figure 4. In addition, the other five wells installed at the site under the tank closure investigation will be added to Figure 4. A total of nineteen (19) wells currently exist at the site. This information will be clarified in the revised Phase II Work Plan.*

84. Page 12, § 3.0 - Why isn't a soil gas survey proposed around any of the tanks? Wouldn't this aid in boring/monitoring well placement?

Given that a burning pit (with a sand bottom) was operated at this site, analysis for dioxin/furan should be performed. What is the status of samples collected during Phase I RI activities?

Response: *Monitoring wells were located in Phase I and additional wells are planned in Phase II across the site to determine the overall site ground water quality. Aside from the ground water around and downgradient of Tank 53, a tank formerly used to store waste oils, no other areas of significant ground water contaminaiton have been discovered on the site. The ground water and soil quality around Tank 53 has been thouroughly investigated with soil gas, soil borings, and monitoring wells.*

During the Phase I RI, the former so-called burning pit (now an oil/water separator) was confirmed to have a concrete bottom, as documented in design plans. The preliminary Phase I dioxins/furans data for a sample from the structure indicates the presence of low levels (1.6) of octa-chlorinated dibenzo-p dioxins. To further assess this concern, the four Phase I surface soil sample locations will be resampled in Phase II for dioxins/furans analysis.

87. Page 13, ¶ 3 - Since elevated levels of TPH were detected around tanks 49, 50, 51, and 55 as part of the Phase I activities, this parameter should be added to the list of analytes required for surface soil.

Response: *To address this concern and to provide the information necessary for risk assessment calculations, additional sampling is planned in these areas and the sample analyses will include TCL volatile organic and semivolatile organic compounds.*

89. Page 15, § 3.4, ¶ 2 - Based on the 10 new wells being installed, and 19 pre-existing wells [5 Phase I wells and 14 tank closure wells (including RW-1 not shown in Figure 7)], the number of TCL/TAL analyses should be 29 TCL and 34 TAL analyses (5 dissolved metals and 29 total metals). Table 1 should be modified to reflect this if in fact this is the case.

The text states that ground water samples will be collected from : each of the Phase I wells, the newly installed Phase II monitoring wells, and all of the pre-existing site wells. The number of Phase I wells, Phase II wells and all the pre-existing wells are, respectively: 5, 11, and 14 for a total of 30 wells. Table 1 indicates 22 wells. Please clarify this discrepancy in the text, in Table 1, and in Table 12 of the QAPjP.

Response: *The text and tables will be clarified to present the following: the resampling of all Phase I wells for the TCL/TAL, the resampling of pre-existing wells MW-86-1 and MW-86-5, and the sampling of all new Phase II wells. All of the ground water samples will be analyzed for the full TCL/TAL less pesticides. Pesticides were not detected in any of the previous site ground water samples and are not considered significant site ground water contaminants.*

90. Page 15, § 3.4, ¶ 5 - Physical parameters should be measured from the piezometers installed.

Response: *Physical parameter measurements were not planned for ground water in the well points or piezometers. It is believed that water from the well points will not provide representative ground water quality information.*

92. Page 16, § 3.5, ¶ 3 - Since TPH has been found in Phase I sediment samples, this parameter should be added to the list of parameters for sediment analyses.

Response: *To address this concern and to provide the compound-specific information necessary for risk assessment calculations, all of the Phase II sediment samples will be analyzed for all TCL volatile and semivolatile organic compounds.*

94. Table 1 and Figure 7 - Table 1 states that there are 12 existing wells onsite, in addition to the 10 new wells that will be installed during Phase II. Figure 7 identifies at least 18 (which does not include the existing RW-1 well) existing monitoring wells. It is recommended that the sections in Table 1 be expanded to identify which wells (i.e., MW-1, MW-2, etc.) will be sampled or modify figures to be consistent with tables.

Response: *The text, tables, figures will be clarified and corrected regarding the monitoring wells at this site. Please see response to Comment #83 and 89.*

97. Figure 4 - This figure identifies the burning pit as being located in the same location as the oil/water separator (Figure 5). Please explain.

Response: *As explained in the RI Report (Section 2.10.2, page 2-114), what is reportedly the former location of the so-called "burning pit" is presently what appears to be an oil/water separator. Design plans for the oil/water separator show this unit as being constructed within the pre-existing burning chamber.*

APPENDIX B - Field Sampling Methodology Plan

98. Page 6, § 3.0 - Will more than one soil gas sample be collected per borehole if conditions warrant? How will the depth of contamination be determined?

Response: *The following statements will be added to the soil gas sampling description in Section 3.0 of Appendix B.*

"In general, two to three soil gas samples will be colleted per probe location. The soil gas samples are typically collected from approximately six feet below grade, at a mid-point in the vadose soil column, and from the interval just above the water table. Thus, the soil gas sample number and depths are primarily dependant upon the depth to ground water. However, subsurface conditions (e.g., bedrock, fill) may prohibit the depth of soil gas sampling."

99. Page 18, § 7.5, ¶ 1 - What is meant by "assessing the NAPL" -- measuring its thickness? If a NAPL is encountered in a well, a sample should be collected and analytically characterized (i.e. fingerprinted) in addition to being "assessed" with an oil/water interface probe.

Response: *The thickness of any NAPL in a well will be measured with an oil/water interface probe. Well headspace readings will also be recorded to aid in assessing the NAPL. In addition, all NAPLs encountered in a well will be sampled for TCL VOCs and petroleum GC fingerprint identification analysis. The NAPL analysis will be added to the revised Phase II RI Work Plan.*

100. Page 19, ¶ 2 - Discuss how alkalinity will be measured in the field.

The order of filling the bottles for the various parameters was indicated; however, biochemical oxygen demand (BOD), chemical oxygen demand (COD), and total suspended solids (TSS) were not mentioned in this section. These parameters were stated as being analyzed for in Section 3, Sampling Plan for each of the four sites. Please explain.

Response: *The alkalinity of ground water samples will not be measured.*

The bottles for BOD, COD, and TSS will be filled after all other sample analysis bottles are filled. This clarification will be added to Section 7.5 of Appendix B in the revised Phase II Work Plan.

101. Page 20, § 8.1, ¶ 3 - Discuss how temperature, alkalinity, and turbidity will be measured in the field.

Response: *Temperature will be measured with an Orion Model SA 230 meter, or equivalent. Turbidity will be measured with an HF Scientific Model 15C Turbidity meter, or equivalent. Alkalinity will not be measured in the field. This test will be deleted from the surface water measurements. All of this information will be added the revised Section 8.1.*

APPENDIX D

110. Page 9-5, § 9.3.6 - The text and Table 3 mentions dioxin/furans; however, there is no mentioned of sample collection and analyses for dioxin/furans in other sections of the document. Will additional samples be collected during Phase II activities for dioxin/furan analysis? What is the status of samples collected during Phase I activities?

Response: *As stated in response to several prior comments, some of the Phase II soil samples from the McAllister Point Landfill and Tank Farm Five will be analyzed for dioxins and furans. The preliminary dioxins and furans data for Phase I archived samples was previously transmitted to EPA and RIDEM. Upon completion and review of the data validation, final dioxins/furans data reports will be sent to the EPA and RIDEM.*

VOLUME V - Risk Assessment Plan - Human Health Evaluation

114. Page 2-1, § 2.1 - Since BNAs include numerous and varied compounds, specify the predominant BNAs detected, e.g. PAHs and phthalates. In addition, highlight inorganics of concern.
Tables 2 through 5 should be referenced since they list Phase I COCs.

EPA's risk range and point of departure should be defined prior to discussing Phase I risk results.

Given the inappropriate treatment of "UJs" in the Phase I Risk Assessment, does the discussion of risk reflect change in treatment of "Ujs" as non-detects? For example, are CaPAHs in ground water still a major contributor to risk in the McAllister Point Landfill? Is thallium in soils at Tank Farms Four and Five a major contributor to the total hazard index?
Discuss more specifically how data from background samples will be used as "reference points."

Response: *Tables located in the Phase I risk assessment provide detailed information on the frequency of detection of BNAs. In some media, predominantly detected BNAs include over 60 compounds. Inorganics of concern are listed in Tables 2 through 5 of the workplan. These inorganic contaminants contribute to the*

risk value calculated for each site. Further highlighting of these inorganics is not warranted.

The tables which list Phase I COCs will be referenced in the text.

EPA's risk range and point of departure will be defined and incorporated into Section 2.1 of the Phase II workplan, prior to presentation of Phase I risk assessment results.

TRC was directed to evaluate "UJ" data as detected values by both Region I (Ms. Margaret McDonough, USEPA) and the federal risk assessment guidance document (RAGS). TRC has indicated previously that the use of "UJ" data for these sites provides an inaccurate picture of risk associated with site usage. Thus, as discussed previously with Region I staff, there is no firm basis to conclude that cancer risks from CaPAHs are possible at the McAllister Point Landfill. Similarly, thallium in soils at the Tank Farms Four and Five sites was included in the assessment due to "UJ" data.

Background sampling data will be used to identify naturally occurring levels of inorganics in environmental media and to evaluate potentially elevated concentrations at each site.

115. Page 2-2, § 2.1.1 - In the Phase I Risk Assessment and the Risk Assessment Plan for the Ecological Evaluation, the size of the landfill is listed as 6 acres, whereas in this section it is listed as 11.5 acres. Please clarify.

Response: *The landfill is 11.5 acres.*

116. Page 2-18, § 2.3 - As outlined in EPA's Risk Assessment Guidance for Superfund and Region I guidance, chemicals of concern are selected based on a number of criteria, including presence in a media and potential toxicity. This section should be expanded to discuss the additional criteria.

Response: *Section 2.3, Selection of Chemicals of Concern, will be expanded to include discussion of criteria outlined in RAGS and by Region I. These criteria will be used during the Phase II risk assessment.*

117. Page 4-1, § 4.0 - A subsection should be added which describes the derivation of chemical intakes (exposure doses).

Response: *This will be added.*

118. Page 4-1, § 4.2 - Exposure parameters should also be based on EPA's Human Health Evaluation Manual-Supplemental Guidance.

Response: *This requirement will be stated.*

119. Page 5-2, § 5.2 - Define the exposure period associated with subchronic and chronic RfDs. "Long-term" may not apply to subchronic.

Response: *The exposure period associated with subchronic RfDs is 2 weeks to 7 years. It is agreed that the inclusion of subchronic in a discussion of "long-term" exposures may not apply.*

120. Tables 2 through 5 - General Comments

Change spelling of 3,3'-dichlorobenzene to 3,3'-dichlorobenzidine.

COCs in these tables should reflect treatment of "UJ" data as non-detects. For example, each of the volatiles listed as COCs in Table 2 were reported as "UJ" values only.

COCs don't necessarily correspond to contaminants of concern discussed in Section 2.1. Please clarify.

Response: *The correction will be made in the revised work plan.*

TRC will revise Tables 2 through 5 to reflect treatment of "UJ" data as non-detects.

Section 2.1 provides a discussion of field investigation findings by environmental media. Not all contaminants discussed in this section are necessarily included as contaminants of concern. Furthermore, discussions in Section 2.1 (Human Health Assessment) focus on those COCs which drive the risk assessment, but may not include all COCs originally selected and presented in Tables 2 through 5.

121. Table 2

Why isn't lead listed as a COC for soils?

Why aren't BTEX compounds listed as COCs for ground water?

Response: *Lead was inadvertently left out of Table 2.*

BTEX were inadvertently left out of Table 2.

122. Table 5

Why aren't petroleum-related VOCs listed as COCs?

Response: *Petroleum-related VOCs were inadvertently left out of Table 5.*

VOLUME VI - Risk Assessment Plan - Ecological Evaluation

123. Although EPA will accept the ecological format for this site because of the subcontractual relationship, the "site characterization" section should be part of the overall RI site characterization section of the RI, not specifically in the Risk Assessment.

Response: *This will be the case.*

124. If the results indicate modelled significant risks at the site, or data gaps, the actual field measurements of effects may be necessary to verify the risk assessment.

Response: *If necessary, the risk assessment will be verified by actual field measurements.*

125. The risk assessment may be broken up to correspond with the different exposure scenarios based upon extent of contamination, habitat types and characteristics of receptor species.

Response: *The Navy will consider EPA's suggestions to break up the risk assessment according to the different exposure scenarios based upon extent of contamination, habitat types and receptor species' characteristics.*

126. Page 4, § 2.0 - There are a number of inconsistencies in this Section and Section 2.0 of the Human Health Evaluation (Volume V). For example, the size of the site is stated as 1,374 acres in the Ecological Evaluation and 1,063 in the Human Health Evaluation. Please explain.

Response: *The most recently defined sizes for NETC and the sites are as follows: NETC = 1,431 acres; Site 01-McAllister Point = 11.5 acres; Site 09-Old Fire Fighting Training Area = 5.5 acres; Site 12-Tank Farm Four = 88 acres; Site 13-Tank Farm Five = 73 acres. In addition, on page 9 of Section 2.3.3, the ground water depth at Site 09 should read "approximately 6 feet below the surface".*

127. Page 14, § 3.2 - The title of this section should be revised to include both aquatic and terrestrial habitats.

Response: *The title of § 3.2 will be changed to **Characterization of Terrestrial and Aquatic Habitats.***

128. Page 15, § 3.2.3 - This section is blank. What is planned with regard to this activity?

Response: *Section 3.2.3 was inadvertently left out. Rhode Island Department of Environmental Management and US Fish and Wildlife Service, Office of Endangered Species lists for the endangered or threatened species which may inhabit or use the Newport area and the environments associated with the base specifically will be reviewed. This information will be checked with RIDEM and the US Fish and Wildlife Service and maps will be provided at appropriate scales to show important habitat or nesting sites for these organisms. These maps will be at the same scale and on the same type of base map as the wetland delineations.*

129. Page 20, § 3.3 - The WET functional analysis should be augmented by a discussion reflecting the best professional judgement of the wetland scientist as to the interpretation of the results.

Response: *A discussion of the interpretation of the results by the wetland scientist will be included with the WET functional analysis.*

130. Page 28, § 3.5.2 - Stream samples should be collected in order of downstream to upstream.

Response: *Stream samples will be collected in order of downstream to upstream.*

131. So as to expedite the review and approval of the draft ecological risk assessment, it is requested that an interim deliverable be generated which includes proposed COCs, indicator species, exposure scenarios and endpoints before any risk calculations are performed.

Response: *The Navy will attempt to submit interim deliverables which will include the proposed COCs, indicator species, exposure scenarios, and endpoints prior to the calculation of risks.*

ATTACHMENT B

134. Page 6, Comment #11 - EPA was concerned that the Phase I RI was lacking information as it relates to hydrogeology and the fate and transport of contaminants through the overburden and bedrock aquifers and recommended that a fracture trace analysis be performed to provide some information with regards to the glacial history of the site. The Navy responded that a fracture trace analysis would be conducted for the area as part of the Phase II investigation; however, there is no mentioned of fracture trace analysis in the September 1992 draft Phase II Work Plan. Please explain.

Response: *A fracture trace analysis will be performed for the sites. The details of the fracture trace analysis will be presented in an addendum to the Phase II Work Plan.*

135. Page 6, Comment #12 - EPA requested that unpurged, depth-specific samples be analyzed for wells exhibiting evidence of non-aqueous phase liquids (NAPLs). The Navy responded that NAPLs present in any of the monitoring wells during Phase II activities would be noted and measured and that if a sufficient quantity of a NAPL is recoverable, a sample will be collected of the NAPL for analysis. EPA believes that the issue of NAPL analysis is not sufficiently addressed in the draft Phase II Work Plan.

Response: *A discussion on the sampling and analysis of NAPLs will be added to Section 7.5 of Appendix B of the revised Phase II RI Work Plan. As presented previously (see response to Comment #99), NAPLs present in any of the monitoring wells during the Phase II activities will be measured and sampled if sufficient quantity is present for sampling. Sampled NAPLs will be tested for TCL VOCs and petroleum GC fingerprint identification.*

136. Page 7, Comment #13 - EPA requested a more thorough description of the procedures employed for collecting field duplicates and field blanks. Although this comment was adequately addressed in the Navy's response package, this is the type of information that should also be included in the draft Phase II Work Plan.

Response: *The additional clarification will be added to Sections 4.4.2 and 4.4.4 of the QAPP.*

137. Page 9, Comment #17 - EPA requested that information relating to the piping network/drainage systems beneath the oil/water separators at the tank farms be incorporated in the Phase II RI Work Plan to ensure that each site is completed characterized. The Navy responded that although the existence of drainage systems beneath the oil/water separators is unknown, any pipe network associated with the

oil/water separators would be further research and any discovered information would be presented in the draft Phase II RI Work Plan. There does not appear to be any further discussion in the draft work plan on the drainage system/piping network. Please explain.

Response: *Maps showing pipe network layouts for Tank Farm Four and Tank Farm Five were recently obtained in preparing a ground water remedial design for Tank Farm Five (Tanks 53 and 56). Copies of the maps will be included as background information in the revised Phase II RI Work Plan.*

138. Page 12, Comment #24 - EPA noted that during a tour of Site 9, it has observed an oily sheen flowing from an outfall pipe at the northwestern portion of the site into the Narragansett Bay. EPA queried whether Site 9 was possibly the source of the discharge. The Navy responded that since the source of oily sheen was unknown, it would be investigated during Phase II activities; however, specific source investigation of the oily sheen is not discussed in the draft Phase II Work Plan. Please explain.

Response: *The likely source of the reported oily sheen is being investigated under a separate underground storage tank study being conducted by the Navy on Coasters Harbor Island. However, to address this concern, the storm water sewer pipe will also be sampled in Phase II just upgradient of the site and at the outfall adjacent to the site. (See response to Comment #39)*

139. Page 16, Comment #31 - The Navy stated in its response to this comment that off-shore sediment and biota sampling will be performed during the Phase II investigations; however, these sampling activities are not discussed in the draft Phase II Work Plan. According to discussions held during the August 6, 1992 Technical Review Committee (TRC) meeting, however, a separate work plan addressing this activity was to be completed prior to off-shore work. What is the status of this sampling effort?

Response: *A separate Off-shore Sampling Work Plan will be developed for these activities. The Navy is in the process of negotiating the contract for these activities with TRC, Battelle Ocean Sciences, and Menzie & Cura, Inc. These off-shore investigation activities are tentatively planned for Spring 1993. The work plan for these activities will be presented to the EPA and RIDEM prior to conducting the sampling.*

140. Page 17, Comment #37 - EPA was concerned that tributyltin antifouling paints may have been disposed of in McAllister Point Landfill. The Navy responded that it was uncertain whether the these types of materials were used during the period of landfill operations at NETC. It indicated that the use of tributyltin paints at NETC would be researched prior to the development of the Phase II Work Plan, but the results of the

research were not discussed or noted in the draft Phase II RI Work Plan. Please explain.

Response: *The use of TBT paints at NETC is not documented. The use of TBT by the Navy will be discussed further with the RIDEM and EPA.* Bob Johnston

142. Page 36, Comment #99 - EPA requested that surface water, sediment, and soil sampling be conducted in the "small ditch" that accumulated ponded water during periods of heavy rainfall at McAllister Point Landfill. The indicated that the locations of all standing water areas and wetlands on the site would be investigated in further detail under the ecological risk assessment conducted during Phase II RI activities; however, the sampling plan and risk assessment portions of the Work Plan do not indicate that samples will actually be collected from these locations. Please explain.

Response: *As described in the RI Report, one area of ponded water forms in a small depression in the north-central portion of the site during periods of heavy rainfall. Sampling planned for this area under the Phase II RI activities includes one surface soil sample (SS-27) (presented in Volume III-1) and one surface water sample, SW-12 (presented in Volume VI, page 29). Given that this area is dry most of the year, is was assumed that a surface soil sample would be collected from this area when no water was present.*

143. Page 51, Comment #142 - The Navy stated that during Phase II RI activities, any LNAPL observed in the monitoring wells at Tank Farm Five would be sampled and analyzed. However, LNAPL analysis is not included in the Tank Farm Five discussion of ground water sampling activities. Please explain.

Response: *As stated in response to previous comments, any NAPLs found in the monitoring wells during the Phase II activities will be measured, sampled, and tested for TCL VOCs and petroleum GC fingerprint identification.*

144. Page 54, Comment #155 - EPA requested that future work at McAllister Point Landfill include, at a minimum, several information/data gathering activities. Does the Navy feel confident that the work outlined in the draft Phase II RI Work Plan will be sufficient to address the issues raised in EPA's comment letter?

Response: *Yes, the Navy believes that the Phase II Work Plan provides a scope of work which will adequately addresses the issues raised by the EPA in their review. The Phase II investigations were developed to address identified data gaps and provide the information necessary to allow development of appropriate remedial actions for the site.*

145. Page 56, Comment #157 - EPA requested that future work at the Old Fire Fighting Training Area include, at a minimum, several information/data gathering activities.

Does the Navy feel confident that the work outlined in the draft Phase II RI Work Plan will be sufficient to address the issues raised in EPA's comment letter?

Response: *Yes, the Navy believes that the Phase II Work Plan provides a scope of work which will adequately addresses the issues raised by the EPA in their review. The Phase II investigations were developed to address identified data gaps and provide the information necessary to allow development of appropriate remedial actions for the site.*

146. Page 57, Comments #159 and #160 - The Navy indicated in response to EPA comments that Phase II RI activities would include a field sampling plan developed specifically to address further definition of the nature and extent of contamination associated with the on-site tanks, fate and transport mechanisms, and physical, chemical and hydrogeologic characteristics of tank farms four and five that may impact the evaluation of potential site remediation technologies. Does the Navy feel confident that the work outlined in the draft Phase II RI Work Plan will be sufficient to address the issues raised by EPA?

Response: *Yes, the Navy believes that the Phase II Work Plan provides a scope of work which will adequately addresses the issues raised by the EPA in their review. The Phase II investigations were developed to address identified data gaps and provide the information necessary to allow development of appropriate remedial actions for the site.*

Additional Comment Package

147. Page 2, Comment #5 - The Navy's response to this comment should be used in the work plan as a rationale for the installation of monitoring wells across the site.

Response: *As stated in the Phase II Work Plan, the additional monitoring wells are planned at the sites to aid in further assessing the presence, nature, and/or extent of any ground water contamination at the sites. Inherent to this assessment is the determination of the hydrogeologic conditions at each of the sites. Thus, the additional upgradient and downgradient well pairs planned at each of the site will aid in refining site ground water contour maps which would be used to estimate horizontal hydraulic gradients.*

148. Page 5, Comment #13 - The Navy's response to this comment should be used in the work plan as a rationale for the installation of monitoring wells at McAllister Point Landfill.

Response: *See response to Comment #147.*

149. Page 8, Comment #18 - The Navy's response to this comment should be used in the work plan as a rationale for the installation of monitoring wells at Tank Farm Four.

Response: *See response to Comment #147.*

RIDEM - DIVISION OF AIR & HAZARDOUS MATERIALS
U.S. NAVY - NETC NEWPORT, RHODE ISLAND
PHASE II RI WORK PLAN COMMENTS & RESPONSES

General

2. General Comment - Site 01, 09, 12 and 13

The scale of the figures in the Phase II Work Plan does not correspond to the scale employed in the Phase I RI. All subsequent figures should employ the scale used in the Phase I RI, (ie, figures used in the Phase II RI and the FS).

Response: *The scale of the figures in the Phase II Work Plan are the same as those presented in the Phase I RI report.*

3. General Comment - Site 01, 09, 12 and 13

The sample location rationale provides valuable information concerning the proposed location of sampling. However, in a number of cases, additional justification is warranted for the proposed sample locations points.

Response: *Please specify those sample locations requiring additional justification.*

4. General Comment - Site 01, 09, 12 and 13

The State would consider proposals to investigate offsite or onsite soil or groundwater contamination with microwells.

Response: *The Navy plans to install the proposed permanent ground water monitoring wells to further investigate the ground water conditions at each of the sites as indicated in the Phase II Work Plan.*

6. General Comment - Site 01, 09, 12 and 13

The PREVIOUS SITE INVESTIGATIONS - Soil Assessment sections of the report address the IAS and CS carried out at each site. For completeness the Work Plan should comment on the sediment and mussel study carried out by the Army Corp of Engineers at the site. The Work Plan should also note any differences in the collection or analysis methods carried out during the Army Corp of Engineers Investigation and the investigation carried out during Phase I activities.

In addition, significantly higher concentrations of contaminants were observed in the samples collected by the Army Corp of Engineers compared to the samples collected

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during the Phase I Investigations. The basis for this disparity must be ascertained prior to the collection of sediment samples from the sites.

Response: *A discussion of the sampling performed by the Army Corp of Engineers will be added to the revised Work Plan. The basis for any disparity in the findings of both studies cannot be determined at this time.*

7. General Comment - Site 01, 09, 12 and 13

In the RECONNAISSANCE SURVEYS sections for each of the sites, it is stated that "Prior to initiating sampling activities a site walkover will be conducted by field investigative team members to familiarize themselves with current site conditions."

In order to minimize the effects of vegetative cover, site reconnaissance surveys should be conducted in the spring. In addition, it is assumed that the EPA and RIDEM will receive a schedule of field activities.

Response: *An attempt will be made to conduct the initial reconnaissance surveys during the Spring; however, the actual initiation of the field investigation activities is dependant upon finalization of the Phase II Work Plan and initiation of the Phase II investigation activities. As with the Phase I investigations, a schedule of field activities will be provided to the EPA and RIDEM prior to starting the field work.*

8. General Comment - Sites 01, 09 and 12

In the Geophysical Surveys section of the specific site sampling plans, the planned locations of EM, magnetometer and seismic surveys are discussed. The Work Plan should include figures depicting the specific locations for these geophysical surveys as they will be applied to each site.

Response: *These figures will be added to the revised Phase II Work Plan. However, the scope (location) of the seismic surveys will be determined in the field with geophysical subcontractors prior to the surveys. The actual proposed scope of the planned seismic surveys will be discussed with the EPA and RIDEM prior to initiation of the surveys.*

11. Volume I, Page 2-8:
Section 2.2.3, Paragraph 4

The document should state if sediment samples were taken during the Confirmation Study.

Response: *This section of the report provides general information on Narragansett Bay marine environment. A discussion of any sampling performed in the bay under*

the Confirmation Study is presented in the site-specific background information sections.

Volume III-1: Field Sampling Plan
Site 01 - McAllister Point Landfill

21. Volume III-1, Page 14:
Section 3.4, Paragraph 2

"As is necessary, additional soil gas survey points will be completed around points indicating elevated concentration of soil gas to locate "hot spots"."

A soil gas survey over the entire site would optimize the location of proposed monitoring wells and borings and identify "hot spots" in areas away from MW 3 and MW 5.

Response: *The Navy does not believe it is warranted at this time to perform a soil gas survey over the entire site. The findings of the Phase I subsurface investigation activities indicate that subsurface VOC contamination is primarily located in the area of wells MW-3 and MW-5.*

22. Volume III-1, TABLE 2: Site 01 - McAllister Point Landfill Surface Soil Location/ Rationale

The Division recommends collecting sediment samples in areas where leachate outbreaks were identified or sediment samples were found to have high levels of contaminants in the Confirmation Study.

Response: *Sediment samples are planned for collection from the bay adjacent to the entire shoreline of the site. The criteria used in siting the planned sample locations included findings of the previous studies and the documented locations of any leachate springs. The proposed off-shore sampling effort will be presented to the RIDEM and EPA in a separate work plan prior to the start of these activities.*

23. Volume III-1, TABLE 4: Site 01 - McAllister Point Landfill Monitoring Well Location Rationale

Phase II MW-12s, 13s are designed to determine groundwater quality north and south of Phase I MW-5.

Phase II monitoring wells 12s and 13s are to be located approximately sixty feet north and south of Phase I MW-5. Microwells in conjunction with a field GC may be employed to fine tune the location of MW 12s and 13s. The Division is aware that logistic problems may prohibit the use of microwells in this area.

Response: *The proposed soil gas survey (van mounted hydraulic probe with GC) will be used in that area of the site to aid in locating the wells. As stated in the Work Plan, the findings of the soil gas surveys will be reviewed with the EPA and RIDEM prior to initiating any boring or well installation activities.*

24. Volume III-1, TABLE 4: Site 01 - McAllister Point Landfill Monitoring Well Location Rationale

MW-14S/R, MW-14S/R, MW-16S/R are designed to determine the upgradient/off site water quality for the northern, central and southern portion of the landfill.

Additional justification is requested for the installation of three upgradient monitoring wells (the report should also note whether upgradient well MW-23 is functional). The Division recommends the use of microwells to determine upgradient groundwater quality. Conventional wells may be installed if an upgradient source is identified.

Response: *The Navy has decided to install ground water monitoring wells to collect representative ground water samples from the site. The planned upgradient well nests are spread out along the length of the site to provide adequate information on site ground water quality and flow conditions.*

Given that the screened interval of well MW-23, which was installed under the site Confirmation Study, does not intercept the water table and extends over both the overburden materials and a portion of the bedrock, it alone is not considered sufficient for monitoring upgradient ground water quality for the site.

25. Volume III-1, Figure 5: Site 01 - McAllister Point Landfill Phase II Investigation Summary

a. Please explain why B-13/MW-23 is not on this map.

b. Please explain why subsurface borings are not proposed for the NW side of the landfill (west of B-15, B-17 and B-19, except MW-8).

Response: *Figure 5 shows only those locations where Phase II activities will be conducted. Given that water levels will be recorded from well MW-23, it will be added to the revised figure.*

One subsurface boring (a well boring) was completed in this area in Phase I for the installation of well MW-2. The findings of the Phase I investigation indicated that the area just south of this is the primary landfill area of the site. However, one boring is planned in Phase II in this area for the installation of well MW-8.

Volume III-2: Field Sampling Plan
Site 09 - Old Fire Fighter Training Area

27. Volume III-2, Page 3:
Section 2.1, Paragraph 2

"The site details from the 1943 drawing are provided in Figure 3."

If available the report should include a more detailed diagram of the site. This diagram would included the location of the piping network beneath the site, the location of any underground tanks etc. In addition details from the demolition of the site should be included such as which components of the system (underground piping etc) if any was left in place when the system was dismantled, etc.

Response: *No other such information is available.*

28. Volume III-2, Page 5:
Section 2.3, Paragraph 3

"VOC were not detected at concentrations exceeding ground water action levels in any of the site ground water samples. However, at well location M-4, elevated soil gas readings in the soil, petroleum odors in the soil and ground water samples, and a sheen on the groundwater indicate a potential for subsurface VOC contamination in this area."

The Work Plan should comment on the obvious signs of oil contamination and the low VOC and SVOCs levels observed in the groundwater.

Response: *The findings of the Phase I investigation are presented in the Work Plan as background information for the site. The Navy does not feel is proper to provide detailed comments on the findings in this section of the Work Plan. Discussions of any observed signs of potential contamination will be provided in the final RI Report.*

29. Volume III-2, Page 10:
Section 3.3, Paragraph 2

"The EM and the Magnetometer geophysical surveys will be conducted along the 10-foot spaced traverses in the central mounded area of the site and at 50-foot spaced traverses along the shoreline edge of the site."

Information presented in the Phase I RI did not indicate whether the elevated magnetic readings observed in the western portion of the site corresponded to the mound found in this area. The mound area and the area immediately west of the mound should undergo

EM and Magnetometer geophysical surveys if these area were not investigated during Phase I activities.

Response: *The Phase I EM and magnetometer geophysical surveys extended into the mounded area in the western portion of the site. The findings of those surveys are presented in the Phase I RI Report. The western area which was found to have elevated magnetic readings is within the small mounded area at that end of the site. This area will be investigated further in Phase II with a 10-foot spaced EM and magnetometer survey. In addition, a follow-up test pit will be excavated at this location during the test pit investigation activities. These additional activities will be added to the revised Phase II Work Plan.*

32. Volume III-2, Page 13:
Section 3.4.3, Paragraph 3

"If potentially contaminated soils..."

Every effort should be made to remove and contain heavily contaminated soils which are discovered.

Response: *Efforts will be made to remove and contain any soils which are observed to be heavily contaminated during the test pit excavation activities.*

33. Volume III-2, TABLE 2: Site 09 - Old Fire Fighting Training Area Surface Soil Location/Rationale.

The state is aware of storm water outfalls along the shoreline of the site. The report should note if any of the shore sediment samples will be taken form the vicinity of the storm water outfalls. Also, if available, the report should confirm the function of these outfalls.

Response: *The scope of the planned off-shore sampling will be presented in a separate off-shore sampling work plan. The locations and functions of the outfalls is being assessed by the Navy.*

34. Volume III-2, TABLE 3: Site 09 - Old Fire Fighting Training Area Test Boring Location/Rationale.

"B-18 Characterize the subsurface soil at the east end boundary of Site 09."

Additional justification is requested for B-18 which is proposed to be located approximately forty feet south of Phase 1 boring B-1.

Response: *The Phase II boring is planned to further investigate the soil conditions in this area. Low levels of organic and inorganic soil contamination were detected in soil samples collected from boring B-1 in Phase I.*

35. Volume III-2, TABLE 4: Site 09 - Old Fire Fighting Training Area Monitoring Well Location/Rationale.

"MW-6S/R Further investigate groundwater quality upgradient (south) of Site 09."

During Phase I investigations VOCs and SVOCs were not detected in Phase I upgradient well MW-5. The concentration of the majority of the heavy metals observed in this well were below that detected in the downgradient monitoring wells. Therefore it is assumed that the justification for an additional upgradient well MW-6S/R is the elevated levels of SVOCs observed in the soil borings for this well. If this is the case, the report should clearly note this in the rationale section. In addition the report should note if an upgradient source of contamination is suspected or whether the observed levels found in the soil boring for MW-5 are due to activities carried out during the operation of and or dismantling of the fire fighting station.

The State recommends addressing potential upgradient contamination by conducting a limited soil gas survey or obtaining grid water samples upgradient of the site with a geoprobe.

Response: *The rationale for well nest MW-6S/R will be rewritten as follows: "Further investigate ground water quality upgradient of the site, primarily the SVOC contamination detected at well MW-5 in Phase I." Also note that the upgradient wells will also provide additional information on background ground water metals levels and subsurface conditions (geology, hydrogeology).*

A soil gas survey will be conducted along the upgradient edge of the site to investigate potential upgradient contamination. The details of the survey will be added to the revised Phase II RI Work Plan.

ground water samples

36. Volume III-2, Figure 7: Site 09 - Old Fire Fighting Training Area Surface Soil Sample Locations

It would be beneficial to the reader if the results for the resampling of the playground were listed.

Response: *The results of the resampling will be presented in Section 2.3 of this volume.*

37. Volume III-2, Figure 10: Site 09 - Old Fire Fighting Training Area Monitoring Well Locations

Please explain the historical nature of the location for MW-6.
Construction excavations by NETC in the area between MW-6 and the Old Fire Fighting Training Area has discovered petroleum related contamination.

Response: *There is no "historical nature" for the location of well MW-6. Well MW-6 is planned at a location upgradient of the site and well MW-5. The well will be located just off of the road.*

Volume III-3: Field Sampling Plan
Site 12 - Tank Farm Four

38. Volume III-3, Page 3:
Section 2.1, Paragraph 2

"At the western side of the tank area in a small metal building which was used as the electric substation during the operation of the tank farm."

The location of this substation should be depicted in the figures for Tank Farm Four. In addition if there is evidence that PCB transformers were housed at the station, PCB soil samples should be taken in this area.

Response: *The location of the substation will be added to the figures in the revised plan. The issue regarding the type of transformers housed in the vaults will be investigated. In addition, the condition of the vaults will be visually surveyed for any signs of leakage from the transformers or evidence of fires. This information will be presented to RIDEM and EPA to further assess the need to perform any PCB investigation at the vaults.*

39. Volume III-3, Page 4:
Section 2.2, Paragraph 1

"The tank bottom sludge obtained during the cleaning operation, was disposed of directly unto the ground in the vicinity of the tank. Between 100,000-190,000 gallons of oil sludge, which is a hazardous waste in the State of Rhode Island, was disposed of at this site."

The Work Plan should indicate whether documents or sources of information other than the IAS were examined in order to investigate sludge disposal practices and locations at Tank Farm Four.

Response: *All available information regarding the tank farms was examined and reviewed in preparing for the Phase I RI report and Phase II Work Plan. Other than the IAS, no information was discovered regarding the reported sludge disposal operations at Tank Farm Four.*

40. Volume III-3, Page 14:
Section 3.3.1, Paragraph 1

"These samples will be collected from the following general locations: around areas of documented Phase I surface soil contamination (oil/water separator), surface soil samples not sampled in Phase I, along the western edge of the site, at several tank locations."

Additional justification is needed for the proposed locations "not sampled in Phase I". That is whether these areas are being investigated in order to provide complete coverage of the area or to investigate suspected areas of contamination for examples area with elevated Phase I soil gas readings etc.

Response: *The referenced statement is actually worded as "..., surface soil areas not sampled in Phase I,...". This portion of the statement refers to the following planned Phase II surface soil samples: SS-9 and SS-10 from around the "ruins" which was discovered in Phase I, SS-11, SS-12, SS-13, SS-14, SS-15, SS-16, SS-17, and SS-20 from across the central tank portion of the site, and SS-18 and SS-19 from a low-lying area discovered in Phase I. The sampling rationale for the samples is presented in Table 2 of this volume.*

42. Volume III-3, Page 4:
Section 3.2.2, Paragraph 5

"Soil samples will be collected from the Phase II site well borings planned at eight different on-site locations."

In the Phase I investigation elevated soil gas readings were obtained in the vicinity of a number of the underground storage tanks. The State recommends collecting soil or groundwater samples from the ring drains of these tanks. A geoprobe could be used for this investigation.

Response: *The planned Phase II RI includes activities to investigate the overall site conditions. The findings of the overall site investigations (e.g., ground water results) will be used to determine the need to further focus the investigation activities in any particular areas (e.g., tanks) of the site.*

43. Volume III-3, Page 4
Section 3.2.2, Paragraph 5

"Soil samples will be collected from the Phase II site well borings planned at eight different on-site locations."

Section 2.2 Site History section of this reports notes that approximately 100,000-190,000 gallons of oils sludge obtained during the cleaning of the tanks was deposited in the

vicinity of the tanks. The report has not indicated which sampling activities are designed to located these sludge disposal areas. The State recommends a limited survey in the vicinity of the tanks. This survey may involve the field examination of soil samples collected with a hand auger or microwell and or the collection of near surface soil gas samples in the vicinity of the tanks.

Response: *During the Phase I surface soil sampling at each of the tank locations, visual surveys were conducted in an attempt to located any of the reported sludge disposal areas. No such areas were observed and two surface soil samples (one discrete and one composite) were collected from each of the tank locations. In addition, no information is available which documents the actual disposal of sludge at this tank farm. Given that there are no signs of the prior use or existence of sludge disposal areas on this site, it is felt that other investigation activities are not appropriate to further address this issue.*

44. Volume III-3, Page 4:
Section 3.2.2, Paragraph 6

"Soil samples will be collected at 5 foot intervals from the well borings to the depth necessary for the installation of the well (ie,approximately 5 feet past the water table)."

In order to locate potentially buried sludge disposal areas and oil spill zones the State recommends that continuous split spoon samples be collected from the well borings to the depth of the water table in addition to collecting soil samples at five foot intervals.

Response: *Given that the depth to ground water typically ranges from approximately 15 to 20 feet below grade and the likely shallow depth of any sludge disposal activities, continuous sampling will be performed over the first five foot interval at each well location to address this concern.*

45. Volume III-3, Page 15:
Section 3.4, Paragraph 6

"In Phase II, a total of thirteen monitoring wells are planned at nine new locations."

During the Phase I soil gas investigation elevated readings were obtained throughout the site including the perimeter of the site. However the grid size employed during the soil gas survey did not allow for delineation of plumes or zones of contamination. The elevated soil gas readings should be addressed during the Phase II investigations. The State recommends the collection of groundwater samples and or soil gas with a geoprobe in order to investigate possible offsite contamination and to optimize the location of onsite sampling points.

Response: *The soil gas survey conducted in Phase I proved to provide inconclusive and potentially erroneous information. The findings of the Phase I ground water analysis did not indicate any subsurface volatile organic contamination. The planned Phase II wells have been sited to more completely characterize the overall site ground water conditions.*

46. Volume III-3, Page 17:
Section 3.5, Paragraph 3

Please provide the rationale for the proposed Acid Volatile Sulfides (AVS) analysis

Response: *The acid volatile sulfides analysis will provide information which will be useful in evaluating the bioavailability of any metals detected in the sediment samples. AVS analysis is now being routinely required by the EPA in sediment studies.*

47. Volume III-3, Page 17:
Section 3.6, Paragraph 1

"The ruins appears to be a former oil/water separator or similar structure."

The report should include a diagram depicting the piping network associated with the oil/water separator including the discharge point for said system. In possible a sample should be collected from this network. In addition the report should include a diagram depicting the fuel line piping network.

Response: *No information regarding the discovered structure is known to be available. Based upon observations made in the field, a pipe which discharges in the brook near the structure appeared to flow from the structure. A sample was collected from this pipe in Phase I. In addition, a sediment/soil sample was collected from the structure in Phase I. Water samples are planned for collection from the structure in Phase II. The map depicting the piping network for the site will be included in the revised Work Plan. However, this structure is not shown on the map.*

48. Volume III-3, TABLE 2: Site 12 - Tank Farm Four Surface Soil Location Rationale

"SS-18 and SS-19 Characterize surface soil quality in the low-lying area located in the northwest portion of Site 12."

Elevated soil gas readings were obtained in the area north of the above sampling points. The report should note the elevation of the area north of the above sampling points, that is whether the area adjacent to the northern border of the site is at a higher or lower elevation than SS-18 and SS-19. If the area north of the above sampling points is at a lower elevation than this area should be sampled.

Response: *The elevation of the area north of the planned sample locations SS-18 and SS-19 is approximately the same as that of the sample locations (40 - 45 feet above mean low water level).*

49. Volume III-3, TABLE 2: Site 12 - Tank Farm Four Surface Soil Location Rationale

"SS-25, SS-26, SS-27 Determine background surface soil quality for Site 12."

The above sampling points have been designated as upgradient surface soil samples. However, elevated soil gas readings (collected at water table depth) were observed in this area. Therefore it may be inappropriate to label these locations as upgradient until the source of the elevated readings is determined. The State would consider any proposal to investigate the area adjacent to the site as possible upgradient sampling locations.

Response: *The referenced sample locations have been designated as "background" locations. The proposed locations are removed from the tank area and are in wooded areas of the site. In addition, these areas are observed to have been wooded and free of any disturbances in historical aerial photographs of the site. The suspect soil gas data is for samples collected from water table depths of approximately 20 feet below grade.*

50. Volume III-3, TABLE 2: Site 12 - Tank Farm Four Surface Soil Location Rationale

"SS-17 Characterize surface soil quality upgradient of the central portion of Site 12."

This sample station is located in an area which may have been used for sludge disposal, therefore the above should be modified as follows:
SS-17 Characterize surface soil quality on the eastern portion of Site 12.

Response: *The term "upgradient" was not intended to infer background. However, the rationale will be clarified as requested.*

51. Volume III-3, TABLE 2: Site 12 - Tank Farm Four Surface Soil Location Rationale

"SS-22 Characterize soil quality in the drainage ditch along the western border of Site 12."

Additional justification is required for SS-22. This justification should address topography and drainage patterns in the vicinity of SS-22.

Response: *A ditch is located between this portion of the site and the Defense Highway. During periods of heavy rainfall, standing water has been observed in this ditch. Based upon these observations, the EPA had previously requested that samples be collected from the ditch to assess site runoff considerations.*

52. Volume III-3, TABLE 3: Site 12 - Tank Farm Four Monitoring Well Locations/Rationale

MW-6S Further investigate ground water quality upgradient of the central portion of Site 12.

MW-7SR Further investigate ground water quality upgradient of the south central portion of Site 12.

The report should indicate the potential source of offsite contamination which warrants three monitoring wells approximately four hundred feet apart. The State recommends placing one of the above monitoring wells in the main body of the tank farm. A limited soil gas survey may be employed to investigate potential off site contamination. In addition a geoprobe may be employed to collected groundwater samples prior to the placement of a permanent type monitoring well.

Response: *The potential source of the levels of inorganic analytes detected in the site ground water is unknown. However, it is possible that the elevated levels of inorganic analytes in the ground water are the typical, naturally occurring levels in the area ground water. The Navy feels that given the site ground water flow conditions and the underground storage tank layout across the site, the planned and existing wells will provide a more complete characterization of the site ground water quality and conditions.*

53. Volume III-3, TABLE 3: Site 12 - Tank Farm Four Monitoring Well Locations/Rationale

MW-10S Investigate groundwater quality in the north central portion of the site".

Additional justification is requested for the proposed sample location. The monitoring well is located in an area which was ND for the soil gas survey conducted during the Phase I RI. The State recommends locating the well to the northwest in order to investigate high soil gas readings obtained from the northwest corner of the site.

Response: *Well is located such that it is will provide ground water quality information for this portion of the site. This location is also near and slightly downgradient from the tanks.*

54. Volume III-3, TABLE 3: Site 12 - Tank Farm Four Monitoring Well Locations/Rationale

MW-12S/R MW-13S Investigate groundwater quality downgradient of the southwest and the southern portion of the site.

Additional justification is requested for the above proposed sampling points locations. That is, what is the source of contamination which warrants the placement of three monitoring wells approximately four hundred feet apart. If the well spacing is designed

to fully investigate this section of the site, the State recommends the use of a geoprobe to collect groundwater samples or soil gas samples in order to optimize the location of the wells.

Response: *The wells are planned at those locations to further assess the ground water quality and conditions downgradient of the tanks. Given the hydrologic conditions in this area of the site and the tank locations, it was believed necessary to install wells at several downgradient locations. Permanent wells are planned for use in any future monitoring and/or sampling efforts, as necessary.*

55. Volume III-3, Figure 7: Site 12 - Tank farm Four Surface Soil Sample Locations

Please provide rationale for the collection of surface soil samples from the tops of the tanks.

Response: *Surface soil samples are planned for collection from the top of the tanks to further investigate TPH surface soil contamination detected in Phase I. The rationale for each of these surface soil samples will be added to Table 2.*

Volume III-4: Field Sampling Plan
Site 13 - Tank Farm Five

56. Volume III-4, Section 3.0

Please explain why no geophysical surveys are planned for this site

Response: *Given the size of the site and the presence of the very large underground storage tanks and the associated piping across the primary area of the site, it is likely that geophysical surveys would not provide any additional information which would be useful in the remedial investigation.*

57. Volume III-4, Page 13:
Section 3.3.1, Paragraph 2

According to Table 2 and Figure 6, there are two (2) background surface soil samples, not three.

Response: *The table and figure are correct. The text will be changed to two (2) background surface soil sample locations for the site.*

58. Volume III-4, Page 13:
Section 3.3.2, Paragraph 2

"Soil samples will be collected at 5-foot intervals from the well borings to the depth of necessary for installation of the well (i.e., approximately 5 feet past the water table)."

Typo: omit "of."

This sentence contradicts the procedure presented in Appendix B, page 15, paragraph 4, which states that "Split spoon samples will be collected continuously at 2.0 -foot intervals from the well borings until the water table has been reached or split-spoon refusal (encountered boulders or bedrock)." The State recommends that the procedure as outlined in Appendix B be followed.

Response: *The typo "of" will be omitted.*

The procedures presented in Appendix B are the typical sampling methods for the field investigation activities. Site-specific differences in the methods are presented in the individual Field Sampling Plans. Given that the primary purpose of the well borings is for the installation of monitoring wells, it is not believed necessary to continuously sample to the depth of the water table (typically 10-20 feet below grade). However, as with Tank Farm Four, to address the concern of possible sludge disposal areas, continuous sampling will also be performed over the first five foot interval at each well location on this site.

59. Volume III-4, Page 15:
Section 3.4, Paragraph 2

It is unclear on Figure 7 and Table 1 which wells will be tested. The "12 existing wells" mentioned on Table 1 as being sampled are not clearly identified on Figure 7. There are five (5) locations in Phase I (MW-1 through MW-5) as well as fourteen (14) other wells which were installed under a tank closure investigation for Tanks 53 and 56. Therefore, it must be made clear which of these existing nineteen (19) wells will be sampled. If only twelve (12) of these nineteen (19) existing wells are being sampled, please explain why all wells are not being sampled and provide a rationale for choosing the sampled wells.

Response: *The following summarizes those wells planned for sampling in Phase II at Tank Farm Five:*

- *five (5) of the eight pre-RI existing wells (MW86-1, MW86-2 (if water present), MW86-5, MW-53W (if it has water), MW-56W or MW-56E (from 56E if no water in 56W));*

- *all six (6) of the Phase I RI wells (MW-1, MW-2, MW-3, MW-4 (if it has water), MW-5, and MW-6);*

- *one (1) to two (2) of the more recent tank closure investigation wells (MW-8 (if it has water), and RW-1 (only if no water is present in MW-53W)); and*

- *all ten (10) of the new Phase II wells.*

The above ground water sampling plan should result in the collection of twenty two (22) ground water samples. Any NAPL observed or detected in the wells will also be sampled. Note that all of the new Phase II ground water samples will be analyzed for the full TCL/TAL. However, based upon the results of ground water samples collected from the existing wells, all other ground water samples will only be analyzed for TCL VOCs and TAL metals. All of this information will be presented in a table in the revised work plan.

60. Volume III-4, Page 15:
Section 3.4, Paragraph 2

The first sentence states that "groundwater samples will be collected from each of the Phase I ... monitoring wells." In the Phase I RI, the "hits table" indicates that MW-4 provided insufficient sample volume for analysis. Please explain whether this well is one of the twelve (12) existing monitoring wells to be sampled. If so, then please explain what alternatives are being considered if the well is again unable to provide adequate sample volume.

Response: *The monitoring well sampling plan is explained further in response to comment #59. During the Phase I RI ground water sampling, well MW-4 only had sufficient volume for TCL VOCs and SVOCs analysis. In addition, during the most recent tank closure investigation sampling event, sufficient water was present in the well for sampling. It is hoped that during the Phase II sampling event that the well will have sufficient volume for TCL VOCs and TAL metals analysis. However, if there is no water present in the well, then no ground water sample will be obtained from that area. To increase the potential for water in the wells at this site during the sampling, an attempt will be made to perform the ground water sampling outside of any long dry periods. In addition, a ground water sample will first be collected from the well without purging the well. This sample will then be discarded and the well resampled if the well recovers enough after purging.*

61. Volume III-4, Page 15:
Section 3.4, Paragraph 2

Please explain why monitoring well MW-86-3 is not shown on Figure 7.

Response: *MW86-3 was a pre-existing well installed under tank closure investigation activities in 1986. During the construction of the nearby new fire fighting training center, this well and another well (well GHR) were destroyed. Monitoring wells MW-7 and MW-8 were more recently installed under the tank closure investigation as replacements for these wells. A discussion of this will be added to Section 2.3 of Volume III-4 of the work plan.*

62. Volume III-4, Section 3.4
General Comment

Please explain whether MW-86-5 is to be sampled. This monitoring well is shown on Figure 7 of Volume III of the Phase II workplan but no sample results were displayed in the Phase I RI hits tables. Please explain the status of this well.

Response: *As presented in response to Comment #59, well MW-86-5 will be sampled if water is present in the well at the time of sampling. This well still exists and a ground water sample can be collected from it if water is present in the well. To increase the potential for water in the wells at this site during the sampling, an attempt will be made to perform the ground water sampling outside of any long dry periods. In addition, a ground water sample will first be collected from the well without purging the well. This sample will then be discarded and the well resampled if the well recovers enough after purging.*

64. Volume III-4, Page 18:
Section 4.2, Paragraph 3

It should also be noted that recent studies conducted at this site under the RCRA program have indicated that elevated levels (> 100 ppm) of Total Petroleum Hydrocarbons are present in the surface soils at Tank 53 as well.

Response: *The draft Work Plan was completed prior to obtaining the referenced findings of the recent tank closure soil investigation activities. In addition, the findings and results of the soils investigation have not been presented in a report. However, a short discussion of this preliminary information will be added to this section of the revised work plan.*

66. Volume III-4, General

Please provide a figure indicating the layout of the pipe network for the tank farm. Please explain how the piping is enclosed.

Response: *A recently discovered map which shows the pipe network layout for the tank farm will be included in the revised work plan.*

67. Volume III-4, General

In the Phase I RI (Volume I), Figure 2-9., elevated soil gas concentrations are shown along the southwestern edge (upgradient) of the tank farm. The Phase II RI should address this situation. Is there any evidence of off-site contamination?

Response: *The findings of the Phase I soil gas survey are considered questionable. The findings of ground water and subsurface soil sampling in this area of the site confirms the absence of subsurface VOCs in this area of the site. Based upon these findings, there is no evidence of any off-site VOC contamination source in this area.*

APPENDIX B: Field Sampling Methodology Plan

69. Appendix B, Page 9:
Section 4.2, Paragraph 3

"Soil samples will be collected from a depth of at least six inches below ground surface."

The Division recommends that the following be added to the above. In the absence of obvious signs of contamination composite soil samples will be taken from each soil sample area.

Response: *Given the absence of any definable "areas" for composite sampling, discrete samples are planned to investigate the presence, nature, and extent of any surface soil contamination. Many of the discrete samples are planned to further investigate the extent of surface soil contamination detected in Phase I.*

70. Appendix B, Page 13:
Section 6.2, Paragraph 3

"Split spoon samples will be monitored for the presence of total VOC vapors with a flame or photoionization detector."

The report should elaborate on the procedure to be employed to detect VOCs in the split spoon samples (ie, samples placed in jars for headspace analysis, etc).

Response: *Upon opening, each split spoon soil sample will be immediately screened with an organic vapor analyzer.*

71. Appendix B, Page 9:
Section 4.2, Paragraph 3

"Soil samples to be analyzed for VOCs will be collected at a depth of at least six inches below the ground surface."

The vast majority of surface soil samples collected during the Phase I RI were non detect for VOCs or contained low levels of VOCs. The State recommends collecting the soil samples at a greater depth. The Navy may want to consider the use of an appropriate field GC for VOC analysis (Field GC capable of detecting VOC in the low ppb range).

Response: *The 0 to 1 foot horizon is typically considered as the interval for surface soil sampling. Sampling over this interval provides the information necessary for determining exposure risks to surface and near-surface soils. Attempts will be made to collect the VOCs surface soil sample aliquot from within the bottom of this interval. Subsurface soil samples will be collected from test pits and/or borings to evaluate the subsurface soil conditions at the sites. A field GC is not planned for the analysis of VOCs in soil samples. The surface soil samples will be analyzed at a EPA Contract Laboratory Program laboratory according to established EPA protocols.*

72. Appendix B, Page 15:
Section 7.2, Paragraph 4

"Soil samples to be submitted for laboratory analysis will be transferred directly from the split spoon to the sample container with a dedicated decontaminated stainless-steel spoon."

The report should note the criteria to be employed for determining which samples will be sent to the laboratory, ie field observations, odors, readings obtained with the VOC detector, etc.

Response: *Appendix B provides the general field sampling protocols and standard operating procedures. The site-specific criteria used for determining which samples to send for laboratory analysis is presented in the site-specific Field Sampling Plans in Volume III of the Work Plan. As presented in these plans, such typical criteria includes signs of potential contamination (e.g., oil, stains, odors, field instrument readings), depth of water table, depth of bedrock, depth of fill, etc.*

74. Appendix B, Page 16:
Section 7.3, Paragraph 5

This section of the report should be modified to meet requirements of the State of Rhode Island Groundwater Regulations. The necessary modifications include but are not limited to the following:

Threaded or press joints only on PVC pipe (no glued joints), all joints shall be fitted with an "O" ring or wrapped with teflon tape.

The well screen slot size shall retain at least 90% of the grain size of a filter pack. A bottom cap and a sump sediment trap shall be installed.

The ground surface seal shall extend to a minimum of 40 inches below the land surface and shall be flared such that the diameter at the top is greater than the diameter at the bottom. The top of the ground surface seal shall be sloped away from the well casing and shall be imprinted with the designation of the monitoring well.

Response: *The above-listed modifications will be added to the revised Phase II work plan. To ensure that all necessary corrections are made in the final work plan, please provide the Navy with a list of any other revised well construction details.*

76. Appendix B, Page 18:
Section 7.4, Paragraph 1

"Development will continue until pH, temperature and specific conductance have stabilized and turbidity is < 10 NTU or has stabilize to + or - 10 % on successive well volumes."

The State recommends that: All Phase I monitoring wells will be checked to determine if the wells meet the 10 NTU turbidity criteria. Wells which do not meet this criteria should be redeveloped.

Response: *At the time of the development of the Phase II wells, the turbidity of the ground water in the Phase I wells will be checked. Phase I wells will be redeveloped, as necessary, according to the above-stated criteria. The Phase II work plan will be revised as indicated.*

77. Appendix B, Page 18:
Section 7.5, Paragraph 2

"Additionally, at those sites where the presence of a non-aqueous phase liquid (NAPL) is anticipated due to previous site information or as potentially indicated by test or monitoring well boring observation, the presence of NAPLs will be assessed (e.g. the

thickness of the NAPL will be determined) prior to sampling with an oil/water interface probe."

The Division recommends the following:
Prior to taking water level measurements a head space readings should be collected and recorded for each well using a HNu or an OVA.

An oil/water interface probe should be used at all well independent of site history. The use of an oil/water interface probe in lieu of an electronic water sensing device will not generate any appreciable delays or cost in sampling the wells.

NAPLs detected in the wells should be sampled prior to well purging.

Response: *As recommended, headspace readings will be measured from the casing of each well just prior to obtaining water level measurements before purging.*

Oil/water interface probe measurements are not planned at wells observed to be clean during drilling, installation, and development. Examples of such wells include off-site or background wells. Given that oil/water probes have previously been used to measure petroleum product, it is not good practice to routinely introduce such a probe into a well which could be clean. Although the probes are decontaminated prior to and after each use, there is still a potential for introducing low-level organic contamination into a well from oil/water probe. If a NAPL is present in a well, its presence will be identified during either drilling, well installation, development, purging, water level measurements, and/or well headspace measurements. After such identification or if a NAPL is previously known to be present in a well, an oil/water interface probe would then be used to measure the product in the well.

NAPLs known to exist in a well prior to purging, will be sampled prior to purging.

Volume IV: Data Evaluation and Assessment Plan

79. Volume IV, Page 3.2:
Section 3.4, Paragraph 3

This section outlines the format to be used concerning the extent of contamination at the sites. The State recommends that figures be included which depict the concentrations of contaminates (total VOC, SVOC etc.) at each sample point.

Response: *As in the Phase I RI report, where possible, figures which aid in presenting the detected contamination will be developed for each of the sites. However, given the extensive number of samples and typical amount of analytical data, it is not*

always feasible or helpful to present sample specific data for all media at each sample location on figures.

80. Volume IV, Table 1: Planned Report Format for RI Report at NETC- Newport

The Division recommends that all site information be grouped together in one section so that the reader does not jump between sites while reviewing.

Response: *As presented in the Phase II Work Plan, the information for each of the sites will be presented and assessed separately. As with this work plan, only general information (e.g., regional, NETC) applicable to all of the sites will be presented once at the beginning of the entire RI report. In addition, all appendices will be grouped together by subject (e.g., boring logs, data tables).*

Volume V: Risk Assessment Plan - Human Health Evaluation

81. Volume V, Page 2-2:
Section 2.1.1, Paragraph 1

"Following landfill closure, a three foot thick soil cap was placed over the site".

Please clarify this statement. Our records indicate that a three foot cap was not placed over the entire site.

Response: *Evidence of "cap material" was discovered over a portion of the McAllister Point Landfill site during the field investigation. However, no documentation was available which indicated this "cap material" was placed over the entire site. This statement will be clarified.*

82. Volume V, Page 2.8:
Section 2.1.1, Paragraph 2

"For Scenario 1, 2, and 3, the major contributing factor to the calculation of cancer risk is ingestion of arsenic and carcinogenic PAHs in soil. Ingestion of soil and house dust and/or inhalation of vapor phase VOCs also contribute to the overall cancer risk for children and adults..."

The report should indicate whether inhalation of dust and vapor phase VOCs were considered during the calculation of risk for the daycare center.

Response: *The fact that the inhalation of dust and vapor phase VOCs were not considered during the calculation of risk for the daycare center will be included in the report.*

Volume VI: Risk Assessment Plan - Ecological Evaluation

83. Volume VI, Page 1:
Section 1.0

The information presented in this section of the reports indicates that field activities carried out for the ecological risk assessment will consist of a qualitative review of wildlife in the area and the collection of sediment and water samples.

Activities of this nature are routinely carried out during Phase I investigations. Therefore, the Workplan should stipulate that, if required, additional bioassays, bioassessments, etc., will be carried out at the site prior to the completion of the ecological risk assessment. The EPA and RIDEM will review any proposals concerning the necessity of said studies.

Response: *Should the results of the risk assessment indicate ecological risk to a specific component, further field or laboratory work will be recommended if such work would contribute to the analysis of remediation options in that component.*

84. Volume VI, Page 18:
Section 3.2.6, Paragraph 4

"These samples will be examined using a rapid benthic assessment methodology".

Additional information is requested concerning the proposed benthic assessment to be carried out at Tank Farms Four and Five (sample locations, time windows, etc.). The State recommends EPA's Rapid Bioassessment Protocol II and III for these sites.

Response: *The time frame should be late spring to early fall. Sampling locations are described in Section 3.5.1.*

EPA Protocol II was recommended because the objective of this protocol are consistent with the risk assessment objectives. According to EPA (Klemm, D.J., P.A. Lewis, F. Fulk, and J.M. Lazorchak, 1990. Macroinvertebrate Field and Laboratory Methods for Evaluating the Biological Integrity of Surface Waters. United States Environmental Protection Agency, Environmental Monitoring Systems Laboratory, Cincinnati, Ohio. EPA/600/4-90/030), the objective of Protocol II is to provide a reasonably reproducible assessment of biological impact and consists of a habitat assessment and collecting macroinvertebrates from all available habitats. This is what this work plan proposes.

The use of Protocol III is not recommended based on EPA's description of the Protocol III objective to assess biological impact and to establish the basis for trend monitoring of pollution effects over a period of time. It is not within the

objective of this risk assessment to establish a basis for trend monitoring, and therefore Protocol III is not required.

87. Volume VI, Page 29:
Section 3.5.1

"SW-1, SD-1 Existing station; downstream of railroad bridge and Defense Highway."

"SW-1A SD-1D New station; flat area near mouth of brook."

The above sampling locations may be affected by contaminants from the railroad right-of-way and tidal action. The Work Plan should comment on the above and indicate what action can be taken to address these potential sources of contamination.

Response: *It is recognized that the railroad bridge and highway are potential sources of contamination. This knowledge will be integrated into a comparison of stations upstream and downstream of the bridge/highway area.*

It is also recognized that the mouth of Gomes Brook is "on the beach" and is subject to tidal action. Attempts will be made to sample at outgoing low tide to mitigate the potential diluting effects of sea water.

88. Volume VI, Page 47:
Section 7.2, Paragraph 2

"This analysis will use information generated from the Exposure and Ecological Effects Assessments and will rely upon the Toxicity Quotient approach as well as on direct observation of conditions in the field to provide an overall weight of evidence concerning the nature of risk."

Information gathered during the Phase I investigations indicates that surficial contamination is present at the sites (Ex McAllister Point Landfill). The report should indicate why quantitative studies, such as bioaccumulation analysis of mammal or invertebrate tissue were not proposed for these sites.

Response: *Bioaccumulation studies are viewed as second tier studies (following the tiered approach to ecological risk assessment developed by EPA in Region 9 studies). Should the initial analysis indicate that such data is necessary to assess risk especially in terms of guidance for remediation, such recommendations will be made in the risk assessment report.*