9

STUDY AREA SCREENING EVALUATION WORK PLAN

Responses to USEPA and RIDEM Comments

U.S. Department of Navy
Installation Restoration Program

Naval Education and Training Center
Newport, Rhode Island

Contract No. N62472-86-C-1282
October, 1992

TRC
TRC Environmental Corporation

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

GENERAL COMMENTS

1. It appears that the field effort being proposed at these six study areas (SA) is well thought out and very thorough. However, an important concept of the field program, the rationale for the location of samples and the reason for choosing the Analytes of Concern for each sample, is missing from the document. A table should be added to each section addressing these issues.

Response: *The requested tables will be added to the NETC-Newport Study Area Screening Evaluation Work Plan.*

2. It is recommended that one boring be split-spooned continuously to bedrock at each Study Area (SA). This boring would aid in better characterizing the geology of each SA.

Response: *SASE investigations of Tank Farm One (SA-07), Tank Farm Two (SA-10), and Tank Farm Three (SA-11) have been temporarily suspended are being reassessed as a result of DFSP (Defense Fuel Supply Point) contracted environmental investigations of these areas. The Navy believes that many of the investigation scope questions and comments relative to these study areas could most effectively be answered following receipt and review of DFSP study reports.*

At the remaining three study areas where borings have been proposed (SA-04, SA-08 and SA-17) soil samples will be collected as described in the study area specific Work Plans. At study areas SA-04 and SA-08 split-spoon soil samples will be collected continuously from on-site soil borings to a minimum depth of the ground water table. Beyond the water table, split-spoon samples will be collected at five-foot intervals for another ten feet or to bedrock, whichever is first. Spilt-spoon sampling of well borings will continue to the depth of bedrock. At study area SA-17 the Navy does not believe it is necessary to determine the depth to bedrock during a preliminary screening evaluation. However, if subsurface soil contamination is detected at this study area, the Navy will evaluate the extent of

additional investigation necessary to delineate the extent of contamination.

3. It is recommended that for those borings being converted into monitoring wells a soil sample from the saturated zone be analyzed for total organic carbon (TOC). The purpose of the TOC analysis is to aid in determining whether contaminants such as volatile organics are binding to the soils or not, and whether pump and treat would be useful in removing the contaminants from the aquifer.

Response: *Work plans for two of the study areas (SA-04 and SA-08) will be modified to include the collection and analysis of one soil sample for TOC from the screened interval of each of the eight planned monitoring wells. No investigation of ground water conditions at the Gould Island Electroplating Shop (SA-17) have been planned. However, two samples will be collected and analyzed for TOC from borings completed through the floor slab of the former electroplating shop at SA-17.*

4. The final work plan needs to address what precautions will be taken while coring bedrock when overburden soils and groundwater appear to be contaminated.

Response: *On-site boring locations which indicate evidence of contamination by observation or field instrumentation, will be cored in the following manner; when the borings cannot be advanced with hollow stem augers and sampler refusal is encountered, a casing will be seated and grouted into the bedrock. After allowing the grout material to set up, coring will proceed through the inner casing. As noted in Appendix B of the SASE Work Plan, open bedrock boreholes will be backfilled with a bentonite slurry and the mixture allowed to set, prior to construction of monitoring wells.*

5. Consideration should be given to having a well couplet installed at each study area. The purpose of the couplet is to assess vertical gradients within the aquifer and to determine the "potential" distribution of contaminants throughout the aquifer.

Response: *The Navy does not believe that the installation of nested monitoring wells is warranted at this time. If subsurface soil and shallow ground water contamination is detected during the SASE investigation, the Navy will evaluate the scope of additional investigation necessary to delineate the extent of contamination.*

6. Please clarify whether the EM-31 readings will be obtained in the horizontal and vertical dipole configuration.

Response: *Appendix B will be modified to indicate that measurements will be continuously be obtained in the vertical dipole configureation. Measurements in the horizontal configuration will also be obtained at all observed anomalies.*

7. Attachment B is EPA Region I's Total Recoverable Petroleum Hydrocarbons in Soil/Sediment analytical method which should be used in lieu of the method referenced throughout the work plan.

Response: *Noted, the referenced method will be substituted for TPH analytical Method 418.1.*

SPECIFIC COMMENTS

Introduction and Project Background Document

8. Page 19, § 3.2.1, ¶ 5 - What will the soil cuttings be analyzed for if shown to be contaminated (e.g., TCLP or RCRA Hazardous Constituents)?

Response: *A composite soil sample will be collected from the test or monitoring well borings in which a sample was not analyzed for full TCL/TAL analysis. Samples will be analyzed for either remaining TCL/TAL or TCLP parameters as required for disposal characterization.*

9. Page 20, § 3.2.2, ¶ 1 - The plan states that all well water collected during monitoring well development and purging will be containerized, pending analytical results of the requisite ground water samples. Where will this drummed material be stored until it can be "characterized?"

Response: *As described in the IDW plan, all site-specific generated wastes (soils and water) will be stored on-site until it has been characterized.*

10. Page 21, § 3.2.3, ¶ 2 - Will split-spoon samplers be decontaminated after every use? The last sentence requires some clarification.

Response: *Yes. Split spoon samplers will be decontaminated in the field after every use. The sentence is intended to indicate that as much field equipment as possible will be decontaminated in the laboratory.*

11. Page 26, ¶ 1 - Sample data should be presented with appropriate qualifiers, limitations of qualified data, dilution factors, and detection units, in addition to contaminant concentration for each parameter.

Response: *Noted. Sample data will be amended, as appropriate, with comments which reflect upon the data validity. Additionally, data validation will be completed on all analytical data as described in Section 8.0 of the project QA/QC Plan provided as Appendix D of the SASE Work Plan.*

12. Page 26, ¶ 3 - As written, the first sentence is confusing and requires clarification.

Response: *The sentence should be written as: Following completion of the field investigation program, an evaluation will be performed to assess the quality of the non-sampling data gathered for the study areas.*

Table 1 (2)

13. Page 1 of 4, 5th bullet - The discussion on the operational history of the site should also include a brief description of the site prior to reported site activities, making note of any physical/geographical alterations that may have occurred as a result of or after reported site operations (similar to the detail of information that was provided in the aerial photography discussions in Volumes I through VI of the work plan).

Response: *Noted.*

14. Page 2 of 4 -- Risk Evaluation - This discussion should also assess the relative likelihood that contamination will migrate from the site through each specific pathway medium identified.

Response: *The SASE Report will include in the risk assessment section discussions on contaminant migration (fate and transport) by specific pathway medium.*

15. Page 2 of 4 -- Surface Water - This section should also address recreational uses of surface waters, where appropriate.

Response: *The recreational uses of surface waters will be evaluated in the SASE report.*

16. Page 4 of 4 -- Summary, Conclusions and Recommendations -- 3rd bullet - Recommendations with regard to appropriate limited response actions, e.g. removals, should be offered, where appropriate.

Response: *The SASE Report will recommend whether additional investigation or response actions should be performed at study areas, as appropriate.*

17. Figure 1 - Site Locus - Since only a portion of Gould Island is currently owned by the Navy, the shading of the southern portion of the island (that which is currently State-owned) should be removed.

Response: *Noted. This Figure will be revised.*

18. Figure 3 - RI Sites and SA Locus Plan - Site 2-Melville North Landfill (MNL) should be removed from this map. The SASE Work plan is a secondary document generated pursuant to terms of the NETC Federal Facility Agreement (FFA), of which MNL is not included.

Response: *The text of the SASE Work Plan will be modified to note that Site 2 (MNL) is not a site listed in the FFA. However, Figure 3 will remain unchanged since placement of Site 02 on the Locus plan is primarily intended to provide the reader with a sense on the proximity of study sites and RI sites to each other. It is believed the absence of Site 02 from this figure would cause more confusion than its inclusion along with a modifying statement in the text of the Work Plan.*

19. Appendix A - Every other page of Appendix A is missing.

Response: *Noted.*

Appendix B

20. Turbidity measurement should be added to the list of field analyses for all ground water and surface water sampling.

Response: *Noted. The Work Plan will be revised.*

21. Page 1, ¶ 1 - The first sentence is incomplete.

Response: *Noted. The words "field activities." will be added to the end of this sentence.*

22. Page 4, § 2.1, ¶ 1 - Will the measurements obtained by the EM-31 be in both the horizontal and vertical dipole configurations?

Response: *Yes. See response to comment No. 6.*

23. Page 4, § 2.2, ¶ 4 - Detected anomalies should be identified in both the text of and on requisite site maps in the SASE Report.

If the magnetic locator does indicate the presence of ferromagnetic materials buried in the subsurface, will there be a contingency plan developed to try and identify the buried anomaly?

Response: *Any significant detected anomalies will be further investigated during the SASE investigation. The Navy will provide TRC with funding options to ensure that such issues are addressed during the SASE field activities. Additional investigation activities for the investigation of such anomalies would likely include a test pit investigation.*

24. Page 6, § 3.2, ¶ 1 - Historical and existing site data should be used to approximate depth to the water table prior to the initiation of soil gas sampling. It is unlikely that a vapor well borehole advanced only 2 1/2 feet into the subsurface will be sufficient to detect VOCs above a ground water plume.

Is there going to be only one sample of soil gas collected per borehole or more (i.e., various depths)?

Are matrix spikes/surrogate compounds required as part of the QC measures?

Response: *The soil gas procedures in Appendix B will be appended to indicate the survey will be conducted using a van-mounted hydrualic probe (e.g., "geoprobe") and a laboratory type "field" gas chromatograph (GC). However, the drilling procedure presented in Appendix B is that which is planned to investigate Study Area 17. The use of a van-mounted hydraulic probe will allow for the collection of one to two soil gas sample per probe location. In general, two*

samples will be collected per soil gas point location. These samples would be collected from the interval just above bedrock refusal or the water table and approximately six feet below ground surface. Matrix spikes and surrogate compounds are not planned as part of the field analysis QC procedures.

25. Page 7, § 3.2, ¶ 2 - The text states that calibration will be performed prior to sample analysis. However, information in Section B.4.2 indicates that for Level B Instrumentation, continuing calibration will be done. Please clarify this discrepancy.

Response: *As noted in response No. 24 above, soil gas procedures in Appendix B will be appended to include the use of a van-mounted hydraulic probe. These procedures include completion of a three-point calibration curve prior to each day of sampling activity, during the day, and after completion of each day's analysis.*

26. Page 11, § 5.1, ¶ 3 - This section should indicate that all test pits will be backfilled daily upon completion of sampling and characterization.

Response: *The text of Appendix B will be modified to indicate that test pits will be backfilled upon completion of sampling/characterization or at the end of the day, whichever comes first.*

27. Page 16, § 7.3 - The filter pack above the top of the well screen should be a minimum of two feet to ensure proper isolation distance between the top of the well screen and annular seal. The additional foot should prevent the bentonite from potentially clogging the well screen.

Response: *The text of Appendix B will be modified to indicate that the sand pack will extend two feet above the top of the screen.*

28. Page 17, § 7.4 - Please provide information pertaining to the number of well volumes to be removed from the well during development. Turbidity, as well as other conventional parameters, e.g. pH, temperature and specific conductance, should be monitored during well development to confirm proper well construction. A pH greater than 8 is indicative of grout contamination which could effect water quality analytes. In addition, well development should continue until turbidity is < 10 NTU's or turbidity has stabilized to $^{+}$ 10% on successive well volumes (minimum of five well volumes).

The text states that the surge block will be decontaminated with detergent and tap water followed by tap water and deionized water rinses. Methanol should be used as a rinse following the tap water and preceding the deionized water rinse.

Response: *Noted. The text of Appendix B will be modified to address concerns relative to turbidity.*

The text of Appendix B will be modified to indicate that the surge block will be rinsed with methanol and hexane in addition to the tap and deionized water rinses.

29. Page 18, § 7.5, ¶ 1 - A period of at least two weeks should elapse between well development and well sampling.

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.

The text states that groundwater level will be measured with an electronic device. Please identify the device and the method that will be used for this determination.

The text states that pH, specific conductance, temperature, dissolved oxygen, salinity, and redox potential of the groundwater will be measured in the field. Please identify the methods for these determinations.

Response: *The text of Appendix B will be modified to indicate that a period of at least two weeks will elapse between well development and well sampling.*

The text of Appendix B will be modified to indicate that the thickness of the NAPL would be measured. Samples of any observed NAPLs will also be collected for petroleum fingerprint identification analysis and TCL VOCs. The Navy will provide TRC with option funding to perform such collection and analysis of NAPLs during the SASE investigations.

A Model 101 Solinst electronic water level indicator, or equivalent, will be used to measure the depth to water.

Measurements of pH, specific conductance, temperature, dissolved oxygen, salinity and redox potential will be measured using field instrumentation. In general methods used to collect these measurements will follow approved EPA (SW-846, Third Edition) or Standard Methods procedures.

30. Page 18, § 7.5, ¶ 2 - During purging, temperature, specific conductance and turbidity should be measured (one measurement per well volume). In addition, a five gallon/minute purge rate seems to be excessive. As a point of departure, the Navy should anticipate purging at no more than two gallons/minute. Purging should be conducted from the top of the water column down so as to avoid having the bailers pass through a non-purged zone of the well riser.

Response: *Noted. The text of Appendix B will be modified accordingly.*

31. Page 18, § 7.5, ¶ 3 - A discussion as to the order of filling the sample containers should be presented, e.g. volatiles, semi-volatiles, etc. In addition, VOCs be sampled immediately after purging.

Response: *The text of Appendix B will be modified to indicate sample collection order. VOCs will be sampled first.*

32. Page 20, § 8.0 - The text lists several parameters that will be measured for water samples. Please identify the methods for these determinations and discuss the associated precision and accuracy objectives, such as frequency and recovery.

The text describes surface water sampling with insufficient details. Additional information such as how and the locations where the surface water samples will be collected, (near the shore, in the middle, elsewhere), should be provided.

Response: *See response to comment No. 29.*

Information on the locations of surface water sample collection are provided in the location-specific Work Plans provided as Volumes 1 through 6 of the SASE Work Plan.

33. Page 22, § 9.0 - Sediment samples must contain more than 30% solids or to be acceptable an adjustment must be made by using more sample for the proposed analyses.

Response: *Noted. Appendix B will be modified accordingly.*

Appendix C

34. It should be noted that some of the required health and safety information can be found in the study area specific work plans instead of the site health and safety plan (e.g. personal protective equipment requirements, route to the hospital...). These work plans should be attached to the HSP and available on site.

Response: *A copy of the HASP as well as a copy of individual study area work plans will available on-site during field activities.*

35. Page 5, § 1.2.8 - Clarification is requested as to whether all wells will be developed prior to purging the newly installed monitoring wells. Will the four existing wells located at Tank Farm One be redeveloped?

Response: *As noted in Response No. 1 investigations of Tank Farm One have been suspended pending completion of DFSP investigations.*

36. Page 16, ¶ 1 - As discussed at the August 6 NETC TRC meeting, a procedure should be established that provides for the proper disposal of tyvek, disposable booties and other sampling paraphernalia by EPA and it's contractor prior to leaving the site after field oversight/split sample collection activities.

Response: *As noted in Appendix C, disposal of Investigation-Derived waste materials will be handled as discussed in Section 3.0 of the Work Plan Introduction.*

37. Page 19, § 7.1.3 - Will drager tubes be used to detect the presence of benzene if ambient air readings exceed 1 ppm total volatiles?

Response: *Drager tubes are not planned for use at any of the study areas.*

38. Page 21, § 7.1.6 - Please clarify the term "materials". Does this refer to soil cuttings and/or purge and development water (i.e., IDWs) or PPE equipment?

Response: *PPE equipment.*

39. Page 23, § 7.2.4 - In the second sentence change the second "requirements" to "readings."

Response: *Noted.*

40. Page 24, § 7.3.2 - Will the O_2/explosimeter be lowered down the borehole if elevated PID/FID readings are detected in the breathing zone to determine if an explosive atmosphere exists?

Response: *Yes. Appendix C will be modified accordingly.*

41. Page 29, § 8.3.1 -- Eyes - In the first sentence the word "eye" was left out between "the" and "they".

Response: *Noted.*

Appendix D

42. Page 4-3, Section 4.4.2 - EPA Region I is now requiring that the organic fraction of the field blank be filled with HPLC-grade water while the inorganic fraction be filled with deionized or distilled water.

Response: *The text of Appendix D will be modified to incorporate these changes.*

43. Page 4-3, Section 4.4.3 - If environmental samples are being analyzed for TPH then the source water should also be analyzed for that parameter.

Response: *Noted. Appropriate changes will be made to Appendix D.*

44. Page 7-1, Section 7.0 - The text states that EPA-approved methods will be used for all analyses and CLP SOW will be used for TAL and TCL parameters. There is no mention of NEESA input. Yet, in Section 1.5, Project Scope, page 1-3, the text states that in addition to CLP, NEESA will be followed for Level C analysis. Please clarify this discrepancy.

Response: *Both NEESA D and CLP SOW procedures will be followed by the contract laboratory, in instances where the two protocols differ the more stringent protocol will be applied.*

45. Page 7-2, Section 7.5 - The appropriate tables (e.g., 1 and 3) should be updated to account for the TCLP analysis.

Response: *Tables 1 and 2 will be updated to include TCLP analysis.*

46. Page 8-2, Section 8.2.2 - What is the purpose of validating 50% of the soil/sediment samples from SAs 7, 10, 11, and 17? Please define what is meant by validating 50% of the samples with respect to the criteria outlined on page 8-3 (3rd and 4th paragraphs).

Response: *Given the large number of soil/sediment samples planned for collection from the sites, it was proposed to validate 50% (or approximately half) of the soil sample data. It is believed that by validating a representative number of soil/sediment samples from across the site and from each laboratory batch, the laboratory data quality could be generally determined for all of the samples. The sample data which would be validated would include all of the surface soil, sediment samples, and one of the subsurface soil sample from each boring location. If after reviewing the results of the validated and unvalidated data it was determined necessary to validate some of the remaining unvalidated data, this could always be conducted. All other unvalidated data would be reviewed by TRC for adherence to general QC guidelines (e.g, holding times, blank results).*

47. Page 9-1, Section 9.3.1 - Trip blanks must be treated in the same manner as the collected sample. For example, if HCl is required as a preservative for the sample, then the trip blank must contain the preservative. Please indicate whether the trip blanks will have the appropriate preservatives added by the laboratory.

Response: *Trip blanks will be pre-preserved with HCL.*

48. Table 1 - The note "a" typically applies to aqueous and not soil/sediments.

The note "c" is applicable to dioxins and furans. However, per Table 1 dioxin and furans are not being analyzed for. Please clarify.

Response: *Noted. Note "c" will remain as per comment response No. 54.*

49. Table 1, Containers and Preservation Methods

The table states in footnote (d) that the water method is modified as described in Section 7.0. Please state in Section 7.0 that the method is modified and identify the modification.

Response: *The method modification is identified in Section 7.4. The text will be clarified to indicate the modification to Method 418.1.*

50. Table 2 - Containers and Preservation Methods for Aqueous Samples

The table shows HCl added to samples by quantity only. Please indicate that the acid will be added to pH <2 and checked to ensure that the appropriate pH is achieved.

Response: *Table 2 will be modified to incorporate the requested change.*

51. Table 3 - If analytical samples are to be validated in accordance with EPA Region I functional guidelines and the CLP SOWs, an additional table outlining the flagging criteria should be developed. For example, for TCL volatiles, the laboratory is given 10 days to analyze the sample from validated time of sample receipt (VTSR). However, from the validation standpoint for TCL volatiles, the holding times are 7 days for unpreserved and 14 days for preserved samples, respectively as measured from date of collection.

In accordance with the Organic SOW (OLM01, pages 6 and 7), the holding times for soil/sediment for TCL base neutral/acid compounds and TCL pesticides/PCBs should be 10 days from VTSR and not 7 days as cited. Furthermore, for TAL metals, the holding time should be 180 days (vs. 6 months) per CLP SOW ILM01, page D-4. Lastly, the statement "no holding times established according to the CLP SOW" is misleading since there is no CLP SOW for petroleum hydrocarbons.

All holding times must be from sample collection. Please make the appropriate changes.

A table outlining the detection limits for TAL metals should be added.

Response: *Noted. The data validation contractor employed for this project will be required to follow the most stringent CLP and Region 1 EPA data validation requirements during review of analytical data. A table of detection limits for TAL metals will be added.*

52. Tables 5 to 7 - These tables only include information on TCL analytes. Please provide information on the other analytes such as TAL, TPH, and TOC.

Response: *As noted in comment response No. 51 above, a table of TAL metal detection limits will be added. In addition, detection limits for other analyses will either be tabularized or discussed within the text of Section 7.0.*

Volume I - Coddington Cove Rubble Fill Area - Study Area O4

53. Page 1, § 1.1, ¶ 4 - As mentioned previously, site investigation findings may also identify areas where limited response actions, e.g. removals, are appropriate.

Response: *Noted. See response to comment No. 16.*

54. Page 5, § 2.5, ¶ 2 - Based on the suspected disposal of ash materials at the site, EPA recommends that several soil samples be collected and analyzed for dioxins and furans.

Response: *Soil samples which appear visually indicative of ash material will be retained for potential dioxins/furans analysis. The actual dioxins/furans analysis of such samples will be determined by the Navy during the field investigation activities. The Navy will provide TRC with contract option pricing for the such samples analysis.*

55. Page 6, § 3.2, ¶ 2 - "The radiological survey will be conducted... to assess the absence or presence of any radiological hazards on the site."

According to EPA Region I's Office of Radiation Programs, the type of survey discussed here will only identify large quantities of emitters (most likely only beta and gamma emitters due to the fact that sodium scintillation meters do not readily pick up alpha particles) near the surface of the surveyed areas. A more detailed survey, including collection and laboratory analysis of representative subsurface soil samples, must be conducted to completely assess the absence or presence of any radiological hazards on the site.

Response: *The Navy does not believe that initiation of a detailed radiation survey is warranted at this time. Available background information does not suggest disposal of this type of material, however, a radiation survey has been proposed as an initial assessment of the presence of radioactive hazards at the study area. If elevated radiation readings are detected during the SASE investigation, the Navy will evaluate the extent of additional investigation necessary to delineate the extent of contamination.*

56. Page 7, § 3.3 - It is stated that concrete, asphalt, slate, wood, brush and ash are known to be present in the Coddington Cove Rubble fill area. In the Introduction, p. 24, it is stated that the following is also present: wire, cables and empty paint cans. Their scattered presence will probably significantly affect the results of the EM-31 and magnetometry survey. An additional possible degradation would exist if the

concrete in the landfill is reinforced concrete. Is it the presence of this scattered metallic debris which TRC hopes will aid in determining the nature and extent of fill at the site?

Response: *As stated in the Work Plan little information is available regarding the nature and presence of debris at the Coddington Cove Rubble Fill Area. The geophysical techniques will be used to attempt to define the extent of debris disposal in the fill area.*

57. Page 7, § 3.4, ¶ 1 - The text states that the soil gas survey will be executed on a 50-foot grid pattern. However, Figure 3 shows the soil gas survey on a 100 foot survey. Please clarify.

Response: *Figure 3 will be modified to show a 50-foot spaced soil gas survey grid.*

58. Page 7, § 3.4, ¶ 2 - With respect to the soil gas samples, why are they to be analyzed solely for benzene, toluene and xylene?

Response: *As noted in comment response No. 24 soil gas procedures will be modified. Samples would be analyzed using a modified method 8010/8020 analysis procedure, and should be able to detect a number of VOC compounds.*

59. Page 9, § 3.6 - Please refer to above comment on page 4 regarding physical parameters to be monitored during well development and purging.

Please clarify as to whether samples analyzed for TAL metals are to be filtered or non-filtered.

The text states that total chloride will be determined. Please identify the method for this analysis and associated quality control, such as duplicates, blanks, matrix spikes, etc.

The methods for temperature, pH, conductivity, dissolved oxygen, alkalinity, and salinity must also be provided.

Response: *Physical parameters discussed in comment response No. 29 will be measured at SA-04. Consistent with standard EPA protocol, unfiltered ground water samples will be analyzed for TAL metals. Total chloride will be measured in the laboratory using EPA Method 325. Methods for analysis of temperature, pH, conductivity, dissolved oxygen, and salinity are provided in the response to comment No. 29. Alkalinity would be measured using EPA Method 310.*

60. Page 9, § 3.7 - The text states that samples will be analyzed for all TCL/TAL and total chlorine. Please provide method for total chlorine determination.

Response: *See the response to comment No. 59.*

Volume II - Tank Farm One - Study Area 07

As described in comment response No. 2, investigation activities at Tank Farm One have been temporarily suspended pending review of completed and planned DFSP studies. The Navy believes that some of the following questions/comments would be most effectively answered following receipt and review of DFSP study reports.

61. Page 1, § 1.1, ¶ 1 - Although mentioned briefly in the second sentence, assessment of impacts to human health and the environment from reported sludge disposal operations should be an objective of this investigation.

Response: This objective will be added.

62. Page 2, § 2.2 - Please include a brief description of the current use, e.g. storage of JP4, fuel oil, etc., of each tank. It is unclear from the site description and information provided on table 1 (1963 data) as to the current use, i.e. contents, of each tank.

What is the current storage capacity and use of tanks 9 and 10? Why are they included in the site description portion of the document (which leads one to believe that they are part of Tank Farm One), but excluded from the field sampling program?

Response: *Additional information on the current use of each tank will be researched and included in the SASE report. Tanks 9 and 10 were excluded from the SASE investigation because they are not included in the FFA for NETC.*

63. Page 7, § 2.4, ¶ 1 - The location of the soil samples collected during the confirmation study are provided in Figure 3 and not Figure 4 as cited.

Response: The figure citation will be corrected.

64. Page 12, § 3.3 - Will the presence of the above-ground and underground riveted steel and reinforced concrete tanks have any impact on the EM-31 data collected?

Response: *The presence of the tanks will affect the EM-31 data as you near the tanks. The EM interferences caused by the tanks, other structures, fences, utility lines, pipe lines, etc. will be noted during the surveys and in evaluating the survey results.*

65. Page 12, § 3.4 - EPA has recently learned of an "abandoned building" near the sewage lift station in the vicinity of Tank Farm One. It is believed that waste fuel products, solvents and other VOC-related constituents were dumped into an underground vault inside the abandoned building. In addition, it is suspected that this underground vault is contributing to ground water contamination in the sewage lift station area. EPA requests, therefore, that the soil survey be expanded to confirm or deny the presence of contamination emanating from the underground vault.

Given the size of this study area and the uncertainty regarding the locations of the reported sludge disposal areas, consideration should be given to reducing the soil gas grid to 50-100 feet. Based on the site background information presented, including the fact that siting of these disposal areas may not have always been directly adjacent to each tank and various ground "scars" were visually noted, it is possible that a 200-foot spaced grid may not detect many of the disposal areas.

Response: *As described in comment response No. 2, investigation activities at Tank Farm One have been temporarily suspended pending review of completed and planned DFSP studies. The Navy believes that some of the following questions/comments would be most effectively answered following receipt and review of DFSP study reports.*

66. Page 13, § 3.5.2, ¶ 1 - The first sentence on Page 14 talks about three monitoring wells being installed. However, Figure 6 shows four (4) wells being installed. Furthermore, it does not appear that monitoring well MW-3 located southeast of Building 117 is being installed. Please explain.

Response: *Wells were planned for installation at four new locations (MW-1, MW-1, MW-4, and MW-5). New well MW-4 is incorrectly labelled as MW-3 on Figure 6. (Note: a previous MW-3 well exists at the site.)*

67. Page 13, § 3.5.2, ¶ 3 - It is recommended that one boring from each study area be continuously split-spooned to the bedrock surface in order to more completely characterize the stratigraphy of the site.

Response: *As described in comment response No. 2, investigation activities at Tank Farm One have been temporarily suspended pending review of completed and planned DFSP studies. The Navy believes that some of the following questions/comments would be most effectively answered following receipt and review of DFSP study reports.*

68. Page 13, § 3.5.2, ¶ 4 - The work plan should outline what precautions will be taken to prevent contaminated groundwater (if present) from entering the bedrock aquifer during coring activities.

Is it known if the overburden aquifer and bedrock aquifer are hydraulically connected?

Response: *As described in comment response No. 2, investigation activities at Tank Farm One have been temporarily suspended pending review of completed and planned DFSP studies. The Navy believes that some of the following questions/comments would be most effectively answered following receipt and review of DFSP study reports.*

69. Page 13, § 3.5.2, ¶ 5 - A statement that soil samples may be analyzed for TCLP should be added.

As a follow up to the above comment regarding § 3.4, dependent upon the results of the proposed soil gas survey, subsurface soil samples should be collected from the sewage lift station area to further identify the source, nature and extent of contamination in this area.

Response: *As described in comment response No. 2, investigation activities at Tank Farm One have been temporarily suspended pending review of completed and planned DFSP studies. The Navy believes that some of the following questions/comments would be most effectively answered following receipt and review of DFSP study reports.*

70. Page 15, § 3.6 - The text states that total chloride will be determined. Please identify the method for this analysis and associated quality control, such as duplicates, blanks, matrix spikes, etc.

The methods for temperature, pH, conductivity, dissolved oxygen, alkalinity, and salinity must also be provided.

Response: *The methods for these tests will be included in the revised report. See the response to comment No's. 29 and 59.*

71. Page 15, § 3.6, ¶ 4 - The text states that three groundwater samples will be field filtered. Please indicate this in Appendix B, Section 7.5, Groundwater Sampling Methods, and describe the procedure for sampling dissolved metals. The water sample should be filtered in the field immediately after collection through a 0.45 micron filter and immediately preserved after filtration with nitric acid to pH <2. This comment applies also to groundwater sampling in Volume IV and V. Also, in Section 4.3 of Appendix D, the text states that groundwater samples will be analyzed

for total metals and no mention is made of dissolved metals analyses. Please clarify this discrepancy.

Response: *The method for field filtering will be added to Appendix B and the collection of filtered ground water samples will be clarified in the Work Plan.*

72. Page 16, § 3.7 - The text states that samples will be analyzed for all TCL/TAL and total chlorine. Please provide method for total chlorine determination.

Response: *The method for this test will be provided in the revised plan. See the response to comment No. 59.*

73. Table 1 - As mentioned previously, it is uncertain why reference to tanks 9 and 10 is included in the site description of Tank Farm One but then excluded from the sampling plan discussion and this table. A brief discussion regarding the current ownership and status of these two tanks should be added to the site description section to "close the loop" on these tanks. Are they still owned by the Navy? If so, why aren't they included in the scope of the field sampling program for the tank farm? Are they being investigated/closed under State UST regulations?

What is the current status of tanks 13 and 18? Are they still active? Prior to 1977, they were reportedly used to store ballast sludge. Is this correct? What is their current use/contents? If they are inactive, are there plans to close these tanks pursuant to State UST regulations?

Response: *Tanks 9 and 10 were not included in the SASE investigation because they are not considered a part of Tank Farm One in the NETC FFA. The current status of Tanks 13 and 18 will be researched further and the information will be included in the SASE report.*

Volume III - NUSC Disposal Area - Study Area 08

74. Page 9, § 3.5.2, ¶ 1 - The last sentence of the first paragraph is unclear as written. Please clarify. In addition, consideration should be given to continuously split-spooning one boring to bedrock in order to better characterize the stratigraphy of the site.

Response: *The last sentence is intended to indicate that proposed monitoring well locations will coincide with well boring locations. (see response to comment No. 2)*

75. Page 10, § 3.6 - The text states that total chloride will be determined. Please identify the method for this analysis and associated quality control, such as duplicates, blanks, matrix spikes, etc.

The methods for temperature, pH, conductivity, dissolved oxygen, alkalinity, and salinity must also be provided.

Response: *See the response to comment No's. 29 and 59.*

76. Page 10, § 3.6, ¶ 3 - The locations of the piezometers should be added to Figure 6. In addition, information as to how the piezometer will be installed, diameter, screen length and whether they will be developed needs to be presented in this section or added to Appendix B.

Response: *As requested, the locations of piezometers will be added to Figure 6. Procedures for installation and development of the two-inch diameter piezometers, screened five feet above and below the observed water table will be provided in the SASE Work Plan.*

77. Page 11, § 3.7 - The text states that samples will be analyzed for all TCL/TAL and total chlorine. Please provide method for total chlorine determination.

Response: *See the response to comment No 59.*

78. Page 11, § 3.7, ¶ 2 - The stated location for SW-2/SD-2 should be located at the western end of the site and not the eastern end of the site as cited in the text (see Figure 6).

Response: *Noted. The text will be modified accordingly.*

Volume IV - Tank Farm Two - Study Area 10

Note: As described in comment response No. 2, investigation activities at Tank Farm Two have been temporarily suspended pending review of DFSP studies. The Navy believes that many of the following questions/comments would be most effectively answered following receipt and review of DFSP study reports.

79. Page 1, § 1.1, ¶ 1 - Although mentioned briefly in the second sentence, assessment of impacts to human health and the environment from reported sludge disposal operations should be an objective of this investigation.

Response: *This objective will be added to the revised Work Plan.*

80. Page 3, § 2.3, ¶ 1 - Was a confirmation study not performed at this site because the IAS did not reveal evidence of contamination at Tank Farm One? This issue needs to be further clarified. The last sentence is misleading as written.

Response: *This issue will be researched further and discussed in the SASE report or at a TRC meeting.*

81. Page 6, § 2.3.1 - Because it is difficult to locate the "elongated ground scars" on the figures attached to this volume (Fig. 3 shows location of 1951 scars but not 1981 or 1988 reported "areas of concern") in relationship to proposed sampling locations, EPA requests that soil borings (in addition to B-14 and B-15) be advanced in the "elongated ground scar" areas identified by aerial photography, to adequately confirm the absence of "reported sludge disposal activities."

Response: *As described in comment response No. 2, investigation activities at Tank Farm Two have been temporarily suspended pending review of DFSP studies. The Navy believes that the following questions/comments would be most effectively answered following receipt and review of DFSP study reports.*

82. Page 10, § 3.3 - Will the presence of the above-ground and underground reinforced concrete tanks have any impact on the EM-31 data collected?

Response: *See the response to Comment No. 64.*

83. Page 10, § 3.4, ¶ 1 - As mentioned previously, it is recommended that the soil gas grid be reduced from 200 to 100 feet to be certain that the "reported sludge disposal trench" is not missed. A reduced soil gas grid should also help in assessing whether modifications to the proposed test boring sampling locations are warranted.
In addition, the text states that the soil gas survey will be conducted on 200-foot spaced north-south traverses across the site. However, Figure 4 shows the spacing to be 400 foot. Please clarify.

Response: *As described in comment response No. 2, investigation activities at Tank Farm Two have been temporarily suspended pending review of DFSP studies. The Navy believes that the following questions/comments would be most effectively answered following receipt and review of DFSP study reports.*

84. Page 11, § 3.5.1, ¶ 1 - Why are discrete soil samples not planned for collection around each tank?

Response: *As described in comment response No. 2, investigation activities at Tank Farm Two have been temporarily suspended pending review of DFSP studies. The Navy believes that the following questions/comments would be most effectively answered following receipt and review of DFSP study reports.*

85. Page 13, § 3.6 - The text states that total chloride will be determined. Please identify the method for this analysis and associated quality control, such as duplicates, blanks, matrix spikes, etc.

The methods for temperature, pH, conductivity, dissolved oxygen, alkalinity, and salinity must also be provided.

Response: *See the response to comment No's. 29 and 59.*

86. Page 13, § 3.6, ¶ 1 - Consideration should be given to adding a sixth well so as to form a cluster at one location. This well would aid in determining vertical gradients and whether contaminants may be taking a deeper flow path.

Response: *As described in comment response No. 2, investigation activities at Tank Farm Two have been temporarily suspended pending review of DFSP studies. The Navy believes that the following questions/comments would be most effectively answered following receipt and review of DFSP study reports.*

87. Page 13, § 3.6, ¶ 2 - Will a sample of any NAPL encountered be collected and analyzed?

Response: *As described in comment response No. 2, investigation activities at Tank Farm Two have been temporarily suspended pending review of DFSP studies. The Navy believes that the following questions/comments would be most effectively answered following receipt and review of DFSP study reports.*

88. Page 14, § 3.7 - The text states that samples will be analyzed for all TCL/TAL and total chlorine. Please provide method for total chlorine determination.

Response: *See the response to comment No 59.*

Volume V - Tank Farm Three - Study Area 11

Note: As described in comment response No. 2, investigation activities at Tank Farm Three have been temporarily suspended pending review of DFSP studies. The Navy believes that many of the following questions/comments would be most effectively answered following receipt and review of DFSP study reports.

89. Page 2, § 2.2, ¶ 1 - What is the current status of the two inactive tanks, i.e. 69 and 70? Does the Navy have any plans to close these tanks pursuant to State UST regulations?

Response: *The current status of these tanks will be researched further and included in the SASE report or discussed at a TRC meeting.*

90. Page 3, § 2.2.1 - The first bullet states that the area of crushed stone is located northeast of Tank 32. However, in the next sentence it states that this is the area of the oil/water separator unit. According to Figure 2, the oil/water separator is located northwest of Tank 32. Please clarify.

Response: *This will be clarified in the revised Work Plan.*

91. Page 3, § 2.3, ¶ 2 - Was the confirmation study not conducted because the IAS did not reveal evidence of contamination at "one of the five Newport Naval Base tank farms?" This issue needs to be clarified. The last sentence is misleading as written.

92. Page 8, § 3.4, ¶ 1 - As mentioned previously, it is recommended that the soil gas grid be reduced from 200 to 50-100 feet to be certain that "sludge disposal/burning areas" are not missed. A reduced soil gas grid should also help in assessing whether modifications to the proposed test boring sampling locations are warranted.

93. Page 9, § 3.5.1, ¶ 1 - Based on Figure 4, there are eleven (11) onsite surficial soil samples being collected (i.e., within the sites boundary), and sample SS-12 is located outside the site boundary. The first sentence requires clarification.

94. Page 10, § 3.5.2 - A well boring should be advanced between tanks 32 and 33 which is the reported location of the waste oil/sludge burning pit (pg.4) It does not appear as though the proposed boring locations depicted on Figure 4 would be sufficient to capture this suspected area of concern.

95. Page 10, § 3.5.2, ¶ 5 - Given that waste oil/sludge burning activities were reported to have occurred at this site, it is recommended that a subsurface soil sample be collected from a boring location near tanks 32 and 33 for dioxin/furan analysis.

96. Page 11, § 3.6 - The text states that total chloride will be determined. Please identify the method for this analysis and associated quality control, such as duplicates, blanks, matrix spikes, etc.

The methods for temperature, pH, conductivity, dissolved oxygen, alkalinity, and salinity must also be provided.

97. Page 11, § 3.6, ¶ 4 - The location of the piezometers should be added to Figure 4. Furthermore, information as to how piezometer will be constructed, installed and developed needs to be added to Appendix B.

98. Page 12, § 3.7 - The text states that samples will be analyzed for all TCL/TAL and total chlorine. Please provide method for total chlorine determination.

99. Page 12, § 3.7, ¶ 1 - Surface water/sediment sample location #5 is located west of SW-3/SD-3 and not east of it as cited in the text.

100. Page 14, § 4.2 - Change Tank Farm Two to Tank Farm Three.

101. Table 1 - This table would be more useful if it also included information on the current status of each tank. For example, page two states that tanks 69 and 70 are inactive, but the table infers that they're currently used for JP-4 storage. So as to uavoid any possible confusion, it is recommended that a "current status" column be added to the table. (This comment also pertains to Table 1 in Volumes II and IV.)

Volume VI - Gould Island Electroplating Shop - Study Area 17

102. Page 4, § 2.4 - Composite samples 4, 4D, 5 and 6 presented in Appendix A, Table 3-2 are not discussed in this section; is it applicable to this section and should they be discussed?

Response: *Composite sample 4 was collected from locations outside the former electroplating shop, composite sample 4D was a QA duplicate of composite 4, and composite samples 5 and 6 were collected from Building 35. Discussion of these sample results is not germane to SA-17. The Table presented in Appendix A will be modified to eliminate these samples.*

103. Page 10, § 3.2, ¶ 1 - As discussed during the August 6, 1992 TRC meeting, it is recommended that site reconnaissance surveys include ambient air monitoring for asbestos. Although asbestos has not been found in Building 32, it was observed hanging from the walls and ceiling of the walkway between Buildings 32 and 35 which could create a health hazard to workers in the area of the former electroplating shop.

Response: *Noted. Ambient air will be monitored for the presence of asbestos during the site reconnaissance. In addition, two floor dust samples will also be analyzed*

for possible asbestos containing material. These two samples will provide additional data on whether disturbance of floor dusts would pose a health and safety risk to site workers. The SASE Work Plan will be modified to incorporate this additional monitoring and analyses.

104. Page 10, § 3.2, ¶ 3 - "The radiological survey will be conducted... to assess the absence or presence of any radiological hazards on the site."

According to EPA Region I's Office of Radiation Programs, the type of survey discussed here will only identify large quantities of emitters (most likely only beta and gamma emitters due to the fact that sodium scintillation meters do not readily pick up alpha particles) near the surface of the surveyed areas. A more detailed survey, including collection and laboratory analysis of representative subsurface soil samples, must be conducted to completely assess the absence or presence of any radiological hazards on the site.

Response: *The Navy does not believe that initiation of a detailed radiation survey is warranted at this time. Available background information does not suggest disposal of this type of material, however, a radiation survey has been proposed as an initial assessment of the presence of radioactive hazards at the study area. If elevated radiation readings are detected during the SASE investigation, the Navy will evaluate the extent of additional investigation necessary to delineate the extent of contamination.*

RIDEM - DAHM
U.S. NAVY - NETC NEWPORT, RHODE ISLAND
SASE WORK PLAN COMMENTS & NAVY RESPONSES

1. Introduction and Project Background, Page 6:
Section 2.2, Paragraph 2

"Also a fish food processing operation utilize the cold storage warehouse in Building 42 near Pier 1."

Please note, the fish processing plant ceased operations in 1983.

Response: *Noted. The text will be modified.*

2. Introduction, Page 6:
Section 2.3, Paragraph 2

"The NACIP program consist of three phases: Phase I - Initial Assessment Study (IAS), Phase II - Confirmation Study (CS), and Phase III - Remedial Measure Phase."

The 1986 Confirmation Study designates Phase III operations as Corrective Action Measures.

Response: *Noted.*

3. Introduction, Page 14:
Section 2.4.4, Paragraph 5

"Except for the stream and pond at NUSC and the stream which empties into Coasters Harbor, all of the other streams and ponds are on land which is being excised by the Navy."

The report should note whether this land has been excised.

Response: *The referenced quote was obtained directly from the 1983 IAS report. This information will be researched and updated in the final Work Plan.*

4. Introduction, Page 18:

Section 3.1, Paragraph 2

Drums should not be labeled hazardous waste until the material has been determined to be hazardous waste by definition.

Response: *The text will be modified to indicate that drums will be marked as to contents (i.e. decontamination water from wells x, y and z, etc.). Hazardous waste labels will be affixed to the drums and will include a statement that the material is a "suspected" hazardous waste pending receipt of analytical results.*

5. Introduction, Page 26:
Section 5.0 Evaluation of Risk

The Division recommends that a qualitative discussion of potential future uses of the sites be offered in the narrative report.

Response: *Noted. This discussion will be included in the SASE report.*

6. Introduction, Page 28:
Section 6.0

The Division requests a copy of the validated data upon its completion.

Response: *Noted. A copy of validated data will be transmitted to RIDEM after an initial review by TRC.*

7. Introduction, Page 28:
Section 6.0, Last paragraph

The schedule states validated data will be available in 8 weeks, not within 10 weeks as stated in the text. Please clarify.

Response: *For schedule development it has been assumed that validated data will be available within eight weeks of completion of field activities. The text will be modified to agree with the schedule presented as Figure 12, and the assumptions presented in Section 6.0.*

8. Introduction, Figure 9 - Surface Water Quality Map of Narragansett Bay:

The Division requests that this map be updated. The most recent copy can be obtained from the Department's Division of Water Resources.

Response: *Noted. This map will be updated.*

9. Introduction, Figure 12 - Project Schedule:

This schedule does not correspond with the previous Table on Page 28. This schedule states that there is seven (7) months between the start of laboratory analysis and the submittal of the draft SASE report. Page 28 states that this duration is five (5) months. Please clarify.

Response: *The text on page 28 corresponds to the schedule presented as Figure 12. Working backwards, the text on page 28 indicates that the draft SASE report is estimated to be submitted within three months of receiving all data, and validated data is estimated to be received within eight weeks (see comment response No. 8) of completion of sampling activities. This totals five months. What is not mentioned is that laboratory analysis will begin within approximately two weeks of the start of the eight week field investigation program. This component adds another six weeks to the schedule, which now totals approximately seven months.*

10. Appendix B, Page 5:
Section 2.3, Paragraph 2

"GPR surveys are conducted by pulling the transmitter/antenna slowly along the predetermined transverse."

The resolution obtained from GPR is dependent upon a number of factors, one of which is the speed at which the GPR survey is conducted. Therefore the report should indicate the speed at which the GPR will be conducted (i.e. 10 mph, 5 mph < 1 mph, etc.).

Response: *The GPR will be pulled at a speed consistent with resolution necessary to assess the presence of subsurface reflecting units. Specification of the speed at which the GPR unit is moved in the field sampling plan may be restrictive in terms of obtaining the necessary data quality.*

11. Appendix B, Page 6:
Section 3.2, Paragraph 1

"At each soil gas sampling point, a pneumatic hammer drill will be used to advance a 3/4 inch diameter, vapor well borehole approximately two and one half feet into site soil."

The proposed depth for the soil gas survey may not be appropriate for certain sites. In order to delineate and differentiate the location of the sludge disposal areas and any ground water contamination plume at the Tank Farms, it is recommended that a minimum of two soil gas samples should be taken at each sample location. The first sample should be taken at the proposed depth. The second sample should be taken within five feet of the water table. The Division recommends that the same sampling strategy be attempted at Study Areas 04 and 08. The Division is aware that logistic problems, nature of material at these sites, may limit the penetration depth of the soil gas probe.

Response: *The soil gas procedures in Appendix B will be appended to to include the use of a van-mounted hydraulic probe and a laboratory type "field" gas chromatograph (GC). However, the soil gas drilling at Study Area 17 will be conducted as presented in Appendix B. The use of a van-mounted probe will allow for the collection of more than one soil gas sample per probe location. In general, two soil gas samples will be collected per soil gas point location. These samples would be collected from the interval just above refusal or the water table and approximately six feet below ground surface. At Study Area 17, one soil gas sample will be collected from just below the floor slab.*

12. Appendix B, Page 7:
Section 3.2, Paragraph 2

"Prior to sample collection, a low flow pump is connected to the teflon tubing protruding from the ground and allowed to excavate at least three well volumes of air."

The Division concurs with the use of the low flow pump. The report should also note whether a vacuum gauge will be employed during the purging process.

Response: *The modified soil gas sampling and analysis procedures will include the use of a vacuum gage during purging procedures.*

13. Appendix B, Page 7:
Section 3.2, Paragraph 2

"The GC used for gas analysis will be a HNu Model 311 portable gas chromatograph, equipped with a 10.2 eV photo ionization detector lamp and an SE-30 capillary column, or equivalent."

Please explain if the 10.2 eV lamp will detect all compounds suspected at the SASE sites other than those at the tank farm. In addition, detection limits for all compounds (including compounds not listed in the report and total VOC) for the HNu Model 311 GC should be included in the report.

Response: *As noted in response No. 11, soil gas sampling procedures will be modified. Analysis will be conducted with a laboratory type "field" gas chromatograph (GC). Samples would be analyzed using a modified method 8010/8020 analysis procedure.*

14. Appendix B, Page 7:
Section 3.2, Paragraph 3

"The instrument will be calibrated daily, prior to sample analysis using a standard for benzene, toluene, and a mixture of o-, m-, and p-xylenes."

The report fails to list all the compounds which will be analyzed for during the soil gas survey. The report should provide a list of compounds which will be analyzed for during the soil gas survey. The Division will tentatively concur with the list of compounds (total VOCs and a mixture of halo and hydrocarbons) employed during the soil gas survey conducted at tanks 53 and 56 of Tank Farm 5. (The results of the soil gas survey conducted at tanks 53 and 56 will be used in determining the suitability of these compounds).

Response: *Procedures employed during the soil gas sampling activities at Tank Farm 5 are planned to be used for SASE investigations as noted in the response to comment No. 11. The list of compounds analyzed will be the same as the Tank Farm 5 soil gas survey.*

15. Appendix B, Page 9
Section 4.2, Paragraph 1

The Division recommends that surface soil samples be obtained from the 0-12 inch range.

Response: *Noted. The text will be modified.*

16. Appendix B, Page 9:
Section 4.2, Paragraph 2

"A geologic and general description (e.g. stains, odors) of each surface soil sample will be recorded in a field notebook."

The Division recommends documenting OVA and HNu readings in the field notebook and subsequently identifying all significant "hits" in the report.

Response: *Noted.*

17. Appendix B, Page 11:
Section 5.1, Paragraph 1

"Information obtained from geophysical or soil gas surveys will be used to aid in "fine tuning" planned test pit locations, as appropriate."

The Division recommends including information from field observations, i.e. stressed vegetation, stained soil, etc.

Response: *Noted.*

18. Appendix B, Page 13:
Section 6.2, Paragraph 1

"Split spoon soil samples will be monitored for the presences of total VOC vapors with a flame or photo ionization detector."

The Work Plan should elaborate on the Field Screening techniques to be employed to measure VOC. For example, the Work Plan should indicate if head space analysis will be measured from soil samples placed in a closed container. In addition, it should note that in order to avoid VOC loss, the portion of the soil sample set aside for head space

analysis will not be sent to the lab. A separate aliquot will be set aside for laboratory analysis.

Response: *Noted. Appendix B will be modified.*

19. Appendix B, Page 15:
Section 7.1

Please explain if use of a geoprobe was considered at some of the sites in lieu of the proposed monitoring wells at SA #4, #8 and #17.

Response: *Yes. See the response to comment No. 11. However, installation of monitoring wells was proposed to allow sampling and characterization of the chemical quality of ground water at these study areas in accordance with USEPA requirements.*

20. Appendix B, Page 17:
Section 7.3, Last bullet

"Wells will be clearly numbered on casing."

There are a number of problems associated with painted identification numbers. The Division recommends that, in addition to painted identification numbers, a permanent identification system such as identification tags be attached to the well casing or the cement base.

Response: *Noted.*

21. Appendix B, Page 17:
Section 7.4, Paragraph 1

"Wells will be developed by the surge block and purge techniques."

The Work Plan should indicate that, if possible, the wells will be developed in a manner minimizing infiltration of sediment.

Response: *Noted. The Work Plan will be modified to address this concern.*

22. Appendix B, Page 18:
Section 7.5, Paragraph 1

This paragraph details the procedures to be employed prior to sampling the well.

The Division recommends the following:

- Prior to taking water level measurements a head space reading should be collected and recorded for each well using a HNu or an OVA.
- A water oil interface probe should be used at all wells independent of site history as limited information is available concerning the nature of the contaminants at the sites.
- The presence of both DNAPL and LNAPL should also be ascertained with an oil water interface probe.

Response: *Noted. Appendix B will be modified to incorporate these procedures.*

23. Appendix B, Page 18:
Section 7.5, Paragraph 3

This paragraph details the procedures to be employed during sample collection at the wells. The Division recommends that the wording be modified to reflect that if NAPLs are detected in a well, the field team will document the presence of the NAPL and obtain a sample of the NAPL prior to well purging.

Response: *If NAPLs are detected in a well, they will be sampled and tested for TCL VOCs and petroleum fingerprint identification.*

24. Appendix B, Page 20:
Section 8.0

The Division requests to be present during final sediment sample location selection.

Response: *Noted.*

25. Appendix B, Page 20:
Section 8.1, Paragraph 3

The following should be added to the end of this paragraph:

In addition, precipitation events which occur forty eight (48) hours prior to the surface water level measurement will be noted.

Response: *Noted. Appendix B will be modified to note this condition.*

26. Appendix B, Page 22:
Section 9.1

The Work Plan should note that the results of the field test and field observations will be used to finalize sediment sample locations. Also, preference should be given to areas of leachate outbreaks, deposition areas, and to sediments containing organic material as opposed to sand. In addition, the Work Plan should elaborate on the sediment sample collection methods and depths for the sediment samples.

Response: *Noted. Appendix B will be modified. Additionally, the text of Appendix B will be changed to indicate that sediment samples will be collected from a depth determined in the field. A 1 - 2 foot core will be collected (where possible) at each sediment station to identify the zone of bioturbation. The sediment sample will be collected from above the zone of bioturbation.*

27. Appendix C, Page 2:
Section 1.1, Paragraph 2

The responsibility for insuring site safety is the property owner's and/or the designated Site Safety Officer.

Response: *Development of a site safety plan is intended to minimize the potential for health and safety related problems. However, neither the Navy or TRC can definitively insure the safety of any individual on-site.*

28. Appendix C, Page 22:
Section 7.2.1

Insert "subsurface soil" into the first sentence.

Response: *Noted.*

29. Appendix D, Page IV: Table of Contents (continued)
List of Tables

Insert "Target Analyte List"

Response: *Noted.*

30. Appendix D, Page 3-2:
Section 3.4, Paragraph 1

The Division recommends changing the word "population" to "media".

Response: *Noted.*

31. Appendix D, Page 8-3:
Section 8.2.2, Paragraph 6

This paragraph discusses the level of data validation for the Study Area Sites. Justification is required for the proposed differences in the level of data validation for the Study Area Sites.

Response: *See Response to EPA comment No. 46.*

32. Volume I, Page 1:
Section 1.1, Paragraph 1

"Currently available information suggests . . ."

Please explain what information suggests this assumption.

Response: *The IAS Report.*

33. Volume 1, Page 2:
Section 2.1, Paragraph 2

"West of the site is a low lying wet area and the Defense Highway, followed by a narrow strip of land and Narragansett Bay."

The location of this wet area should be depicted in the Site Figure.

Response: *Noted. Figure 2 will be modified.*

34. Volume I, Page 3:
Section 2.2.1, Bullet 3

"In general, observations were limited by the lack of physical access onto the site due to the presence of fencing and the heavy vegetative cover present."

Field observations at the above site were limited by the extent of the vegetative cover. The section on surface soil sampling (Volume 1, Page 7 Section 3.5.1 Surface Soil Sampling) of this report states that field observations, "soil discoloration, or other surface indicators of potential contamination" will be used to fine tune sample locations. The Division recommends that, in order to avoid vegetation related logistic problems, the fine tuning of sample locations be conducted in the fall or spring. This comment applies to all Study Areas.

Response: *Noted.*

35. Volume 1, Pages 3, 4:
Section 2.3.1, Paragraphs 2, 3, 4

- "The 1942 aerial photo indicated the presence of a small ponded area west of the future Coddington Cove Rubble Fill area, adjacent to Defense Highway, building No. 47 and its associated open storage are not present in the 1942 photo."
- "The 1951 coverage shows a man-made ditch or swale northwest of the small ponded area observed in the 1941 photo."
- "There also appeared to be a drainage ditch to the north and east of the fill area."
- "In addition the presence of several roughly circular dark areas, possibly ponded areas, were located along the western edge of a light colored area."

The location of the above features should be depicted in the Figure for the section.

Response: *Noted. A Figure will be added to this Work Plan to approximately delineate these features.*

36. Volume 1, Page 7:
Sections 3.4 and 3.5

The location of the soil gas survey, and soil sample points are discussed in these paragraphs. The Work Plan should note if any of these points are located in the aforementioned swale, ditch or ponded areas. In addition, the Division recommends that, if possible, the proposed depth for the soil gas survey be increased.

This comment also applies to study areas 08 and 17.

Response: *As noted within the Work Plan a soil gas survey will be completed on a 50-foot grid survey and additional survey points will be completed around points indicating elevated concentrations of soil gas. Specific biased soil gas points will be placed within the approximate outlines of the above noted features if a grid point does not fall within this area. As described in the response to comment No. 11, the depth of the soil gas survey will be increased.*

37. Volume 1, Page 7:
Section 3.4, Paragraph 3

"The portable GC will be used to identify the individual concentrations of benzene, toluene, and xylene in the soil gas samples."

See previous comment (#38).

Response: *See the response to comment No. 11 and 14.*

38. Volume 1, Page 7:
Section 3.5.1, Paragraph 5

Please indicate if the proposed sampling depth is designed to sample cover material.

Response: *As noted in the response to comment No. 15, the surface soil samples will be collected from 0-12 inches deep. These samples are proposed to assess the nature and degree of contamination, if any, of surface materials on-site. No evidence of procedures requiring placement of "cover" material was found during preparation of this Work Plan.*

39. Volume II, Page 1:
Section 1.1, Paragraph 1

"Project objectives for this site are to assess if petroleum releases have occurred at the site and if environmental contamination is present as a result of such releases."

The Division recommends rewording this statement as releases have already occurred on site; specifically the sludge burial and the release from Tank 17.

Response: *Note: SASE investigations of Tank Farm One (SA-07), Tank Farm Two (SA-10), and Tank Farm Three (SA-11) have been temporarily suspended pending review of DFSP (Defense Fuel Supply Point) contracted investigation activities of these areas. The Navy believes that questions and comments relative to these study areas would be most effectively answered following receipt and review of DFSP study reports.*

40. Volume II, Page 2:
Section 2.2, Paragraph 1

General Comment - The Division recommends changing the word "Appendix" possibly to "Annex" through each site section because there are already Appendices in the front of the document.

Response: *This concern is noted. However, the present format will be retained for ease of segregation of individual study area work plans.*

41. Volume II, Page 2:
Section 2.2, Paragraph 2

"Two transformer vaults and an inactive ethyl blending plant which is located in the southeastern corner of the site is described in Section 2.3."

The Work Plan should be modified so that soil samples will be taken from the above areas.

42. Volume II, Page 3:
Section 2.2.1

It is unlikely that these tanks underwent a RIDEM closure in 1977 as RIDEM UST regulations did not go into effect until 1985.

43. Volume II, Page 6:
Section 2.3.1, Paragraphs 3, 4, 5

These paragraphs contain information concerning ground scars and excavated areas in Tank Farm 1.

The Work Plan should be modified to include these areas in the soil gas survey. In addition, a soil sample should be taken from the excavated area.

44. Volume II, Page 8:
Section 2.4, Paragraph 7

"The location of sampling point 04 is shown on Figure 3."

The location of sampling point 04 is not clearly shown on Figure 3.

Response: *This will be corrected in the final Work Plan, as necessary.*

45. Volume II, Page 8:
Section 2.4, Paragraph 9

General Comment - Please identify the location of the PCB storage area on site which is stated in the text and whether any on site survey will be conducted for potential releases.

Response: *The location of the PCB storage area was not presented in the EPA report. Its location will be further researched.*

46. Volume II, Page 9:
Section 2.5, Paragraph 6

Insert language to indicate that the adjacent Melville Ponds are Class A State Stocked Trout Ponds for public recreation. Trout and other fish from these ponds are consumed by the public.

Response: *This language will be added to the final Work Plan.*

47. Volume II, Page 9:
Section 2.5, Paragraph 7

"The Eastern Passage Trust well is the closest public ground water supply well on Aquidneck Island."

The location of the closest private well has not been noted in the Work Plan. This information may be obtained from RIGIS water main maps. This comment also applies to the other sites.

Response: *RIGIS information was reviewed during the preparation of this Work Plan. The Eastern Passage Trust well was the closest potable water supply well.*

48. Volume II, Page 12:
Section 3.4, Paragraph 2

The Division requests that all soil gas surveys conducted during this investigation be on a 50 foot grid system, maximum. In addition, sampling locations for the soil gas survey and the soil samples should include the sludge disposal areas identified and sampled during the Confirmation study.

49. Volume II, Page 15:
Section 3.6, Paragraph 2

The Division recommends that all existing wells be redeveloped and if found to be unusable that they be replaced.

50. Volume II, Page 15:
Section 3.6, Paragraph 2

"Wells will be installed at the following on-site locations: one well upgradient of the tank area (MW-1) . . ."

Past operational practices may have resulted in the contamination of the portions of the tank farm within the fenced area. The Division recommends locating an upgradient monitoring well off site of the tank farm.

51. Volume II, Page 16:
Section 3.7, Paragraph 2

This paragraph describes the proposed locations for the surface water and sediment samples.

As stated above, the Division recommends sampling in deposition areas. SW-5 and SD-5 may be moved closer to the dam if this location is found to be a greater deposition area than the location proposed in the Work Plan.

Response: *As recommended, sampling will be conducted in depositional areas. The planned sampling locations will be confirmed as such prior to finalizing the Work Plan.*

52. Volume II, Table 1 - Study Area 07

The Division requests that Tanks 9 and 10 and the surrounding areas be included in this investigation as the report indicates that the tanks have been used for the collection of the ring drain waters from all of the tanks at Tank Farm 1 as well as ballast sludge.

53. Volume III, Page 11
Section 3.7, Paragraph 2

"The samples will be collected from the following locations: one in the southern primary stream just upstream of the site (SW-1/SD-1) . . ."

The proposed location for the upgradient sample is too close to the road. The Division recommends placing the upgradient sample further upstream, possibly at the fork in the stream.

Response: *Noted. The text and Figure 6 will be revised to note the new upstream location.*

54. Volume IV, Page 11:
Section 3.5.1, Paragraph 1

This paragraph contains information concerning possible locations of the soil sample.

The Division recommends taking a soil sample near the electric substation.

Response: *As noted in the response to comment No. 39, investigation activities have been temporarily suspended at Tank Farm Two pending receipt and review of DFSP investigation reports. The Navy believes that questions and comments relative to these study areas would be most effectively answered following receipt and review of DFSP study reports.*

55. Volume III, Figure 6 - Site Investigation Summary Map

The Division recommends two (2) additional borings into the Plateau area. This area was the original disposal area identified and only one boring and one surface sample have been proposed.

Response: *Noted. Two additional borings will be conducted within the outlined plateau area. These two borings will be installed and sampled (two TCL/TAL samples per boring) consistent with the other boring to be conducted within the plateau area. The text and Figure 6 will be revised.*

56. Volume IV, Page 7:
Section 2.4

The Work Plan should note that information from the hydrogeology investigation will be used to confirm the presence of a ground water divide in the upper area of the Tank Farm.

Response: *See the response to comment No. 54.*

57. Volume IV, Page 11:
Section 3.5.1

Please explain why sampling is only going to be conducted at 5 tanks.

58. Volume IV, Page 11:
Section 3.5.1, Paragraph 3

"Three background (two on-site, and one off-site) soil samples (SS-11, SS-12, and SS-13) will also be collected."

Soil sample SS-12 will be collected from the downgradient portion of the site in between the two downgradient wells (MW-4 and MW-5). Therefore soil sample SS-12 should not be designated a background sample.

59. Volume IV, Page 11:
Section 3.5.1

General Comment - The Division recommends that unless there is evidence of contamination no surface soil samples or subsurface soil samples be taken from the top of the tanks in any of the Tank Farms.

60. Volume V, Page 3:
Section 2.3, Paragraph 1

The Work Plan should note if any other companies beside GOCO have stored materials in these tanks.

Response: *As noted in the response to comment No. 39, investigation activities have been temporarily suspended at Tank Farm Three pending receipt and review of DFSP investigation reports. The Navy believes that questions and comments relative to these study areas would be most effectively answered following receipt and review of DFSP study reports.*

61. Volume V, Page 4:
Section 2.3, Paragraph 6

"At Tank Farm 3, there was a burn pit located between tanks 32 and 33 used for waste oils and sludges. The Navy removed it and some of the surrounding soils in 1974-1975."

Currently, no soil gas sampling points are located in the area between tanks 32 and 33. In order to locate the above burning pit, additional samples should be taken from this area.

62. Volume V, Page 9:
Section 3.5

This section discusses the proposed locations for soil samples. The Division recommends that the site survey include the transformer vault, the pump house and the separator pit. Also, any other areas in which there has been a potential release should be sampled.

63. Volume V, Page 11:
Section 3.6, Paragraph 1

Please clarify ground water movement. Page 5 indicates that ground water movement is complex going both north/northwest and east/northeast.

64. Volume V, Page 14:
Section 4.2

"Historical Information indicates that Tank Farm Two was used for the storage of diesel and ship fuel."

Typo "Tank Farm Two" should be replaced with "Tank Farm Three".

65. Volume VI, Page 7:
Section 2.4, Paragraph 16

The Division recommends that the power room adjacent to the electroplating area be sampled for contaminants.

Response: *The power room will be visually surveyed for the presence of any signs of potential contamination. Samples will be collected from any suspected contaminated materials.*

66. Volume VI, Page 8:
Section 2.5, Paragraph 5

The Work Plan should note whether there are any public or private wells on Jamestown.

Response: *The presence of public wells within Jamestown will be discussed and presented in the SASE report.*

67. General Comment - Study Areas #07, #10 and #11

The Work Plan indicates that there are several tanks located within these tank farms that are inactive, some have been inactive for as long as 20 years. In accordance with State UST regulations, these tanks are considered abandoned and tank closure procedures must begin immediately.

Response: *Noted. The status of the tanks will be researched further and presented in the SASE report or at a TRC meeting.*