



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

ELDN# 10080 - F

DIVISION OF AIR AND HAZARDOUS MATERIALS
291 Promenade Street
Providence, R.I. 02908-5767

January 24, 1991

Franco LaGreca
U.S. Department of the Navy
Naval Facilities Engineering Command
Northern Division
U.S. Naval Base, Bldg. 77 LOW
Philadelphia, PA 19112-5094

RE: Draft NETC Remedial Investigation Report

Dear Mr. LaGreca:

The Division of Air and Hazardous Materials has conducted a preliminary review of the Remedial Investigation report for NETC. A review of the Risk Assessment sections of the report has not been completed at this time. Comments regarding the Risk Assessment as well as any additional comments regarding the Remedial Investigation Report will be forwarded at a later date.

Please contact this office at (401) 277-2797 if you have any questions or concerns in regards to the above.

Sincerely,

Paul Kulpa
Division of Air and Hazardous Materials

cc: Carol Keating, Project Manager US EPA

DEM-AIR AND HAZARDOUS MATERIALS
Comments- NETC Newport
Remedial Investigation/Risk Assessment
December 1991- January 1992

Comments

EXECUTIVE SUMMARY

1. General Comment

The report has segregated the different aspects of the investigation for each site into separate sections. Incorporating all segments of the report dealing with one site into one section would allow for greater continuity.

2. Page ES-5 - Site Geology, Hydrogeology and Hydrology
Paragraph 2

"Many areas on Aquidneck Island, on which the NETC is located, obtain potable water supply from wells".

The majority of water use on Aquidneck Island comes from several reservoir systems operated by Newport Water Department and Portsmouth Water and Fire District.

3. Page ES-6 Field Investigation Summary

The report has compared observed levels to contaminant comparison levels, background levels and available regulatory levels. The Department recommends that the report include separate tables with the reference levels.

4. Page ES-6 Field Investigation Summary

The report has separated carcinogenic PAHs from total PAHs. The Department recommends that the report provide a table listing the two categories.

5. Page ES-6 Field Investigation Summary

The report should reference a summary table which includes range of detects for contaminants in the various matrixes at all of the sites.

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6. Page ES-7 Human Health Evaluation (Volume II)

This section of the report examines risk associated with carcinogenic and noncarcinogenic contaminants. The Department recommends that the report provide a table indicating which contaminants are considered carcinogenic and noncarcinogenic. See comment #4.

7. Page ES-9 Site Description

"The site is approximately 6 acres in size and is located between Defense Highway and Narragansett Bay."

The size of the landfill appears to be in error. Based on the figures in the report, the landfill is approximately 10 acres in size. Please correct.

7. Page ES-10 Geology, Hydrogeology and Hydrology

The western edge of the site bordering Narragansett Bay is characterized by a steep slope to the shore line."

The Department recommends that the report indicate whether exposed debris was found on the steep slopes or whether the slopes appear to be subject to erosion and or flooding.

8. Page ES-10 Geology, Hydrogeology and Hydrology

The report should note the depth to groundwater as well as the depth of fill in groundwater at all sites.

9. Page ES-9 Previous Environmental Investigations

"However, PCB contamination detected in mussels samples appeared to be attributed to area-wide contamination, on the basis of background samples."

The report should comment on the location of the background sample. Comment applies to all other appropriate sites.

10. Page ES-22 - Site 09 Old Fire Fighting Training Area Previous Environmental Investigations

This paragraph should be revised to state that although no onsite field sampling work had been conducted in the past, the Initial Assessment Study in 1983 included this site.

11. Page ES-28 Site 12 Tank Farm Four Site Description

The site is characterized by the presence of twelve 60,000 barrel underground storage tanks and associated pump valve houses.

In the appropriate section of the report the source for the volume of the tanks should be noted. This comment also applies to Tank Farm Five.

12. Page ES-28 Site 12 Tank Farm Four Tank Contents Assessment

Low levels of PCBs was detected in a sludge sample taken from the oil water separator. A sample of sludge from the tanks should also be tested for PCBs.

13. Page ES-28 Site 12 Tank Farm Four Tank Structure Sample Assessments

For clarity the report should note whether the contaminants reported in this section were found in the oil water separator or the ruins.

14. Page ES-28 Site 12 Tank Farm Four Tank Geology, Hydrogeology and Hydrology

"As previously mentioned the surface water measurements indicate that Normans Brook is a gaining stream, receiving discharges from ground water."

The report should note whether Normans Brook may be a seasonal gaining stream. This comment also applies to Tank Farm Five.

**15. Page ES-33 - Tank Contents Assessment-Tank Farm 4
Paragraph 1**

General Comment- Explain why the detection limit for PCB's ranged from 12 to 24 ppm and how you determined that the level was not in the 1-11 ppm range. The arsenic level in Tank 44 which exceeded the Federal standard should be identified as a hazardous waste material and must be disposed of in accordance with the 90 day regulatory period.

**16. Page ES-40 - Tank Contents Assessment- Tank Farm 5
Paragraph 1**

General Comment- Explain which tank had the oil contents whose barium level exceeded the Federal standard of 100 ppm. Also, these oil contents therefore meet the definition of hazardous waste and must be disposed of within the 90 day regulatory period.

**17. Page ES-42 - Conclusions and Recommendations
Paragraph 2**

Typo- change "heath" to "health"

**18. Page 1-6 1.2.1 - NETC Description
Paragraph 2**

General Comment- Change the "Town of Newport ..." to the City of Newport.

**19. Page 1-9- NETC History
Paragraph 4**

Is the Naval War College a major university? Please explain.

**20. Page 1-14 - 1.3 Site Background
Site Description**

" The site is approximately 6 acres in size..."

See comment # 6.

21. Page 1-17 Site 1 McAllister Point Landfill Sec. 1.3.1 Site History

"A final covering of soil three feet thick was placed over the NETC landfill following its closure."

The above thickness of the cap is quoted elsewhere in the Remedial Investigation Report. The report should indicate whether other documentation exist supporting the reported three foot thick cap. In addition it should note whether sampling activities confirm the reported depth. If other documentation and or conformational sampling is not available all subsequent references to the thickness of the cap should note the source.

22. Page 1-17 Site 2 Melville North Landfill Sec. 1.3.2 Site Description

The site description should include a discussion of the oil soak piles.

**23. Page 1-20 - Site History
Page 2- Figure 1-7**

Explain if any documentation exists with the Navy that will verify that the four oil tanks indicated in Figure 1-7 have been removed from the ground.

**24. Page 1-20 Site 9 Old Fire Fighting Training Area Sec. 1.3.3
Site History**

"The site details from the 1943 Drawings are provided on Figure 17."

The report should provide additional drawings which depict the modifications made to the Training Center. These drawings should note areas which subsequently cover by concrete and or asphalt.

25. Page 1-26 - Chronology of Regulatory and Navy Actions

*** Bullet #2**

The Department has on file shellfish contamination closure maps as far back as 1939 for Narragansett Bay.

26. Page 1-26 and 1-27 - Chronology of Regulatory and Navy Actions

General Comment- If this is a true environmental chronology, all enforcement actions should be included.

27. Page 1-28 - Summary of Environmental Investigations

"... however, no CS was performed and no environmental samples have been collected from the site."

Recommend report changed from " environmental" to "analytical".

28. Page 1-28 - Summary of Environmental Investigations

General Comment- There is a lot of reference in the beginning of the document to past investigations and reports which could possibly be eliminated.

29. Page 1-30 - Leachate Springs

Paragraph 3

" The EPA has established salt water quality standards for metals under the Clean Water Act."

Explain why RIDEM 1988 is referenced in Table 1-2 and not the federal standards.

30. Page 1-31 - Sediment and Mussels

Paragraph 1

General Comment- Although no regulatory standards exist, regulators refer to Health Advisory's.

31. Page 2-10 - Findings of Geophysical Investigation

Paragraph 2

Typo- Change "lekely" to likely

32. Page 2-12 & 2-13 Findings of Geophysical Investigation

General Comment- The report indicates that large anomalies were detected in the locations of area A and B and that the anomalies may be in relation to the large soil pile and a sewer line. If you refer to Figure 1-7, these anomalies may also be the underground storage tanks from the old fire fighter. Further investigation should be conducted to determine if the tanks were ever removed or just covered over.

33. Page 2-14 Soil Gas Investigation Sec. 2.3

The report should justify exclusion of McAllister Point Landfill and Melville North Landfill from the soil gas survey.

34. Page 2-15 Soil Gas Survey Method

General Comment- Has the process using teflon tubing and rigid PVC ever been known to produce contaminants in site samples? Please explain.

35. Page 2-16 Sec. 2.3 Soil Gas Investigation, Soil Gas Survey Methods,

Soils gas samples were analyzed using a portable gas chromatograph, HNu Model 311, which allows for the low level (1-50 parts per billion) detection of several aromatic and chlorinated components."

The report should list the compounds which can be detected by the HNu Model 311. Note portable GC which are capable of detecting and identifying a wide range of compounds are available.

36. Page 2-19 Sec. 2.3.1 Old Fire Fighting Training Area, Findings of Soil Gas Survey,

"The total VOC soil gas results are presented in Figure 2-7."

When appropriate, the report should produce similar figures for the individual contaminants detected. Note this comment applies to the other contaminants detected at the site.

**37. Page 2-20 Site 12-Tank Farm Four Sec 2.3.2
Overview of Investigation**

"The soil gas survey was conducted around each of the twelve underground storage tanks and on a 400 foot spaced grid over the remainder of the site."

Justification is required for the four hundred foot grid interval. A smaller interval would have increased the probability of detecting contaminants.

**38. Page 2-21 Site 12-Tank Farm Four Sec 2.3.2
Overview of Investigation**

"Using nearby water level measurements, attempts were made to drill soil gas points holes to within approximately two feet of grade."

The report should note whether the location of the soil gas sampling point would allow for the detection of oil sludge potentially placed on or near the surface of the tank farm.

A Geoprobe with appropriate field instrumentation would allow for a more intensive investigation and would produce more comprehensive vertical and horizontal profiles of contaminants in the saturated and unsaturated zone. The Department recommends that a Geoprobe be considered during subsequent subsurface investigations and in the siting of any additional monitoring wells at all sites at NETC.

**39. Page 2-23 Site 12-Tank Farm Four Sec 2.4.2
Overview of Investigation**

"The two surface soil samples from around each tank consisted of one composite; sample from the tank area and one discrete sample from any area observed to have signs of contamination (e.g. stains, stressed vegetation)."

The report should indicate how the composite sample was taken. (ie: Were the top of tanks divided into quarters and composite samples taken from each quarter and were any of the samples were screened with a HNu). Also, why no samples were taken from the perimeter of the tank where oil may have escaped through the top seal. Please explain.

**40. Page 2-26 Site 01 McAllister Point Landfill Sec. 2.4.1
Overview of Investigation**

"The remaining eleven onsite surface soil samples were collected outside of the established fill area."

The report should briefly elaborate on outside of the fill area, ie on the toe of the landfill, into the former side railroad track etc.

**41. Page 2-26 Site 01 McAllister Point Landfill Sec. 2.4.1
Overview of Investigation**

"All fifteen on-site surface soil samples were collected from locations outside of the reported capped area of the landfill.

The report should justify the sampling rationale, including but not limited to reasons for not taking samples from under the cap.

42. Page 2-27 - Site -01 McAllister Point Landfill 2.4.1

General Comment- Recommend additional soil sampling along the north and western landfill slopes to better characterize the site contaminants.

**43. Page 2-28 Site 02 Melville North Landfill Sec. 2.4.2
Background Information**

"As discussed in Section 1.4.2, previous surface soil sampling was conducted (by others) in and around a central area of the site containing visible oily deposits (see Figure 1-12).

Figure reference should be changed to 1-14.

**44. Page 2-29 Site 02 Melville North Landfill Sec. 2.4.2
Overview of Investigation**

"The seventeen surface soil samples were collected outside the suspected fill areas."

The report should justify the sampling location rational and why samples were not taken from the suspected fill areas.

45. Page 2-39, Sec. 2.5.1 Site 01 Melville North Landfill, Background Information

The report should indicate whether the location of the test pits were estimated or measured from information obtained from aerial photographs.

**46. Page 2-41 Site 02 Melville North Landfill Sec. 2.5.1
Overview of Investigation**

The report should note whether any of the test pit were placed in the lagoons depicted in the aerial photographs.

47. Page 2-43 Sec. 2.6 Subsurface Soil Boring Investigation.

"Subsurface borings were completed at the McAllister Points Landfill, Melville North Landfill an at the Old Fire Fighting Training Area to aid in determine the nature and extent of subsurface soil contamination at each site."

The report should indicate why borings were not taken at the Tank Farms.

**48. Page 2-44 Subsurface Soil Boring Investigation Section 2-6
Soil Boring Sampling Methods**

"In some instances, samples were initially transferred to a ziploc bag for OVA and /or HNu headspace analysis. The headspace readings from the bag samples were used to aid in selecting which samples to submit for laboratory analysis."

The Department recommends that in to order to avoid potential problems with VOC loss and or phthalate contamination half of the split spoon could be set aside for headspace readings while the other half is placed in an appropriate sample container.

**49. Page 2-49 Paragraph 2 :
2nd Sentence Typo**

Change "ON" to ONE

50. Page 2-51 Paragraph 3- Last sentence

General Comment- Further investigation and sampling of the ash layer for Dioxin and Furan analysis should be conducted.

51. Page 2-60 Tank Farm #4 First Sentence

See comment # 47

**52. Page 2-60 Overview of Investigation
Typo- 2nd sentence**

Change "stratigraphyu" to stratigraphy

53. Page 2-60 Overview of Investigation

General Comment- Recommend additional monitoring wells be placed downgradient of the most southern tanks to better characterize groundwater movement and any contamination movement.

**54. Page 2-62 Overview of Investigation
Typo-Second Sentence**

Change "subsubsurface" to "subsurface"

**55. Page 2-69 Groundwater Investigation Well Development
Section 2.7**

"Wells were developed using two methods: by the surge block technique with a Watterra pump assembly, and by compressed air."

There are a number of problems associated with the use of compressed air for developing monitoring wells. Therefore this method should not be used in the future.

**56. Page 2-70 Groundwater Investigation- Well Development
Section 2.7**

"Table 2-12 shows the well development data for all sites."

The report should indicate whether the descriptions provided in Table 2-12 depict the final appearance of the well after development.
(example)

McAllister Point:

Well # 1 Dark Brown to clear no odors
Well # 7 Gray silty no odor.

After development, Well # 1 was clear and Well # 7 was silty.

**57. Page 2-70 Groundwater Investigation Monitoring Well Measurements and
Sampling Section 2.7**

"An oil water interface probe was used to measure the thickness of any oil present in the well".

The report should indicate whether an oil/water interface probe was used at all of the wells. If this was not done, the department recommends an oil/water interface probe should be employed during any subsequent water level measurements. The report did not note whether the LNAPLs detected in the monitoring wells were sampled. The Department also recommends that future groundwater sampling events should include testing and sampling of NAPLs.

**58. Page 2-71 Monitoring Well Measurements and Sampling
Paragraph 2- last sentence**

Change "int" to " in the"

**59. Page 2-72 Groundwater Investigation Monitoring Well Measurements and
Sampling - Section 2.7 : 3rd paragraph**

The report should generally note whether any of the groundwater samples were turbid.

60. Page 2-77 Field Measurements and Observations
Paragraph 2

General Comment- Has this Department been provided with a copy of this research project which is being conducted by this Navy Officer. If not, the Department would like a copy of the report forwarded as soon as possible.

61. Page 2-85 Overview of Investigation
Paragraph 1

"One well pair (MW-1S/D) was installed immediately downgradient of the UST's , the suspected sources of ground water contamination."

This sentence should be revised and any other reference to this well location as being immediately downgradient. Ground water appears to move more in a southwest direction towards the brook.

62. Page 2-96 Overview of Investigation

"Two sediment samples were collected from each location; one from 0- to 1-foot and the other from 1- to 2-feet below the sediment surface."

The report should note the nature of the sediments collect, (sand, mud etc.). In addition the report should note whether the sediments were collected from turbulent or quiescent portions of the stream. Note the above comments apply to both Tank Farms.

63. Page 2-100 Tank Sampling Methods
Paragraph 2

" One sludge sample was collected from one of the tanks sampled on the tank farms. The sludge sample was collected from Tank #50 on Tank Farm Five using a sludge sampler."

Please explain why only one sludge sample was taken. Based on the nature of the contaminants observed in the different tanks, a separate sludge sample should have been taken from each of the tanks to be representative of the tank contents. The Department recommends this be conducted in the second phase.

64. Page 2-102 Site 12: Tank Farm Four- Background Information

General Comment- The Department recommends further investigation and sampling of all tank sludge layers in Tank Farm 4 because the document indicates the UST's were not cleaned. Although, the layers may be small, it is a waste material which will have to be characterized and disposed of properly.

**65. Page 2-102 Overview of Investigation
Paragraph 1**

General Comment: Please explain why the Department was not notified of the situation in Tank 40 with the oil rising into the access chamber.

66. Page 2-103 Overview of Investigation

General Comment- Please explain why samples were run for both EP toxicity and TCLP analysis.

**67. Page 2-105 Overview of Investigation
Paragraph 1- typo**

" Although some sludge..., it was sufficient for the collection of a sludge sample at these tanks."

Change " it was sufficient " to " it was not sufficient"

**68. Page 2-111 Section 2.10.1 Site 13- Tank Farm Four
Overview of Investigation**

The report indicates that the oil water separator was constructed in a portion of the burning pit. For completeness the report should describe the burning pit. If documentation does not exist describing the burning pit the IAS may be appropriately reference for the pits description. (Burning pit had steel sides and a sand bottom.)

**69. Page 2-113 Section 2.10.1 - Site 13 Tank Farm Four
Overview of Investigation**

"The water sample was analyzed for all of the TCL (less pesticides/PCBs) and TAL parameters."

The report should indicate why PCBs were excluded from the list of analytes. Please explain.

**70. Page 2-115 Section 2.10.2- Site 13 Tank Farm Five
Overview of Investigation**

"Refusal was encountered in both of the borings at a depth of 5.5 feet into the soil, at what was believed to be the concrete bottom of the structure."

The report should indicate, if possible, whether the concrete from the bottom of the boring was similar to the concrete which made up the sides of the structure.

**71. Page 3-6 Paragraph 1 -Typo
2nd sentence**

Change " Abut " to " about "

72. Page 3-19 - Top of Page

" Figure 6 represents..."

Remove this reference to Figure 6 because it is not part of this report.

**73. Page 3-23 Section 3.4.2 Site Specific Geology -Site 01
McAllister Point Landfill**

"The undisturbed sample was tested by Empire Soils Investigations, Inc. for triaxial permeability, particle size and Atterberg limits."

The report should indicate whether the above sample was randomly chosen for the test or whether it was used because it is representative of the soil at the site. In addition the report should explain why samples from the other sites were not subject to the same test.

**74. Page 3-40 Site 2- Melville North Landfill
Average Linear Velocities**

"An effective porosity of 15 % was assumed for the till at the site."

As reported in this section the hydraulic conductivity was based upon the slug test taken in the till and the fill. Therefore the porosity value should be modified to reflect the till at the site.

75. Page 3-40 Section- 3.5.2 Site Specific Hydrology

The hydraulic conductivities were determined using slug test. Due to problems associated with slug tests the report should note in Appendix J, where possible, hydraulic conductivities based on well lithology. In addition the report should comment on any significant differences between slug test results and well lithology values.

76. Page 3-40 Site 01 McAllister Point Landfill Average Linear Velocities

The horizontal gradient calculations between the monitoring wells do not appear to be corrected to represent normal groundwater flow (spatial location of wells dictate that well pairs are not perpendicular to groundwater flow contour). Use of such well pairs may generate errors in the calculation of groundwater velocities. Therefore an alternate strategy should be used in calculating groundwater velocities, (use of groundwater contours between two points on a line which is perpendicular to groundwater flow).

77. Page 3-40 Site 02 Melville North Landfill Average Linear Velocities

Two linear velocities should be calculated for a well under tidal influence. This comment applies to all appropriate NETC sites.

78. Page 3-40 Site 02 Melville North Landfill Average Linear Velocities

"An effective porosity of 15% was assumed for the till at the site.

Figures 3.7 to 3.9 indicate that a significant portion of the fill at the site is in the groundwater table. Therefore the effective porosity for the fill should be factor into the average linear velocity calculation.

79. Page 3-44 Site 12 Tank Farm Four

If known, the report should indicate whether the top of the tanks are above or below the groundwater table.

80. Page 4-4 - Section 4.1.1 Soil Assessment

The report should provide the rational for the BNA and VOC comparison levels, e.g. comparison levels used at other sites or in other states etc.

81. Page 4-3 Paragraph 1

General Comment- It has yet to be determined that the levels indicated in Table 4-6 are true or acceptable background levels.

82. Page 4-5 Sec. 4.1.1 Soil Assessment

"In order to evaluate other detected soil contaminants levels, background levels have been developed for inorganic analytes, and contaminant-comparison levels have been set for other classes of compounds (volatile and base neutral/acid extractable organic compounds)."

The report should indicate why comparison to background levels as well as contaminant base levels were not carried out for the volatile and base neutral/acid extractable organic compounds.

83. Page 4-6 Sec. 4.1.1 Soil Assessment

"Background levels for inorganic soil contaminants have been developed on the basis of soil quality at two background soil sample locations (SS-16, SS-17) at the McAllister point Landfill site."

The report should indicate why SS-16 and SS-17 were chosen as representative background locations for the study. Please explain if other sample locations such as upgradient of the tank farms could be used as a background sample location. Also, the report should indicate whether the above sample locations are located adjacent to or in a road ditch or if there are any potential source of contamination at the above sample locations.

84. Page 4-7 Sec 4.1.1 Ground Water Assessment

"In order to evaluate the analytical groundwater data and identify areas of concern at each site, Federal and State action levels were used."

The report should indicate why comparisons to background groundwater levels were not carried out for the sites.

85. Page 4-7 Sec 4.1.1 Ground Water Assessment

"These maps show the areas in a site where contaminants were detected at levels exceeding action levels and indicate site-specific information(e.g, wells in which a petroleum product was observed on the groundwater surface).

Where appropriate, aerial maps depicted total VOC, SVOC etc. found at each monitoring well should be included in the report.

86. Page 4-8 Sec 4.1.3 Surface Water and Sediment Assessment

"In order to evaluate sediment data and identify areas of concern at each site, contaminant-comparison, action, or background levels have been used."

In the appropriate section of the report the nature of the stream substrate, including upgradient portions of the stream should be reported. In addition the report should characterize the environment the stream flows through (agricultural, residential, industrial etc.).The Department recommends upgradient source investigation in the second phase.

87. Page 4-11 Sec 4.2.1 Volatile Organic Compounds (VOCs)

"This review indicated the low levels of carbon disulfide, chloroform, and toluene detected in the detected in a oil samples are similar in concentration to those detected in a few of the field blanks."

The report should comment on the likely source for the carbon disulfide contaminants, (i.e. whether it is common lab contaminant etc.).

88. Page 4-18 Sec 4.2.1 Base Neutral and Acid Extractable Compounds (BNAs)

The report should comment on any discernable vertical distribution of contaminants.

89. Page 4-35 Paragraph 2

General Comment- Please explain the rationale for removal of specific contaminants which were disqualified in soil samples but were qualified in the water samples of the site.

(example)

Bis(2-ethylhexyl)phthalate in the soil samples at TF#4 were given "U" qualifier and in ground water given "J" qualifier. Does this "U" qualifier underestimate risk for soil exposure even though 1/2 the SQL was used in calculations. Please explain.

90. Page 4-44 Sec 4.3.2 Groundwater Assessment

"Signs of VOC related contamination (e.g., oil, sheen) were also observed at the ground water table at several other locations on the site."

The report should list the other locations where evidence of VOC contamination was observed.

**91. Page 4-45 Volatile Organic Compounds
Paragraph 2**

Please explain how no volatile fraction could be detected in the petroleum layer.

92. Page 4-50 Sec. 4.3.3 Sediment Sample Assessment

The report should note the nature of the sediments collected, (sand, mud etc.).

**93. Page 4-72 Soil Assessment 4.5.1
Paragraph 2**

"... which were typically analyzed for total petroleum hydrocarbons (TPH) and lead".

Explain why the soil samples were not analyzed for other contaminants which may present a risk to human health or the environment.

**94. Page 4-75 Base Neutral/ Acid Extractable Organic Compounds
Paragraph 2**

General Comment- Please explain how the holding time for Pyrene was exceeded.

95. Tank Farm # 4- General Comment

The Division recommends further investigation into locating the sludge disposal pits at the tank farm.

**96. Page 4-84 Surface Water and Sediment Assessment 4.5.3
Paragraph 2**

" A surface water sample (W-2) was collected from an outfall pipe which appeared to drain from the ruins which were investigated at this site(see section 2-10)."

General Comment- The Division recommends that further investigation be conducted into the Tank Farms to determine if fuel lines servicing the tanks were properly drained and cleaned when the tank farms were closed. Also, from historical information and schematics determine if the systems were installed to separate oil and water from tanks or lines and then discharge the water phase into the brooks.

**97. Page 4-85 : Volatile Organic Compounds (VOC's)
Paragraph 2**

Please explain how carbon disulfide was qualified as "U" in some sampling locations but real in other sampling locations at the site. Also, explain what the source of the carbon disulfide in the laboratory blanks is from.

98. Page 4-91 Inorganic Analytes

" Given that this sample location is at the mouth of the brook as it enters Narragansett Bay and is tidally influenced, the elevated inorganic analytes may be related to a source in the bay and not the Tank Farm."

This statement should be removed because there has been no information presented to support this assumption. Current information would support that this area would be a deposition area for contaminants flowing from the brook.

**99. Page 4-93 Volatile Organic Compounds (VOC's)
Paragraph 3**

General Comment- Please explain if any information on file indicates that organic solvents were used to clean the tanks and/or fuel lines at the tank farms.

100. Page 4-98 Volatile Organic Compounds (VOC's)

" Other VOC's detected in the oil sample from Tank 39 were rejected in data validation on the basis of GC/MS tuning criteria".

Explain which VOC's were rejected and give more detail on how the tuning criteria failed.

**101. Page 4-99 Volatile Organic Compounds (VOC's)
Paragraph 2**

General Comment- Explain why the detection limits were higher in the oil samples for Tanks 42, 45 and 46.

**102. Page 4-100 Volatile Organic Compounds (VOC's)
Paragraph 2**

" A TCL/TAL analysis was performed on the TCLP extraction leachate of the oil sample from Tank 44."

" A TCL/TAL analysis of the TCLP extraction leachate of the oil sample of Tank 40 ..."

Please explain why this procedure was conducted specifically on these two tanks and whether or not this is standard EPA procedure.

**103. Page 4-102 Inorganic Analytes
Paragraph 2**

General Comment- If the arsenic level in the oil phase in Tank 44 exceeds the federal maximum concentration the material is a hazardous waste by definition and must be disposed of in the 90 day time frame.

**104. Page 4-119 Total Petroleum Hydrocarbons (TPH)
Paragraph 1**

General Comment- The Division recommends further investigation into the possibility that an offsite source may be contributing to the TPH levels in the brook and sediments.

**105. Page 4-123 Inorganic Analytes
Paragraph 1**

Insert Table number in the blank space.

**106. Page 4-125 Volatile Organic Compounds
Paragraph 3**

Please explain how there was no volatile fraction observed in the oil samples from Tanks 49, 54, 57 and 58.

VOLUME I - RI INVESTIGATION FIGURE + TABLES

107. Table 1-6 McAllister Point Landfill

General Comment- The Department requests a copy of this U.S.Army Corp report for it's review.

108. Table 4-5 - Site 13 Tank Farm Five

Typo: Spelling error on "Sludge from tank"

109. Table 4-7 - Inorganic Analyte Background Levels

General Comment- recommend additional background samples during second phase to provide additional documentation that these levels are in fact true background representations.

110. Table (s) 4-7 thru 4-28

General Comment- The abbreviation identified "NE" should be reworded to indicate that the results " may be equal to but not exceeding the developed contaminant level". The current description does not allow the reader to consider that possibility.

111. Table 4-28 Site 13 - Tank Farm Five

General Comment- error in the concentration units (ie: g/l)

112. Figure 1-15

General Comment- The Department requests a copy of the " Design Development Final Submission Design Analysis Report, Expansion of Child Care Center (Sea 1987)".

113. Figure 2-13 Tank Farm 4 & 5

See comment #39

114. Figure 2-28 Site 13 Tank Farm Five

General Comment- Please explain whether or not the stream branch flowing into Gomes Brook from the north has been investigated for upgradient contamination sources.

**115. Section 3 Figures Site 01 McAllister Point Landfill
Figure 3-2 Geologic Cross section Line A-A'**

The department recommends that the sample interval or well screen lengths be depicted on this and all other similar tables.

**116. Section 3 Figures Site 01 McAllister Point Landfill
Figure 4-10 Subsurface Soil Contamination Cross Section Line A-A'**

The department recommends that the fill, overburden or bedrock lines or hatches may be included if it does not effect legibility. In addition, when appropriate total concentrations of PCBs may be included in the figures.

117. Figure 3-3 and 3-4 McAllister Point Landfill

General Comment- Please explain the significance of the question marks in both figures

118. Section 4 Tables

When appropriate label background sampling locations.

**119. Appendix I Figure 5- Site 12 Tank Farm Four Groundwater
Table Contour Map 01/31/91**

Contour lines drawn in the vicinity of MW-10 appear to be in error.

REMEDIAL INVESTIGATION- APPENDICES

120. Section B- Historical Site Map

General Comment- Copies of the areal photos should accompany the printed interpretation.

**121. Volume 1 Appendix B
Appendix B Historic Site/ Aerial Photographs**

The Initial Assessment Study included photocopies of photographs in the report. Where possible and appropriate the report should included photographs (enlargements if necessary) in the final report.

122. Volume 1 Figures

The report should included topographic maps for each of the site on the same scale as the other figures presented in this section.

123. Appendix M-1 "Hits Tables"

Background sample locations and or wells should be labeled.

RISK ASSESSMENT-COMMENTS

124. Page 2-10 : Paragraph 1 3rd sentence

Typo- " not a priori "

125. Page 2-13 : Top of the page

Typo- " upgradient concentrations (monitoring well MW-22)."

This should be monitoring well MW-23

126. Page 2-18 - PCB's and Pesticides Last sentence

" However, because of the strong tendency of PCB's to adsorb to organic matter in soils, PCB's do not tend to migrate unless solvents or oils are present. (Callahan et al 1979)"

Movement of PCB's and PCB contaminated materials into the soil has been well documented at other sites currently being investigated around this state. Some of the sites have shown contamination which migrated to bedrock and entered fractures. This report relates to PCB's in petroleum and solvent contaminated soils. Recommend rewording.

127. Page 3-4 Data Evaluation 3.1.2

Bullet #7 " Boring MO-5 (0-2') was identified as a background surface sampling location and was used for comparison purposes".

General Comment- Background soil samples previously were compared to Table 4-6 in the RI text. Please explain.

**128. Page 3-19 Exposure Assessment 3.3
Paragraph 1- Bullet 2**

" Although fishing is restricted in the area of the Melville North Landfill, the potential exists for exposure to contaminated shellfish".

Change "fishing" to shellfishing

**129. Page 3-41 Uncertainty Assessment
Paragraph 1- last sentence**

" More likely, the site will be used as a marina".

This statement should be removed from the document because no decision has been made on this issue. Known site contaminants and the preliminary risks presented probably would not favor the development of the marina unless a full site remediation was conducted.

**130. Page 3-42 Uncertainty Assessment
Paragraph 3**

General Comment- Please explain if Arochlor 1260 is the only Arochlor with missing RFD values or could another arochlor RFD value be substituted.

**131. Page ES-17 Risk Characterization
Child Care Scenario**

General Comment- This section should be revised in the final report once the split data has been confirmed or denied by the sampling by TRC.

132. Page ES-21 Site 12 -Tank Farm Four

General Comment- Please explain what "semi-quantitative evaluation" was used to eliminate the dairy cows from further consideration. Consumption of site vegetation and site surface water is a direct route of exposure.

**133. Page ES-26 Site 13 -Tank Farm Five
Paragraph 2-Contaminants of Concern**

Typo- replace "four" with "five"

**134. Page 4-38 Summary of Cancer and Non Cancer Health Risks
Paragraph 2**

" Thus, any risk associated with the ingestion of beryllium in ground water is likely do to a

natural occurrence for the area."

Please explain a " natural occurrence for the area".

**135. Page 4-40 Qualitative Analysis of Risk
Paragraph 1**

Change Table 4-2 to 4-7

**136. Page 4-50 Cancer Risks
Paragraph 2**

General Comment- The paragraph should be revised as soon as the re-sampling of the Day Care facility area has been completed and verified. Also, recalculations of risks posed to the children of the facility should include that some recreational equipment is outside of the fenced/sampling area.

137. Page 4-50 Non-Cancer Effects

Typo "th" should read "the"

**138. Page 5-1 5.1.1 Data Collection
Paragraph 3**

" One monitoring well situated at the upgradient boundary of the site is considered to be representative of back ground for the area surrounding the site".

General Comment- If this statement is referring to MW 5 S-D , all references should be reworded and not referred to as background because the well has been identified in a contamination area.

139. Page 5-2 Data Evaluation 5.1.2

" As detailed in the RI report, the site may contain tank residues resulting from oil storage operations."

Previous investigations and reports have identified that residual materials from the tanks were buried on site. The Division recommends that further investigation be made to locate the disposal areas near the tanks.

140. Page 5-4 Data Evaluation 5.1.2
Bullet (7)

General Comment- The report previously stated that MW-5 was considered background at the tank farm. Also, Table 4-6 of the report is continuously referred to as the background levels for the NETC. Please explain the discrepancy.

141. Summary of Subsurface Soil Data

General Comment- The Division recommends that additional subsurface samples should be taken at both tank farms 4 & 5 to define the site contamination extent and assist in locating buried sludge contaminants.

142. Page 5-10 Summary of Ground Water Data 5.1.6
Last sentence

See comment # 73

143. Page 6-9 Summary of Ground Water Data 6.1.6
Last sentence

General Comment- Any reference to MW-6 as background should be removed because the well is in an area where analytes exceeded the action level.

144. Table 2-1 -2-4 Summary of Surface Soil, Subsoil and Groundwater Samples, McAllister Point Landfill.

It is recommended that total VOC, SVOC, PCBs, etc. be included in the above tables.