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NAB LITTLE CREEK  
5090.3a

LETTER TRANSMITTING GEOPROBE GROUNDWATER SAMPLING FOR SITE 11 AND SITE  
13 AND IDENTIFYING PROPOSED LOCATIONS FOR ADDITIONAL MONITORING WELLS  
NAB LITTLE CREEK VA  
7/13/1998  
CH2MHILL



**CH2MHILL**

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July 13, 98

142506.DE.DM  
98-395

Commander  
LANTNAVFACENGCOM  
Attention: Code 18222 Mr. Bob Schirmer  
Lafayette Annex, Building A  
6500 Hampton Boulevard  
Norfolk, VA 23511-6287

Subject: Contract N62470-95-D-6007  
Navy CLEAN II Program  
Contract Task Order 0054

Dear Mr. Schirmer:

This letter presents the results of the recent Geoprobe® groundwater sampling at Sites 11 and 13 and identifies proposed locations for additional monitoring wells.

The three enclosed figures depict the results of the recent Geoprobe® groundwater sampling and previous monitoring well sampling at Naval Amphibious Base Little Creek Sites 11 and 13. Tables of historical groundwater concentrations of 1,1-DCE and TCE at Site 11 monitoring wells and 1,1-DCE, TCE, and PCP at Site 13 monitoring wells are also enclosed. In addition, Geoprobe® groundwater sampling results are tabulated for each site and analysis.

The results of the recent Geoprobe® groundwater sampling at Site 11 indicate the chlorinated VOC contamination in the lower portion of the Columbia Aquifer is present at greater concentrations and is more extensive than in the upper portion of the Columbia Aquifer. Nine monitoring wells are proposed for construction at Site 11.

- One well pair (LC11-GW05S and LC11-GW05D) and one deep well (LC11-GW04D) are proposed for installation in the more highly concentrated areas of the plume to characterize the contamination.
- Four proposed monitoring wells (LC11-GW06D, LC11-GW07D, LC11-GW10D, and LC11-GW11D) are located around the perimeter of the plume to define the downgradient boundary.
- Two proposed monitoring wells (LC11-GW08D and LC11-GW09D) are located within the plume to define concentration gradients across the site.

The shallow well (LC11-GW05S) will be screened from about 7 to 12 feet bls, while the remainder of the proposed wells will be screened from about 15 to 20 feet bls.

The results of the Geoprobe® groundwater sampling at Site 13 indicate the PCP plume is similar to the plume observed during the August 1995 monitoring well sampling by Foster Wheeler Environmental Services. The chlorinated VOC concentrations at Site 13, however, differ significantly from the groundwater monitoring results obtained by Foster Wheeler in August 1995. Due to the variation between the Geoprobe® groundwater sampling results and the August 1995 monitoring well sampling results, monitoring wells (LC13-GW06S, LC13-GW09S, LC13-GW10S, LC13-GW11S, and LC13-GW13S) were sampled during the recent investigations. Groundwater concentrations in monitoring wells differed significantly from Foster Wheeler's August 1995 sampling results. Ten monitoring wells are proposed for installation in the Columbia Aquifer at Site 13.

- One well, LC13-GW08D, will be paired with LC13-GW08S in the PCP source area to characterize contamination in the lower portion of the aquifer.
- LC13-GW11D and LC13-GW12D will be paired with existing wells LC13-GW11S and LC13-GW12S, respectively in areas where significant concentrations of PCP and chlorinated VOCs have been observed to characterize contamination in the lower portion of the Columbia Aquifer.
- Monitoring wells LC13-GW14 and LC13-GW18 are proposed to monitor concentrations of PCP and chlorinated VOCs within the outer reaches of the plumes.
- Five monitoring wells (LC13-GW15, LC13-GW16, LC13-GW17, LC13-GW19, and LC13-GW20) located around the perimeter of the PCP and chlorinated VOC plumes, will monitor the extent of contamination at Site 13.

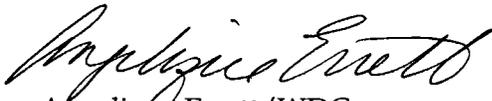
Monitoring well, LC13-GW08D will be constructed with a 2-foot screen extending about 0.5 feet into the Yorktown confining unit. Two deep paired wells (LC13-GW11D and LC13-GW12D) will be screened with 2-foot screens directly above the Yorktown confining unit. The remaining 7 proposed monitoring wells will be screened from approximately 10 to 20 feet bls.

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Please review the enclosed groundwater sampling results and proposed monitoring well locations and direct comments or questions to Scott MacEwen at (703) 471-6405, extension 4332.

Sincerely,

CH2M HILL

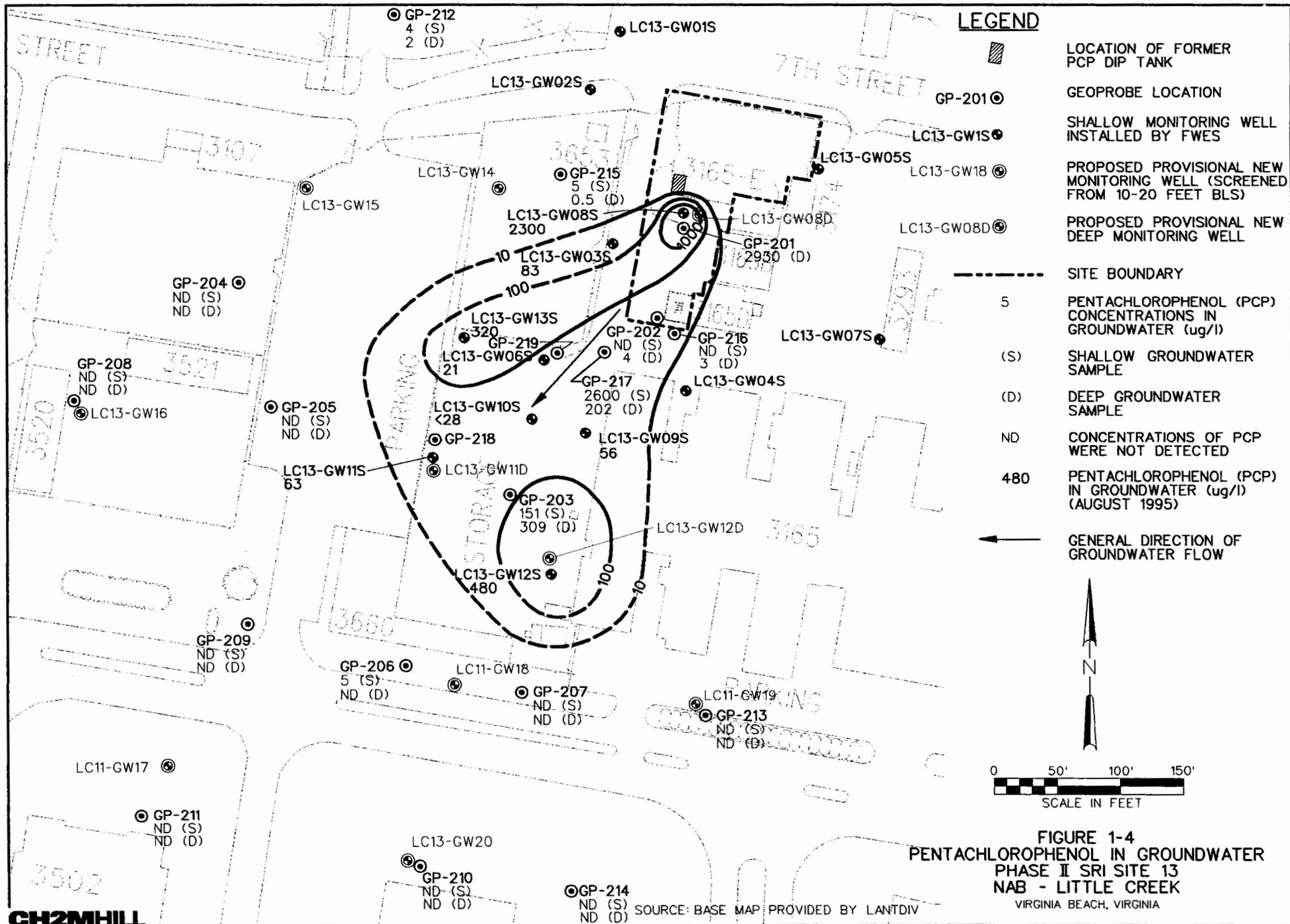


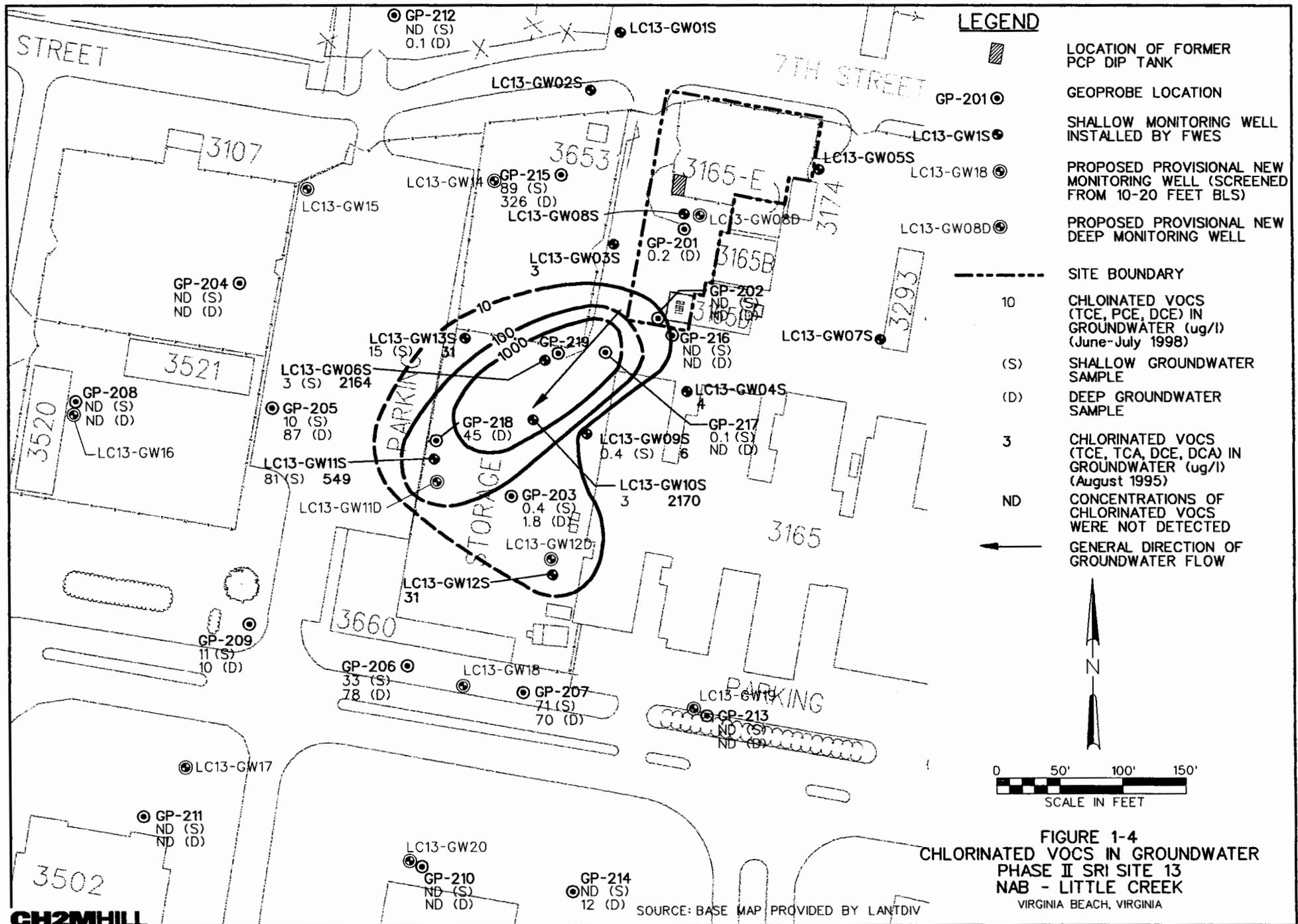
Angelique Errett/WDC  
PROJECT HYDROGEOLOGIST

Enclosure

- cc: Ms. Kelly Greaser/NAB Little Creek (8 copies)  
Mr. Bruce Beach/USEPA Region III (2 copies)  
Mr. Robert Weld/VDEQ (2 copies)  
Ms. Lee Anne Rapp/LANTDIV Code 18312 (cover letter only)  
Mr. Scott MacEwen/CH2M HILL  
Mr. Doug Dronfield/CH2M HILL







**Table 1.1**  
**Historic Groundwater Concentrations of 1,1-DCE and TCE**  
**Site 11**  
**NAB Little Creek**

| Contaminant:                  |                       | 1,1-DCE Concentration (ppb) |           |           |
|-------------------------------|-----------------------|-----------------------------|-----------|-----------|
| Well:                         |                       | LC11-GW01                   | LC11-GW02 | LC11-GW03 |
| Screened Interval: (feet bls) |                       | 8-18                        | 4-14      | 9-19      |
| Date/Source                   | June 1986 / RVS       | 34                          | < 5       | < 5       |
|                               | November 1990 / IRI   | 7                           | <0.1      | <0.1      |
|                               | July 1, 1993 / RI/FS  | 15                          | ND        | ND        |
|                               | May 1996 / GMR 1      | 21                          | ND        | ND        |
|                               | December 1996 / GMR 2 | 5 J                         | ND        | ND        |

| Contaminant:                  |                       | TCE Concentration (ppb) |           |           |
|-------------------------------|-----------------------|-------------------------|-----------|-----------|
| Well:                         |                       | LC11-GW01               | LC11-GW02 | LC11-GW03 |
| Screened Interval: (feet bls) |                       | 8-18                    | 4-14      | 9-19      |
| Date/Source                   | June 1986 / RVS       | 490                     | < 5       | < 5       |
|                               | November 1990 / IRI   | 57                      | <0.1      | <0.1      |
|                               | July 1, 1993 / RI/FS  | 120                     | ND        | ND        |
|                               | May 1996 / GMR 1      | 250                     | ND        | ND        |
|                               | December 1996 / GMR 2 | 100                     | ND        | ND        |

-- = no data available

ND Not detected

*RVS - Final Progress Report: Round 1 Verification Step; CH2M HILL; October 1986*

*IRI - Interim Remedial Investigation; Ebasco Environmental; November 1991*

*RI/FS - Remedial Investigation/Feasibility Study; Foster Wheeler Environmental Services; November 1994*

*Phase I SRI - Draft Supplemental Remedial Investigation; Foster Wheeler Environmental Services; January 1996*

*Onsite Lab - Onsite Groundwater Sampling; CH2M HILL; July 1998*

*GMR 1 - Groundwater Monitoring Round 1; Foster Wheeler Environmental Services; May 1996*

*GMR 2 - Groundwater Monitoring Round 2; CH2M HILL; December 1996*

**Table 1.2**  
**Historic Groundwater Concentrations of 1,1-DCE and TCE**  
**Site 13**  
**NAB Little Creek**

| Contaminant:                  |                           | 1,1-DCE Concentration (ppb) |           |           |           |           |           |           |           |           |           |           |           |  |
|-------------------------------|---------------------------|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| Well:                         | LC13-GW01                 | LC13-GW02                   | LC13-GW03 | LC13-GW04 | LC13-GW05 | LC13-GW06 | LC13-GW07 | LC13-GW08 | LC13-GW09 | LC13-GW10 | LC13-GW11 | LC13-GW12 | LC13-GW13 |  |
| Screened Interval: (feet bls) | 6-16                      | 6-16                        | 6-16      | 6-16      | 5-15      | 3-13      | 3-13      | 3-13      | 2-12      | 2-17      | 2-12      | 2-12      | 2-12      |  |
| Date/Source                   | June 1986 / RVS           | --                          | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |  |
|                               | 1990 / IRI                | --                          | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |  |
|                               | July 29, 1993 / RI/FS     | --                          | --        | ND        | ND        | ND        | 7 J       | ND        | ND        | ND        | --        | --        | --        |  |
|                               | August 1995 / Phase I SRI | --                          | < 10      | < 10      | < 10      | < 10      | 3 J       | < 10      | < 10      | < 10      | 2 J       | < 10      | < 10      |  |
|                               | July 1998 / Onsite Lab    | --                          | --        | --        | --        | --        | < 1       | --        | --        | < 1       | < 1       | < 1       | < 1       |  |

| Contaminant:                  |                           | TCE Concentration (ppb) |           |           |           |           |           |           |           |           |           |           |           |  |
|-------------------------------|---------------------------|-------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| Well:                         | LC13-GW01                 | LC13-GW02               | LC13-GW03 | LC13-GW04 | LC13-GW05 | LC13-GW06 | LC13-GW07 | LC13-GW08 | LC13-GW09 | LC13-GW10 | LC13-GW11 | LC13-GW12 | LC13-GW13 |  |
| Screened Interval: (feet bls) | 6-16                      | 6-16                    | 6-16      | 6-16      | 5-15      | 3-13      | 3-13      | 3-13      | 2-12      | 2-17      | 2-12      | 2-12      | 2-12      |  |
| Date/Source                   | June 1986 / RVS           | 8.5                     | < 5       | 7.7       | 16        | 15        | --        | --        | --        | --        | --        | --        | --        |  |
|                               | 1990 / IRI                | <5                      | < 5       | < 5       | 4 J       | < 5       | --        | --        | --        | --        | --        | --        | --        |  |
|                               | July 29, 1993 / RI/FS     | --                      | --        | 2 J       | 5 J       | 1 J       | --        | 1 J       | ND        | ND        | --        | --        | --        |  |
|                               | August 1995 / Phase I SRI | --                      | < 10      | < 10      | 2 J       | 2 J       | 470 D     | <10       | <10       | 1 J       | 570 D     | 130       | 4 J       |  |
|                               | July 1998 / Onsite Lab    | --                      | --        | --        | --        | --        | 0.46      | --        | --        | 0.16      | 1.51      | 28.7 J    | --        |  |

-- = no data available  
 ND Not detected  
 J = Indicates an estimated value  
 D = Indicates sample is diluted

FPR - Final Progress Report: Round 1 Verification Step; CH2M HILL; October 1986  
 IRI - Interim Remedial Investigation; Ebasco Environmental, November 1991  
 RI/FS - Remedial Investigation/Feasibility Study; Foster Wheeler Environmental Services; November 1994  
 Phase I SRI - Draft Supplemental Remedial Investigation; Foster Wheeler Environmental Services; January 1996  
 Onsite Lab - Onsite Groundwater Sampling; CH2M HILL; July 1998

**Table 1.3  
Historic Groundwater Concentrations of PCP  
Site 13  
NAB Little Creek**

| Contaminant:                  |                           | PCP (ppb) |           |           |           |           |           |           |           |           |           |           |           |
|-------------------------------|---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Well:                         | LC13-GW01                 | LC13-GW02 | LC13-GW03 | LC13-GW04 | LC13-GW05 | LC13-GW06 | LC13-GW07 | LC13-GW08 | LC13-GW09 | LC13-GW10 | LC13-GW11 | LC13-GW12 | LC13-GW13 |
| Screened Interval (feet bls): | 6-16                      | 6-16      | 6-16      | 6-16      | 5-15      | 3-13      | 3-13      | 3-13      | 2-12      | 2-17      | 2-12      | 2-12      | 2-12      |
| Date/Source                   | June 1986 / FPR           | <10       | 55        | 17        | 8.1       | <10       | --        | --        | --        | --        | --        | --        | --        |
|                               | 1990 / IRI                | < 50      | 130       | < 50      | < 50      | < 50      | --        | --        | --        | --        | --        | --        | --        |
|                               | July 29, 1993 / RI/FS     | --        | --        | 32        | ND        | ND        | 20 J      | ND        | 1,700     | --        | --        | --        | --        |
|                               | August 1995 / Phase I SRI | --        | <26       | 83        | --        | <27       | 21 J      | <26       | 2300 D    | 56        | <28       | 63        | 480 D     |
|                               | July 1998 / Onsite Lab    | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        | --        |

-- = no data available

ND Not detected

J = Indicates an estimated value

D = Indicates sample is diluted

*FPR - Final Progress Report: Round 1 Verification Step; CH2M HILL; October 1986*

*IRI - Interim Remedial Investigation; Ebasco Environmental; November 1991*

*RI/FS - Remedial Investigation/Feasibility Study; Foster Wheeler Environmental Services; November 1994*

*Phase I SRI - Draft Supplemental Remedial Investigation; Foster Wheeler Environmental Services; January 1996*

*Onsite Lab - Onsite Groundwater Sampling; CH2M HILL; July 1998*

Table 1. Site 11 Onsite Geoprobe Groundwater Sampling Results - Chlorinated VOCs

| Sample Location and Sample Number | Screen Depth (feet) | Chlorinated VOCs   |                                  |                                |                 |                   | Total VOCs |
|-----------------------------------|---------------------|--------------------|----------------------------------|--------------------------------|-----------------|-------------------|------------|
|                                   |                     | 1,1-Dichloroethene | <i>trans</i> -1,2-Dichloroethene | <i>cis</i> -1,2-Dichloroethene | Trichloroethene | Tetrachloroethene |            |
| LC11-GP201-10                     | 17-21               | 82.8 E             | ND                               | 5.7                            | 591 E           | ND                | 679.5      |
| LC11-GP202-05                     | 10-14               | ND                 | ND                               | ND                             | 0.46            | ND                | 0.46       |
| LC11-GP202-10                     | 17-21               | ND                 | 12.3                             | ND                             | 13.6 E          | ND                | 25.9       |
| LC11-GP203-05                     | 8-11                | ND                 | ND                               | ND                             | ND              | ND                | ND         |
| LC11-GP203-10                     | 18-21               | 52.9 E             | ND                               | ND                             | 184 E           | ND                | 236.9      |
| LC11-GP204-05                     | 8-12                | 3.83               | ND                               | ND                             | ND              | ND                | 3.83       |
| LC11-GP204-10                     | 17-21               | 406 E              | ND                               | ND                             | 1621 E          | ND                | 2027       |
| LC11-GP205-05                     | 8-12                | ND                 | ND                               | ND                             | ND              | ND                | ND         |
| LC11-GP205-10                     | 17-21               | 113 E              | ND                               | 8.76                           | 1877 E          | 0.93              | 1999.69    |
| LC11-GP206-10                     | 17-21               | 357 E              | ND                               | ND                             | 1610 E          | 1.77              | 1968.77    |
| LC11-GP207-05                     | 8-12                | ND                 | ND                               | ND                             | ND              | ND                | ND         |
| LC11-GP207-10                     | 17-21               | 9.75               | ND                               | ND                             | 25.9            | ND                | 35.65      |
| LC11-GP208-10                     | 17-21               | ND                 | ND                               | ND                             | 0.5             | ND                | 0.5        |
| LC11-GP209-10                     | 17-21               | 8.4                | ND                               | ND                             | 9.87 E          | ND                | 18.27      |
| LC11-GP210-10                     | 17-21               | 6.05               | ND                               | 2.54                           | ND              | ND                | 8.59       |
| LC11-GP211-05                     | 8-12                | ND                 | ND                               | ND                             | ND              | ND                | ND         |
| LC11-GP211-10                     | 17-21               | 24.9 E             | ND                               | ND                             | 28.3 E          | ND                | 53.2       |
| LC11-GP212-05                     | 8-12                | ND                 | ND                               | ND                             | 0.68            | ND                | 0.68       |
| LC11-GP212-10                     | 17-21               | 14.5               | ND                               | ND                             | 20.3 E          | ND                | 34.8       |
| LC11-GP213-05                     | 8-12                | ND                 | ND                               | ND                             | ND              | ND                | ND         |
| LC11-GP213-10                     | 17-21               | ND                 | ND                               | 83.1 E                         | 48.9 E          | ND                | 132        |
| LC11-GP214-05                     | 8-12                | ND                 | ND                               | ND                             | ND              | ND                | ND         |
| LC11-GP214-10                     | 17-21               | ND                 | ND                               | ND                             | ND              | ND                | ND         |
| LC11-GP215-10                     | 17-21               | ND                 | ND                               | ND                             | ND              | 0.1               | 0.1        |
| LC11-GP216-10                     | 17-21               | ND                 | ND                               | ND                             | 12.5 E          | 0.37              | 12.87      |
| LC11-GP217-10                     | 17-21               | 62.2 E             | ND                               | ND                             | 68.9 E          | ND                | 131.1      |

E - quantified value exceeded linear calibration range and true value may be higher

Table 1. Site 13 Onsite Geoprobe Groundwater Sampling Results - Chlorinated VOCs

| Sample Location<br>and Sample Number | Screen Depth (feet) | Chlorinated VOCs   |                          |                        |                 |                   |                                 |
|--------------------------------------|---------------------|--------------------|--------------------------|------------------------|-----------------|-------------------|---------------------------------|
|                                      |                     | 1,1-Dichloroethene | trans-1,2-Dichloroethene | cis-1,2-Dichloroethene | Trichloroethene | Tetrachloroethene | Total VOCs                      |
| LC13-GP201-10                        | 17-21               | ND                 | ND                       | ND                     | 0.23            | ND                | 0.23                            |
| LC13-GP202-05                        | 8-12                | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP202-10                        | 17-21               | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP203-05                        | 8-12                | ND                 | ND                       | ND                     | 0.22            | 0.22              | 0.4                             |
| LC13-GP203-10                        | 17-21               | ND                 | ND                       | ND                     | 0.45            | 1.35              | 1.8                             |
| LC13-GP204-05                        | 8-12                | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP204-10                        | 17-21               | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP205-05                        | 8-12                | 7.15               | ND                       | ND                     | 3.12            | ND                | 10.27                           |
| LC13-GP205-10                        | 17-21               | 16.2               | ND                       | ND                     | 51.3 E          | 19.3 E            | 86.8                            |
| LC13-GP206-05                        | 8-12                | 17.9               | ND                       | ND                     | 4.36            | 10.4 E            | 32.66                           |
| LC13-GP206-10                        | 17-21               | 12.9               | ND                       | ND                     | 43.6 E          | 21.7 E            | 78.2                            |
| LC13-GP207-05                        | 8-12                | 5.6                | ND                       | ND                     | 43.6 E          | 21.7 E            | 70.9                            |
| LC13-GP207-10                        | 17-21               | 33.9 E             | ND                       | ND                     | 22.3 E          | 13.9 E            | 70.1                            |
| LC13-GP208-05                        | 8-12                | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP208-10                        | 17-21               | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP209-05                        | 8-12                | 9.99               | ND                       | ND                     | 0.74            | ND                | 10.73                           |
| LC13-GP209-10                        | 17-21               | 9.59               | ND                       | ND                     | 0.77            | ND                | 10.36                           |
| LC13-GP210-05                        | 8-12                | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP210-10                        | 17-21               | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP211-05                        | 8-12                | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP211-10                        | 17-21               | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP212-05                        | 8-12                | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP212-10                        | 17-21               | ND                 | ND                       | ND                     | 0.13            | ND                | 0.13                            |
| LC13-GP213-05                        | 10-14               | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP213-10                        | 17-21               | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP214-05                        | 10-14               | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP214-10                        | 17-21               | ND                 | ND                       | 11.6                   | ND              | ND                | 11.6                            |
| LC13-GP215-05                        | 8-12                | ND                 | ND                       | 15.5                   | 51.2 E          | 22.2 E            | 88.9                            |
| LC13-GP215-10                        | 17-21               | 4.75               | ND                       | ND                     | 321 E           | 0.55              | 326.3                           |
| LC13-GP216-05                        | 8-12                | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP216-10                        | 17-21               | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP217-05                        | 8-12                | ND                 | ND                       | ND                     | 0.13            | ND                | 0.13                            |
| LC13-GP217-10                        | 17-21               | ND                 | ND                       | ND                     | ND              | ND                | ND                              |
| LC13-GP218-10                        | 17-21               |                    |                          |                        |                 |                   | only sent to offsite laboratory |
| LC13-GW06S                           | 3.4 - 13.4          | ND                 | ND                       | 2.04                   | 0.46            | 0.51              | 3.01                            |
| LC13-GW09S                           | 2-12                | ND                 | ND                       | ND                     | 0.16            | 0.21              | 0.37                            |
| LC13-GW10S                           | 2-17                | ND                 | ND                       | ND                     | 1.51            | 1.76              | 3.27                            |
| LC13-GW11S                           | 2-12                | ND                 | ND                       | 45.1 E                 | 28.7 E          | 7.02 E            | 80.82                           |
| LC13-GW13S                           | 2-12                | ND                 | ND                       | 6.1                    | 3.73 E          | 4.66 E            | 14.49                           |

E - quantified value exceeded linear calibration range and true value may be higher

**Table 1. Site 13 Onsite Geoprobe Groundwater Sampling Results - Pentachlorophenol**

| Sample Location and Sample Number | Screen Depth (feet) | Pentachlorophenol (ppb)  |
|-----------------------------------|---------------------|--------------------------|
| LC13-GP201-10                     | 17-21               | 2930                     |
| LC13-GP202-05                     | 8-12                | ND                       |
| LC13-GP202-10                     | 17-21               | 4.03                     |
| LC13-GP203-05                     | 8-12                | 151                      |
| LC13-GP203-10                     | 17-21               | 309                      |
| LC13-GP204-05                     | 8-12                | ND                       |
| LC13-GP204-10                     | 17-21               | ND                       |
| LC13-GP205-05                     | 8-12                | ND                       |
| LC13-GP205-10                     | 17-21               | ND                       |
| LC13-GP206-05                     | 8-12                | 5.3                      |
| LC13-GP20610                      | 17-21               | ND                       |
| LC13-GP207-05                     | 8-12                | ND                       |
| LC13-GP207-10                     | 17-21               | ND                       |
| LC13-GP208-05                     | 8-12                | ND                       |
| LC13-GP208-10                     | 17-21               | ND                       |
| LC13-GP209-05                     | 8-12                | ND                       |
| LC13-GP209-10                     | 17-21               | ND                       |
| LC13-GP210-05                     | 8-12                | ND                       |
| LC13-GP210-10                     | 17-21               | ND                       |
| LC13-GP211-05                     | 8-12                | ND                       |
| LC13-GP211-10                     | 17-21               | ND                       |
| LC13-GP212-05                     | 8-12                | 3.89                     |
| LC13-GP212-10                     | 17-21               | 1.72                     |
| LC13-GP213-05                     | 10-14               | ND                       |
| LC13-GP213-10                     | 17-21               | ND                       |
| LC13-GP214-05                     | 10-14               | ND                       |
| LC13-GP214-10                     | 17-21               | ND                       |
| LC13-GP215-05                     | 8-12                | 5.06                     |
| LC13-GP215-10                     | 17-21               | 0.54 J                   |
| LC13-GP216-05                     | 8-12                | ND                       |
| LC13-GP216-10                     | 17-21               | 3.35                     |
| LC13-GP217-05                     | 8-12                | 2600                     |
| LC13-GP217-10                     | 17-21               | 202                      |
| LC13-GP218-10                     | 17-21               | only sent to offsite lab |

J - result below practical quantitation limit

ND - non-detectable concentration