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NAWC WARMINSTER
5090.3a

**Brown & Root Environmental**
A Division of Halliburton NUS Corporation

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C-49-10-6-065

October 8, 1996

Project Number 1412

Mr. Lonnie Monaco, Code 1823
U.S. Department of the Navy
Naval Facilities Engineering Company
Northern Division, Mail Stop 82
10 Industrial Highway
Lester, Pennsylvania 19113-2090

SUBJECT: Technical Memorandum
Site 4 Removal Action
Trench 0 Verification Sampling Results

Dear Mr. Monaco:

The following summarizes the results of the verification sampling performed to date for Trench 0 during the Site 4 Removal Action. The entire trench has not been excavated/sampled, due to the present usage of the western portion of the trench area for equipment operations associated with the Site 4 removal action. A total of 7 samples have been taken from the trench to date, as shown in the attached sketch map (samples TR00-01 through TR00-07). No potential hot spot areas were identified, however 2 of the samples taken were analyzed for the full suite of analytical parameters (TCL volatiles and semivolatiles, TAL metals, and pesticides/PCBs) as part of the overall sampling strategy of analyzing 20% of the samples for full TCL/TAL parameters. The remaining samples were analyzed for the indicator parameters, including purgeable halocarbons, PAHs, PCBs, and thallium. Raw analytical data from the lab is attached to this memo.

For the volatile organics analyses (purgeable halocarbons and TCL volatiles), there were no positive detections of any VOCs, thus no actions are required based on the VOC results.

No PAHs or pesticides were detected in any of the samples, including both target PAHs and PAHs not originally included as target compounds, thus no actions are required due to PAHs.

There were no positive detections of any pesticides. The single detection of PCBs (0.14 mg/kg in sample TR00-01) was well below the target concentration of 1.6 mg/kg, thus no actions are needed due to pesticide or PCB levels.

Thallium detections ranged up to 2.1 mg/kg, well below the target concentration of 2.9 mg/kg for this compound. For the remaining metals results, the positive detections were screened against NAWC background concentrations, given in Table 2. The metals concentrations that exceeded background (cobalt, selenium, and sodium) were compared against the calculated target concentrations (Table 1). There were no exceedances of target concentrations for these metals, thus no actions are required due to metals levels.

C-49-10-6-065



Based on the analytical results, there were no exceedances of target concentrations in any of the Trench 0 samples obtained to date. As a result of this absence of any indicators of residual contamination, the currently excavated/sampled portion of Trench 0 should be suitable for backfilling without any further soil removal.

If you have any questions regarding the above information or would like to discuss it further, please call me at (412) 921-8778.

Sincerely yours,

Jeffrey P. Orient, P.G.
Project Manager

JPO/sic

Attachments

c: T. Ames
J. Dale
S. Lehman
D. Kennedy
D. Ostrauskas
G. Glenn
N. Teamerson
File 1412

# TABLES

TABLE 1

TARGET CLEAN UP CONCENTRATIONS

| | | PADEP (1) | RISK-BASED (2)(4) | GROUNDWATER PROTECTION (3)(4) | MINIMUM (4) |
|---|---|---|---|---|---|
| | | (mg/kg) | (mg/kg) | (mg/kg) | (mg/kg) |
| Benzo(a)anthracene | | 6 | 17 | 1.5 | 1.5 |
| Benzo(b)fluoranthene | | 6 | 17 | 4.5 | 4.5 |
| Benzo(k)fluoranthene | | NA | 170 | 45 | 45 |
| Benzo(ghi)perylene | | 600 | NA | 96000 | 500 |
| Benzo(a)pyrene | | 0.6 | 1.7 | 82 | 0.6 |
| Acenaphthene | | 30 | 76000 | 630 | 30 |
| Acenaphthylene | | NA | NA | 160 | 160 |
| Anthracene | | 70 | 380000 | 13000 | 70 |
| Chrysene | | 500 | 1700 | 150 | 150 |
| Dibenzo(a,h)anthracene | | 0.8 | 1.7 | 1.4 | 0.6 |
| Fluoranthene | | 400 | 50400 | 6400 | 400 |
| Fluorene | | 40 | 50400 | 830 | 40 |
| Indeno(1,2,3,-cd)pyrene | | 6 | 17 | 13 | 6 |
| 2 Methylnaphthalene | | NA | NA | 140 | 140 |
| Naphthalene | | 8 | 50400 | 140 | 8 |
| Phenanthrene | | 80 | NA | 850 | 80 |
| Pyrene | | 300 | 38000 | 4600 | 300 |
| Acetone | | 0.03 | 130000 | 340 | 0.03 |
| Chlorobenzene | | 10 | 26000 | 3.6 | 3.6 |
| Methylene chloride | | 0.3 | 1700 | 0.46 | 0.3 |
| Aluminum | | NA | 1300000 | 3400 | 3400 |
| Antimony | | 30 | 504 | 5.4 | 5.4 |
| Arsenic | | 3 | 8.4 | 29 | 3 |
| Barium | | 5000 | 88000 | 1700 | 1700 |
| Beryllium | | 1 | 2.9 | 83 | 1 |
| Cadmium | | 20 | 630 | 7.5 | 7.5 |
| Calcium | | NA | NA | NA | NA |
| Chromium | | 10 | 6300 | 38 | 10 |
| Cobalt | | NA | 76000 | 202 | 202 |
| Copper | | 100 | 50400 | 120 | 100 |
| Iron | | NA | 380000 | 1010 | 1010 |
| Lead | | 200 | NA | 1.4 | 1.4 |
| Magnesium | | NA | NA | NA | NA |
| Manganese | | 400 | 29000 | 77 | 77 |
| Mercury | | 20 | 380 | 2.1 | 2.1 |
| Nickel | | 200 | 25000 | 130 | 130 |
| Potassium | | NA | NA | NA | NA |
| Selenium | | 50 | 6300 | 5.2 | 5.2 |
| Silver | | 400 | 6300 | 31 | 31 |
| Sodium | | NA | NA | NA | NA |
| Thallium | | 6 | 101 | 2.9 | 2.9 |
| Vanadium | | NA | 8800 | 5200 | 5200 |
| Zinc | | 1000 | 380000 | 14000 | 1000 |

FOOTNOTES

(1) Values presented are from the "Technical Manual, Pennsylvania's Land Recycling, Revison 1 to Appendix B2 (Statewide Human Health Standards for Soils)," 4/26/96.

(2) USEPA Region III Risk-Based Concentration Table, January-June 1996

(3) Three references: "Soil Screening Guidance: User's Guide", April 1996, "Aquatic Fate Process Data for Organic Priority Pollutants", USEPA, 1982 and the "Drinking Water Regulations and Health Advisories", February 1996 were used to obtain groundwater protection values

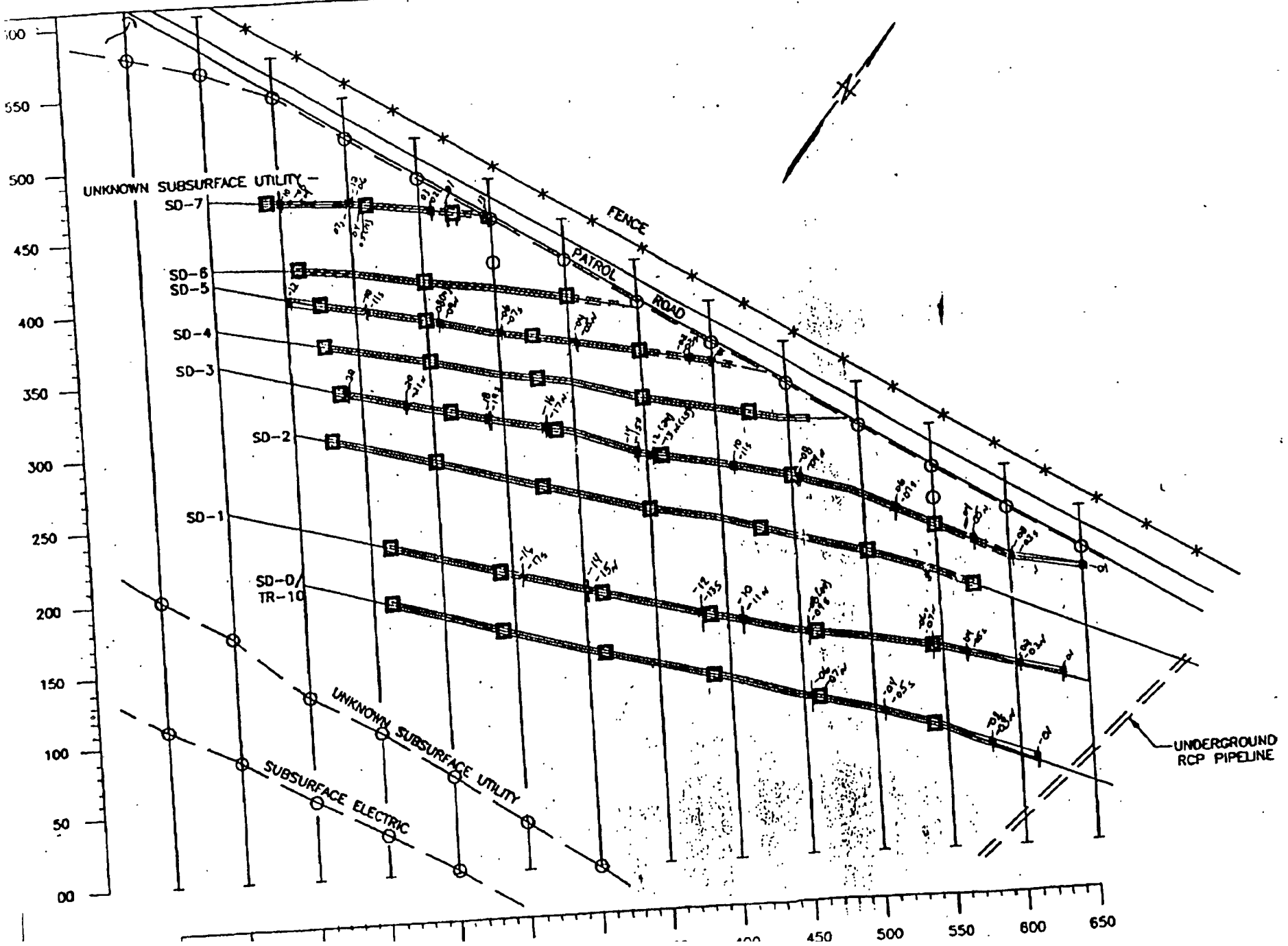
(4) Values were presented with two significant figures

TABLE 2
BACKGROUND SOIL SAMPLING RESULTS

| ANALYTE | AREA B/SITE 4 RANGE | ENERAL BACKGROUN RANGE | COMBINED RANGES |
|---|---|---|---|
| ALUMINUM | 4780 - 17500 | 11200 - 18100 | 4780 - 18100 |
| ANTIMONY | 13.6 - 13.6 | NA | 13.6 |
| ARSENIC | 0.28 - 6.1 | 3.7 - 12.1 | 0.28 - 12.1 |
| BARIUM | 34.6 - 225 | 34.1 - 115 | 34.1 - 225 |
| BERYLLIUM | 0.31 - 1.7 | 0.64 - 1.1 | 0.31 - 1.7 |
| CADMIUM | NOT DETECTED | NOT DETECTED | NA |
| CALCIUM | 240 - 1910 | 520 - 1100 | 240 - 1910 |
| CHROMIUM | 7.9 - 25 | 12 - 35.3 | 7.9 - 35.3 |
| COBALT | 1.6 - 21.1 | 6.2 - 14.4 | 1.6 - 21.1 |
| COPPER | 3.6 - 30.6 | 6.5 - 22.7 | 3.6 - 30.6 |
| IRON | 6980 - 28900 | 14400 - 39900 | 6980 - 39900 |
| LEAD | 1.6 - 23.5 | 6.7 - 96.5 | 1.6 - 96.5 |
| MAGNESIUM | 518 - 4960 | 1810 - 3080 | 518 - 4960 |
| MANGANESE | 30.9 - 2010 | 124 - 718 | 30.9 - 2010 |
| MERCURY | 0.25 - 0.25 | NOT DETECTED | 0.25 - 0.25 |
| NICKEL | 4.1 - 19.1 | 8.1 - 17.5 | 4.1 - 19.1 |
| POTASSIUM | 89.1 - 3050 | 465 - 1240 | 89.1 - 3050 |
| SELENIUM | NOT DETECTED | NOT DETECTED | NA |
| SILVER | NOT DETECTED | NA | NA |
| SODIUM | 55.2 - 86.7 | NOT DETECTED | 55.2 - 86.7 |
| THALLIUM | 0.42 - 0.42 | NA | 0.42 - 0.42 |
| VANADIUM | 15.7 - 37.9 | 18.1 - 45 | 15.7 - 45 |
| ZINC | 9.0 - 48.6 | 19.6 - 60 | 9.0 - 60 |
| CYANIDE | NOT DETECTED | NA | NA |

# SAMPLE LOCATION MAP

9-12-96




LEGE

SD-1

TREN

TRENC

SD-7

SD-6

SD-5

SD-4

SD-3

SD-2

SD-0/T

EXCE

TRENC

NEITHE

DEMOL

# CALCULATION WORKSHEET

Order No. 18116 (01-81)

PAGE _____ OF _____

| CLIENT | | JOB NUMBER | |
|---|---|---|---|
| SUBJECT | TR00 - Sample Locations | | |
| BASED ON | | DRAWING NUMBER | |
| BY | CHECKED BY | APPROVED BY | DATE |

| | Profile | Station |
|---|---|---|
| TR00-01 | 610 | 065 |
| TR00-02 | 580 | 075 |
| TR00-03 Nor. | 580 | 080 |
| TR00-04 | 507 | 100 |
| TR00-05 Sou. | 507 | 095 |
| TR00-06 | 456 | 115 |
| TR00-07 nor. | 456 | 120 |

# ANALYTICAL RESULTS
# TRENCH SAMPLES

| | | | | | | |
|---|---|---|---|---|---|---|
| Client Sample ID: | | W-TR00-01 | W-TR00-02 | W-TR00-03 | W-TR00-04 | W-TR00-05 |
| Job Number & Lab Sample ID: | | A96-4499 A6449901 | A96-4499 A6449902 | A96-4499 A6449903 | A96-4499 A6449904 | A96-4499 A6449905 |
| Sample Date: | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| TCLP Date/HT Met: | | | | | - - | - - |
| Extraction Date/HT Met: | | | | | - - | - - |
| Analysis Date/Ht Met: | | | | | 09/13/96 21:42 YES | 09/13/96 22:16 YES |
| Dilution Factor: | | | | | 1.0 | 1.0 |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8260 - TCL VOLATILE ORGANICS | | | | | | |
| SURROGATES | | | | | | |
| Toluene-D8 | 81-117 | NA | NA | NA | 103 | 104 |
| p-Bromofluorobenzene | 74-121 | NA | NA | NA | 96 | 97 |
| 1,2-Dichloroethane-D4 | 80-120 | NA | NA | NA | 95 | 85 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TCLP Date/HT Met: | | - - | - - | - - | | |
| Extraction Date/HT Met: | | - - | - - | - - | | |
| Analysis Date/Ht Met: | | 09/13/96 20:00 YES | 09/13/96 20:34 YES | 09/13/96 21:08 YES | | |
| Dilution Factor: | | 1.0 | 1.0 | 1.0 | | |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8260 - PURGEABLE HALOCARBONS | | | | | | |
| Bromodichloromethane | 5 | 5 U | 5 U | 5 U | NA | NA |
| Bromoform | 5 | 5 U | 5 U | 5 U | NA | NA |
| Bromomethane | 10 | 10 U | 10 U | 10 U | NA | NA |
| Carbon Tetrachloride | 5 | 5 U | 5 U | 5 U | NA | NA |
| Chlorobenzene | 5 | 5 U | 5 U | 5 U | NA | NA |
| Chloroethane | 10 | 10 U | 10 U | 10 U | NA | NA |
| 2-Chloroethylvinyl ether | 10 | 10 U | 10 U | 10 U | NA | NA |
| Chloroform | 5 | 5 U | 5 U | 5 U | NA | NA |
| Chloromethane | 10 | 10 U | 10 U | 10 U | NA | NA |
| Dibromochloromethane | 5 | 5 U | 5 U | 5 U | NA | NA |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | NA | NA |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | NA | NA |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | 5 U | NA | NA |
| 1,1-Dichloroethane | 5 | 5 U | 5 U | 5 U | NA | NA |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | 5 U | NA | NA |
| 1,1-Dichloroethene | 5 | 5 U | 5 U | 5 U | NA | NA |
| cis-1,2-Dichloroethene | 5 | 5 U | 5 U | 5 U | NA | NA |
| trans-1,2-Dichloroethene | 5 | 5 U | 5 U | 5 U | NA | NA |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | 5 U | NA | NA |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | NA | NA |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | 5 U | NA | NA |
| Methylene chloride | 5 | 3 BJ | 3 BJ | 3 BJ | NA | NA |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | 5 U | NA | NA |
| Tetrachloroethene | 5 | 5 U | 5 U | 5 U | NA | NA |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | 5 U | NA | NA |

* Indicates Result is Outside QC Limits
NA = Not Applicable



09/18/96 15:29
WU003/023

# ANALYTICAL RESULTS/CHRONOLOGY

| | | | | | | |
|---|---|---|---|---|---|---|
| Client Sample ID: | | W-TR00-01 | W-TR00-02 | W-TR00-03 | W-TR00-04 | W-TR00-05 |
| Job Number & Lab Sample ID: | | A96-4499 A6449901 | A96-4499 A6449902 | A96-4499 A6449903 | A96-4499 A6449904 | A96-4499 A6449905 |
| Sample Date: | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| TCLP Date/HT Met: | | - - | - - | - - | | |
| Extraction Date/HT Met: | | - - | - - | - - | | |
| Analysis Date/Ht Met: | | 09/13/96 20:00 YES | 09/13/96 20:34 YES | 09/13/96 21:08 YES | | |
| Dilution Factor: | | 1.0 | 1.0 | 1.0 | | |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8260 - PURGEABLE HALOCARBONS | | | | | | |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | 5 U | NA | NA |
| Trichloroethene | 5 | 5 U | 5 U | 5 U | NA | NA |
| Trichlorofluoromethane | 5 | 5 U | 5 U | 5 U | NA | NA |
| Vinyl chloride | 10 | 10 U | 10 U | 10 U | NA | NA |
| INTERNAL STANDARDS | | | | | | |
| Bromochloromethane | 50-200 | 103 | 106 | 117 | NA | NA |
| 1,4-Difluorobenzene | 50-200 | 99 | 103 | 110 | NA | NA |
| Chlorobenzene-D5 | 50-200 | 96 | 104 | 108 | NA | NA |
| SURROGATES | | | | | | |
| Toluene-D8 | 81-117 | 102 | 105 | 102 | NA | NA |
| p-Bromofluorobenzene | 74-121 | 95 | 95 | 101 | NA | NA |
| 1,2-Dichloroethane-D4 | 80-120 | 86 | 88 | 85 | NA | NA |

* Indicates Result is Outside QC Limits
NA = Not Applicable



08/18/96 15:30 ☎ 004/020

| | | | | | | |
|---|---|---|---|---|---|---|
| Client Sample ID: | | W-TR00-01 | W-TR00-02 | W-TR00-03 | W-TR00-04 | W-TR00-05 |
| Job Number & Lab Sampl ID: | | A96-4499 A6449901 | A96-4499 A6449902 | A96-4499 A6449903 | A96-4499 A6449904 | A96-4499 A6449905 |
| Sample Date: | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| TCLP Date/HT Met: | | | | | - - | - - |
| Extraction Date/HT Met: | | | | | - - | - - |
| Analysis Date/Ht Met: | | | | | 09/13/96 21:42 YES | 09/13/96 22:16 YES |
| Dilution Factor: | | | | | 1.0 | 1.0 |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8260 - TCL VOLATILE ORGANICS | | | | | | |
| Acetone | 10 | NA | NA | NA | 10 U | 10 U |
| Benzene | 5 | NA | NA | NA | 5 U | 5 U |
| Bromodichloromethane | 5 | NA | NA | NA | 5 U | 5 U |
| Bromoform | 5 | NA | NA | NA | 5 U | 5 U |
| Bromomethane | 10 | NA | NA | NA | 10 U | 10 U |
| 2-Butanone | 10 | NA | NA | NA | 10 U | 10 U |
| Carbon Disulfide | 5 | NA | NA | NA | 5 U | 5 U |
| Carbon Tetrachloride | 5 | NA | NA | NA | 5 U | 5 U |
| Chlorobenzene | 5 | NA | NA | NA | 5 U | 5 U |
| Chloroethane | 10 | NA | NA | NA | 10 U | 10 U |
| Chloroform | 5 | NA | NA | NA | 5 U | 5 U |
| Chloromethane | 10 | NA | NA | NA | 10 U | 10 U |
| Dibromochloromethane | 5 | NA | NA | NA | 5 U | 5 U |
| 1,1-Dichloroethane | 5 | NA | NA | NA | 5 U | 5 U |
| 1,2-Dichloroethane | 5 | NA | NA | NA | 5 U | 5 U |
| 1,1-Dichloroethene | 5 | NA | NA | NA | 5 U | 5 U |
| cis-1,2-Dichloroethene | 5 | NA | NA | NA | 5 U | 5 U |
| trans-1,2-Dichloroethene | 5 | NA | NA | NA | 5 U | 5 U |
| 1,2-Dichloropropane | 5 | NA | NA | NA | 5 U | 5 U |
| cis-1,3-Dichloropropene | 5 | NA | NA | NA | 5 U | 5 U |
| trans-1,3-Dichloropropene | 5 | NA | NA | NA | 5 U | 5 U |
| Ethylbenzene | 5 | NA | NA | NA | 5 U | 5 U |
| 2-Hexanone | 10 | NA | NA | NA | 10 U | 10 U |
| Methylene chloride | 5 | NA | NA | NA | 2 BJ | 3 BJ |
| 4-Methyl-2-pentanone | 10 | NA | NA | NA | 10 U | 10 U |
| Styrene | 5 | NA | NA | NA | 5 U | 5 U |
| 1,1,2,2-Tetrachloroethane | 5 | NA | NA | NA | 5 U | 5 U |
| Tetrachloroethene | 5 | NA | NA | NA | 5 U | 5 U |
| Toluene | 5 | NA | NA | NA | 5 U | 5 U |
| 1,1,1-Trichloroethane | 5 | NA | NA | NA | 5 U | 5 U |
| 1,1,2-Trichloroethane | 5 | NA | NA | NA | 5 U | 5 U |
| Trichloroethene | 5 | NA | NA | NA | 5 U | 5 U |
| Vinyl acetate | 10 | NA | NA | NA | 10 U | 10 U |
| Vinyl chloride | 10 | NA | NA | NA | 10 U | 10 U |
| Total Xylenes | 15 | NA | NA | NA | 15 U | 15 U |
| INTERNAL STANDARDS | | | | | | |
| Bromochl romethane | 50-200 | NA | NA | NA | 114 | 126 |
| 1,4-Difluorobenzene | 50-200 | NA | NA | NA | 115 | 126 |
| Chlorobenzene-D5 | 50-200 | NA | NA | NA | 104 | 122 |

* Indicates Result is Outside QC Limits
NA = Not Applicable



09/18/96 15:28

| | | | | | | |
|---|---|---|---|---|---|---|
| Client Sample ID: | | W-TR00-06 | W-TR00-07 | W-TR01-16 | W-TR01-17 | W-TR01-23 |
| Job Number & Lab Sample ID: | | A96-4499 A6449906 | A96-4499 A6449907 | A96-4499 A6449908 | A96-4499 A6449909 | A96-4499 A6449910 |
| Sample Date: | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| TCLP Date/HT Met: | | | | - - | - - | - - |
| Extraction Date/HT Met: | | | | - - | - - | - - |
| Analysis Date/Ht Met: | | | | 09/13/96 23:58 YES | 09/14/96 01:07 YES | 09/14/96 00:32 YES |
| Dilution Factor: | | | | 1.0 | 1.0 | 1.0 |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8260 - TCL VOLATILE ORGANICS | | | | | | |
| SURROGATES | | | | | | |
| Toluene-D8 | 81-117 | NA | NA | 100 | 101 | 104 |
| p-Bromofluorobenzene | 74-121 | NA | NA | 91 | 99 | 97 |
| 1,2-Dichloroethane-D4 | 80-120 | NA | NA | 89 | 88 | 88 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TCLP Date/HT Met: | | - - | - - | | | |
| Extraction Date/HT Met: | | - - | - - | | | |
| Analysis Date/Ht Met: | | 09/13/96 22:50 YES | 09/13/96 23:24 YES | | | |
| Dilution Factor: | | 1.0 | 1.0 | | | |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8260 - PURGEABLE HALOCARBONS | | | | | | |
| Bromodichloromethane | 5 | 5 U | 5 U | NA | NA | NA |
| Bromoform | 5 | 5 U | 5 U | NA | NA | NA |
| Bromomethane | 10 | 10 U | 10 U | NA | NA | NA |
| Carbon Tetrachloride | 5 | 5 U | 5 U | NA | NA | NA |
| Chlorobenzene | 5 | 5 U | 5 U | NA | NA | NA |
| Chloroethane | 10 | 10 U | 10 U | NA | NA | NA |
| 2-Chloroethylvinyl ether | 10 | 10 U | 10 U | NA | NA | NA |
| Chloroform | 5 | 5 U | 5 U | NA | NA | NA |
| Chloromethane | 10 | 10 U | 10 U | NA | NA | NA |
| Dibromochloromethane | 5 | 5 U | 5 U | NA | NA | NA |
| 1,2-Dichlorobenzene | 5 | 5 U | 5 U | NA | NA | NA |
| 1,3-Dichlorobenzene | 5 | 5 U | 5 U | NA | NA | NA |
| 1,4-Dichlorobenzene | 5 | 5 U | 5 U | NA | NA | NA |
| 1,1-Dichl roethane | 5 | 5 U | 5 U | NA | NA | NA |
| 1,2-Dichloroethane | 5 | 5 U | 5 U | NA | NA | NA |
| 1,1-Dichl roethene | 5 | 5 U | 5 U | NA | NA | NA |
| cis-1,2-Dichloroethene | 5 | 5 U | 5 U | NA | NA | NA |
| trans-1,2-Dichloroethene | 5 | 5 U | 5 U | NA | NA | NA |
| 1,2-Dichloropropane | 5 | 5 U | 5 U | NA | NA | NA |
| cis-1,3-Dichloropropene | 5 | 5 U | 5 U | NA | NA | NA |
| trans-1,3-Dichloropropene | 5 | 5 U | 5 U | NA | NA | NA |
| Methylene chloride | 5 | 3 BJ | 4 BJ | NA | NA | NA |
| 1,1,2,2-Tetrachloroethane | 5 | 5 U | 5 U | NA | NA | NA |
| Tetrachloroethene | 5 | 5 U | 5 U | NA | NA | NA |
| 1,1,1-Trichloroethane | 5 | 5 U | 5 U | NA | NA | NA |

* Indicates Result is Outside QC Limits
NA = Not Applicable



09/18/96 15:31 ☑ 008/023

| | | | | | | |
|---|---|---|---|---|---|---|
| Client Sample ID: | | W-TR00-06 | W-TR00-07 | W-TR01-16 | W-TR01-17 | W-TR01-23 |
| Job Number & Lab Sample ID: | | A96-4499 A6449906 | A96-4499 A6449907 | A96-4499 A6449908 | A96-4499 A6449909 | A96-4499 A6449910 |
| Sample Date: | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| TCLP Date/HT Met: | | - - | - - | | | |
| Extraction Date/HT Met: | | - - | - - | | | |
| Analysis Date/Ht Met: | | 09/13/96 22:50 YES | 09/13/96 23:24 YES | | | |
| Dilution Factor: | | 1.0 | 1.0 | | | |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8260 - PURGEABLE HALOCARBONS | | | | | | |
| 1,1,2-Trichloroethane | 5 | 5 U | 5 U | NA | NA | NA |
| Trichloroethene | 5 | 5 U | 5 U | NA | NA | NA |
| Trichlorofluoromethane | 5 | 5 U | 5 U | NA | NA | NA |
| Vinyl chl ride | 10 | 10 U | 10 U | NA | NA | NA |
| INTERNAL STANDARDS | | | | | | |
| Bromochloromethane | 50-200 | 136 | 120 | NA | NA | NA |
| 1,4-Difluorobenzene | 50-200 | 124 | 115 | NA | NA | NA |
| Chlorobenzene-D5 | 50-200 | 121 | 119 | NA | NA | NA |
| SURROGATES | | | | | | |
| Toluene-D8 | 81-117 | 102 | 100 | NA | NA | NA |
| p-Bromofluorobenzene | 74-121 | 93 | 96 | NA | NA | NA |
| 1,2-Dichloroethane-D4 | 80-120 | 86 | 88 | NA | NA | NA |

* Indicates Result is Outside QC Limits
NA = N t Applicable



09/18/96 15:32 007/023

| | | | | | | |
|---|---|---|---|---|---|---|
| Client Sample ID: | | W-TR00-01 | W-TR00-02 | W-TR00-03 | W-TR00-04 | W-TR00-05 |
| Job Number & Lab Sampl ID: | | A96-4499 A6449901 | A96-4499 A6449902 | A96-4499 A6449903 | A96-4499 A6449904 | A96-4499 A6449905 |
| Sample Date: | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| TCLP Date/HT Met: | | | | | - - | - - |
| Extraction Date/HT Met: | | | | | 09/14/96 00:00 YES | 09/14/96 00:00 YES |
| Analysis Date/Ht Met: | | | | | 09/15/96 11:50 YES | 09/15/96 12:36 YES |
| Dilution Factor: | | | | | 1.0 | 1.0 |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8270 - TCL SEMI-VOLATILE ORGANICS | | | | | | |
| 2,4,6-Tribromophenol | 19-122 | NA | NA | NA | 101 | 109 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TCLP Date/HT Met: | | - - | - - | - - | | |
| Extraction Date/HT Met: | | 09/14/96 00:00 YES | 09/14/96 00:00 YES | 09/14/96 00:00 YES | | |
| Analysis Date/Ht Met: | | 09/15/96 19:33 YES | 09/16/96 09:12 YES | 09/16/96 09:56 YES | | |
| Dilution Factor: | | 1.0 | 1.0 | 1.0 | | |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8270-HSL POLYNUCLEAR AROMATIC HYDROCARBONS | | | | | | |
| Acenaphthene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Acenaphthylene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Anthracene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Benzo(a)anthracene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Benzo(b)fluoranthene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Benzo(k)fluoranthene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Benzo(ghi)perylene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Benzo(a)pyrene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Chrysene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Dibenzo(a,h)anthracene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Fluoranthene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Fluorene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Indeno(1,2,3-cd)pyrene | 330 | 330 U | 330 U | 330 U | NA | NA |
| 2-Methylnaphthalene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Naphthalene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Phenanthrene | 330 | 330 U | 330 U | 330 U | NA | NA |
| Pyrene | 330 | 330 U | 330 U | 330 U | NA | NA |
| INTERNAL STANDARDS | | | | | | |
| 1,4-Dichlorobenzene-D4 | 50-200 | 135 | 108 | 107 | NA | NA |
| Naphthalene-D8 | 50-200 | 145 | 112 | 108 | NA | NA |
| Acenaphthene-D10 | 50-200 | 147 | 116 | 113 | NA | NA |
| Phenanthrene-D10 | 50-200 | 156 | 120 | 120 | NA | NA |
| Chrysene-D12 | 50-200 | 115 | 116 | 115 | NA | NA |
| Perylene-D12 | 50-200 | 106 | 131 | 128 | NA | NA |
| SURROGATES | | | | | | |
| Nitrobenzene-D5 | 23-120 | 59 | 58 | 62 | NA | NA |
| 2-Fluorobiphenyl | 30-115 | 70 | 68 | 75 | NA | NA |

* Indicates Result is Outside QC Limits
NA = Not Applicable



08/18/96 15:34 ☑ 010/023

| | | | | | | |
|---|---|---|---|---|---|---|
| Client Sampl ID: | | W-TR00-01 | W-TR00-02 | W-TR00-03 | W-TR00-04 | W-TR00-05 |
| Job Number & Lab Sample ID: | | A96-4499 A6449901 | A96-4499 A6449902 | A96-4499 A6449903 | A96-4499 A6449904 | A96-4499 A6449905 |
| Sample Date: | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| TCLP Date/HT Met: | | | | | - - | - - |
| Extraction Date/HT Met: | | | | | 09/14/96 00:00 YES | 09/14/96 00:00 YES |
| Analysis Date/Ht Met: | | | | | 09/15/96 11:50 YES | 09/15/96 12:36 YES |
| Dilution Factor: | | | | | 1.0 | 1.0 |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8270 - TCL SEMI-VOLATILE ORGANICS | | | | | | |
| Acenaphthene | 330 | NA | NA | NA | 330 U | 330 U |
| Acenaphthylene | 330 | NA | NA | NA | 330 U | 330 U |
| Anthracene | 330 | NA | NA | NA | 330 U | 330 U |
| Benzo(a)anthracene | 330 | NA | NA | NA | 330 U | 330 U |
| Benzo(b)fluoranthene | 330 | NA | NA | NA | 330 U | 330 U |
| Benzo(k)fluoranthene | 330 | NA | NA | NA | 330 U | 330 U |
| Benzo(ghi)perylene | 330 | NA | NA | NA | 330 U | 330 U |
| Benzo(a)pyrene | 330 | NA | NA | NA | 330 U | 330 U |
| Benzoic acid | 1600 | NA | NA | NA | 1600 U | 1600 U |
| Benzyl alcohol | 330 | NA | NA | NA | 330 U | 330 U |
| Bis(2-chloroethoxy) methane | 330 | NA | NA | NA | 330 U | 330 U |
| Bis(2-chloroethyl) ether | 330 | NA | NA | NA | 330 U | 330 U |
| Bis(2-chloroisopropyl) ether | 330 | NA | NA | NA | 330 U | 330 U |
| Bis(2-ethylhexyl) phthalate | 330 | NA | NA | NA | 330 U | 330 U |
| 4-Bromophenyl phenyl ether | 330 | NA | NA | NA | 330 U | 330 U |
| Butyl benzyl phthalate | 330 | NA | NA | NA | 330 U | 330 U |
| 4-Chloroaniline | 330 | NA | NA | NA | 330 U | 330 U |
| 4-Chloro-3-methylphenol | 330 | NA | NA | NA | 330 U | 330 U |
| 2-Chloronaphthalene | 330 | NA | NA | NA | 330 U | 330 U |
| 2-Chlorophenol | 330 | NA | NA | NA | 330 U | 330 U |
| 4-Chlorodiphenylether | 330 | NA | NA | NA | 330 U | 330 U |
| Chrysene | 330 | NA | NA | NA | 330 U | 330 U |
| Dibenzo(a,h)anthracene | 330 | NA | NA | NA | 330 U | 330 U |
| Dibenzofuran | 330 | NA | NA | NA | 330 U | 330 U |
| Di-n-butyl phthalate | 330 | NA | NA | NA | 330 U | 330 U |
| 1,2-Dichlorobenzene | 330 | NA | NA | NA | 330 U | 330 U |
| 1,3-Dichlorobenzene | 330 | NA | NA | NA | 330 U | 330 U |
| 1,4-Dichlorobenzene | 330 | NA | NA | NA | 330 U | 330 U |
| 3,3'-Dichlorobenzidine | 660 | NA | NA | NA | 660 U | 660 U |
| 2,4-Dichlorophenol | 330 | NA | NA | NA | 330 U | 330 U |
| Diethyl phthalate | 330 | NA | NA | NA | 330 U | 330 U |
| 2,4-Dimethylphenol | 330 | NA | NA | NA | 330 U | 330 U |
| Dimethyl phthalate | 330 | NA | NA | NA | 330 U | 330 U |
| 4,6-Dinitro-2-methylphenol | 1600 | NA | NA | NA | 1600 U | 1600 U |
| 2,4-Dinitrophenol | 1600 | NA | NA | NA | 1600 U | 1600 U |
| 2,4-Dinitrotoluene | 330 | NA | NA | NA | 330 U | 330 U |
| 2,6-Dinitrotoluene | 330 | NA | NA | NA | 330 U | 330 U |
| Di-n-octyl phthalate | 330 | NA | NA | NA | 330 U | 330 U |
| Fluoranthene | 330 | NA | NA | NA | 330 U | 330 U |

* Indicates Result is Outside QC Limits
NA = Not Applicable



09/18/96 15:32 008/023

| | | | | | | |
|---|---|---|---|---|---|---|
| Client Sample ID: | | W-TR00-01 | W-TR00-02 | W-TR00-03 | W-TR00-04 | W-TR00-05 |
| Job Number & Lab Sample ID: | | A96-4499 A6449901 | A96-4499 A6449902 | A96-4499 A6449903 | A96-4499 A6449904 | A96-4499 A6449905 |
| Sample Date: | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| TCLP Date/HT Met: | | | | | - - | - - |
| Extraction Date/HT Met: | | | | | 09/14/96 00:00 YES | 09/14/96 00:00 YES |
| Analysis Date/Ht Met: | | | | | 09/15/96 11:50 YES | 09/15/96 12:36 YES |
| Dilution Factor: | | | | | 1.0 | 1.0 |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8270 - TCL SEMI-VOLATILE ORGANICS | | | | | | |
| Fluorene | 330 | NA | NA | NA | 330 U | 330 U |
| Hexachlorobenzene | 330 | NA | NA | NA | 330 U | 330 U |
| Hexachlorobutadiene | 330 | NA | NA | NA | 330 U | 330 U |
| Hexachlorocyclopentadiene | 330 | NA | NA | NA | 330 U | 330 U |
| Hexachloroethane | 330 | NA | NA | NA | 330 U | 330 U |
| Indeno(1,2,3-cd)pyrene | 330 | NA | NA | NA | 330 U | 330 U |
| Isophorone | 330 | NA | NA | NA | 330 U | 330 U |
| 2-Methylnaphthalene | 330 | NA | NA | NA | 330 U | 330 U |
| 2-Methylphenol | 330 | NA | NA | NA | 330 U | 330 U |
| 4-Methylphenol | 330 | NA | NA | NA | 330 U | 330 U |
| Naphthalene | 330 | NA | NA | NA | 330 U | 330 U |
| 2-Nitroaniline | 1600 | NA | NA | NA | 1600 U | 1600 U |
| 3-Nitroaniline | 1600 | NA | NA | NA | 1600 U | 1600 U |
| 4-Nitroaniline | 1600 | NA | NA | NA | 1600 U | 1600 U |
| Nitrobenzene | 330 | NA | NA | NA | 330 U | 330 U |
| 2-Nitrophenol | 330 | NA | NA | NA | 330 U | 330 U |
| 4-Nitrophenol | 1600 | NA | NA | NA | 1600 U | 1600 U |
| N-nitrosodiphenylamine | 330 | NA | NA | NA | 330 U | 330 U |
| N-Nitroso-Di-n-propylamine | 330 | NA | NA | NA | 330 U | 330 U |
| Pentachlorophenol | 1600 | NA | NA | NA | 1600 U | 1600 U |
| Phenanthrene | 330 | NA | NA | NA | 330 U | 330 U |
| Phenol | 330 | NA | NA | NA | 330 U | 330 U |
| Pyrene | 330 | NA | NA | NA | 330 U | 330 U |
| 1,2,4-Trichlorobenzene | 330 | NA | NA | NA | 330 U | 330 U |
| 2,4,5-Trichlorophenol | 800 | NA | NA | NA | 800 U | 800 U |
| 2,4,6-Trichlorophenol | 330 | NA | NA | NA | 330 U | 330 U |
| INTERNAL STANDARDS | | | | | | |
| 1,4-Dichlorobenzene-D4 | 50-200 | NA | NA | NA | 116 | 113 |
| Naphthalene-D8 | 50-200 | NA | NA | NA | 122 | 117 |
| Acenaphthene-D10 | 50-200 | NA | NA | NA | 160 | 123 |
| Phenanthrene-D10 | 50-200 | NA | NA | NA | 154 | 124 |
| Chrysene-D12 | 50-200 | NA | NA | NA | 113 | 93 |
| Perylene-D12 | 50-200 | NA | NA | NA | 129 | 107 |
| SURROGATES | | | | | | |
| Nitrobenzene-D5 | 23-120 | NA | NA | NA | 63 | 64 |
| 2-Fluorobiphenyl | 30-115 | NA | NA | NA | 59 | 78 |
| Terphenyl-D14 | 18-137 | NA | NA | NA | 96 | 102 |
| Phenol-D5 | 24-113 | NA | NA | NA | 74 | 77 |
| 2-Fluorophenol | 25-121 | NA | NA | NA | 60 | 65 |

* Indicates Result is Outside QC Limits
NA = Not Applicable



09/18/96 15:33 009/023

| | | | | | | |
|---|---|---|---|---|---|---|
| Client Sample ID: | | W-TR00-06 | W-TR00-07 | W-TR01-16 | W-TR01-17 | W-TR01-23 |
| Job Number & Lab Sample ID: | | A96-4499 A6449906 | A96-4499 A6449907 | A96-4499 A6449908 | A96-4499 A6449909 | A96-4499 A6449910 |
| Sample Date: | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| TCLP Date/HT Met: | | | | - - | - - | - - |
| Extraction Date/HT Met: | | | | 09/14/96 00:00 YES | 09/14/96 00:00 YES | 09/14/96 00:00 YES |
| Analysis Date/Ht Met: | | | | 09/15/96 13:21 YES | 09/15/96 14:08 YES | 09/15/96 16:27 YES |
| Dilution Factor: | | | | 1.0 | 1.0 | 1.0 |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8270 - TCL SEMI-VOLATILE ORGANICS | | | | | | |
| 2,4,6-Tribromophenol | 19-122 | NA | NA | 113 | 102 | 103 |

| | | | | | | |
|---|---|---|---|---|---|---|
| TCLP Date/HT Met: | | - - | - - | | | |
| Extraction Date/HT Met: | | 09/14/96 00:00 YES | 09/14/96 00:00 YES | | | |
| Analysis Date/Ht Met: | | 09/16/96 10:42 YES | 09/16/96 11:27 YES | | | |
| Dilution Factor: | | 1.0 | 1.0 | | | |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8270-HSL POLYNUCLEAR AROMATIC HYDROCARBONS | | | | | | |
| Acenaphthene | 330 | 330 U | 330 U | NA | NA | NA |
| Acenaphthylene | 330 | 330 U | 330 U | NA | NA | NA |
| Anthracene | 330 | 330 U | 330 U | NA | NA | NA |
| Benzo(a)anthracene | 330 | 330 U | 330 U | NA | NA | NA |
| Benzo(b)fluoranthene | 330 | 330 U | 330 U | NA | NA | NA |
| Benzo(k)fluoranthene | 330 | 330 U | 330 U | NA | NA | NA |
| Benzo(ghi)perylene | 330 | 330 U | 330 U | NA | NA | NA |
| Benzo(a)pyrene | 330 | 330 U | 330 U | NA | NA | NA |
| Chrysene | 330 | 330 U | 330 U | NA | NA | NA |
| Dibenzo(a,h)anthracene | 330 | 330 U | 330 U | NA | NA | NA |
| Fluoranthene | 330 | 330 U | 330 U | NA | NA | NA |
| Fluorene | 330 | 330 U | 330 U | NA | NA | NA |
| Indeno(1,2,3-cd)pyrene | 330 | 330 U | 330 U | NA | NA | NA |
| 2-Methylnaphthalene | 330 | 330 U | 330 U | NA | NA | NA |
| Naphthalene | 330 | 330 U | 330 U | NA | NA | NA |
| Phenanthrene | 330 | 330 U | 330 U | NA | NA | NA |
| Pyrene | 330 | 330 U | 330 U | NA | NA | NA |
| INTERNAL STANDARDS | | | | | | |
| 1,4-Dichlorobenzene-D4 | 50-200 | 117 | 128 | NA | NA | NA |
| Naphthalene-D8 | 50-200 | 121 | 128 | NA | NA | NA |
| Acenaphthene-D10 | 50-200 | 120 | 125 | NA | NA | NA |
| Phenanthrene-D10 | 50-200 | 125 | 134 | NA | NA | NA |
| Chrysene-D12 | 50-200 | 116 | 124 | NA | NA | NA |
| Perylene-D12 | 50-200 | 131 | 138 | NA | NA | NA |
| SURROGATES | | | | | | |
| Nitrobenzene-D5 | 23-120 | 65 | 61 | NA | NA | NA |
| 2-Fluorobiphenyl | 30-115 | 77 | 78 | NA | NA | NA |

* Indicates Result is Outside QC Limits
NA = Not Applicable



09/18/96 15:37 014/023

| | | | | | | |
|---|---|---|---|---|---|---|
| Client Sample ID: | | W-TR00-01 | W-TR00-02 | W-TR00-03 | W-TR00-04 | W-TR00-05 |
| Job Number & Lab Sample ID: | | A96-4499 A6449901 | A96-4499 A6449902 | A96-4499 A6449903 | A96-4499 A6449904 | A96-4499 A6449905 |
| Sample Date: | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| TCLP Date/HT Met: | | - - | - - | - - | | |
| Extraction Date/HT Met: | | 09/14/96 00:00 YES | 09/14/96 00:00 YES | 09/14/96 00:00 YES | | |
| Analysis Date/Ht Met: | | 09/16/96 04:12 YES | 09/16/96 04:27 YES | 09/16/96 04:41 YES | | |
| Dilution Factor: | | 1.0 | 1.0 | 1.0 | | |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8080 - POLYCHLORINATED BIPHENYLS | | | | | | |
| Aroclor 1016 | 40 | 40 U | 40 U | 40 U | NA | NA |
| Aroclor 1221 | 80 | 80 U | 80 U | 80 U | NA | NA |
| Aroclor 1232 | 40 | 40 U | 40 U | 40 U | NA | NA |
| Aroclor 1242 | 40 | 40 U | 40 U | 40 U | NA | NA |
| Aroclor 1248 | 40 | 140 | 40 U | 40 U | NA | NA |
| Aroclor 1254 | 40 | 40 U | 40 U | 40 U | NA | NA |
| Aroclor 1260 | 40 | 40 U | 40 U | 40 U | NA | NA |
| SURROGATES | | | | | | |
| Tetrachloro-m-xylene | 27-132 | 82 | 70 | 64 | NA | NA |
| Decachlorobiphenyl | 58-150 | 98 | 76 | 72 | NA | NA |

| | | | | | | |
|---|---|---|---|---|---|---|
| TCLP Date/HT Met: | | | | | - - | - - |
| Extraction Date/HT Met: | | | | | 09/14/96 00:00 YES | 09/14/96 00:00 YES |
| Analysis Date/Ht Met: | | | | | 09/16/96 20:30 YES | 09/16/96 21:01 YES |
| Dilution Factor: | | | | | 1.0 | 1.0 |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8080 - TCL PESTICIDES/PCBS | | | | | | |
| Aldrin | 8.0 | NA | NA | NA | 8.0 U | 8.0 U |
| alpha-BHC | 8.0 | NA | NA | NA | 8.0 U | 8.0 U |
| beta-BHC | 8.0 | NA | NA | NA | 8.0 U | 8.0 U |
| gamma-BHC (Lindane) | 8.0 | NA | NA | NA | 8.0 U | 8.0 U |
| delta-BHC | 8.0 | NA | NA | NA | 8.0 U | 8.0 U |
| Chlordane | 80 | NA | NA | NA | 80 U | 80 U |
| 4,4'-DDD | 16 | NA | NA | NA | 16 U | 16 U |
| 4,4'-DDE | 16 | NA | NA | NA | 16 U | 16 U |
| 4,4'-DDT | 16 | NA | NA | NA | 16 U | 16 U |
| Dieldrin | 16 | NA | NA | NA | 16 U | 16 U |
| Endosulfan I | 16 | NA | NA | NA | 16 U | 16 U |
| Endosulfan II | 16 | NA | NA | NA | 16 U | 16 U |
| Endosulfan Sulfate | 16 | NA | NA | NA | 16 U | 16 U |
| Endrin | 16 | NA | NA | NA | 16 U | 16 U |
| Endrin aldehyde | 32 | NA | NA | NA | 32 U | 32 U |
| Heptachlor | 8.0 | NA | NA | NA | 8.0 U | 8.0 U |
| Heptachlor epoxide | 8.0 | NA | NA | NA | 8.0 U | 8.0 U |
| Methoxychlor | 80 | NA | NA | NA | 80 U | 80 U |
| Toxaphene | 160 | NA | NA | NA | 160 U | 160 U |

* Indicates Result is Outside QC Limits
NA = Not Applicable



09/18/96 15:38 ☎ 016/023

| | | | | | | |
|---|---|---|---|---|---|---|
| Client Sample ID: | | W-TR00-01 | W-TR00-02 | W-TR00-03 | W-TR00-04 | W-TR00-05 |
| Job Number & Lab Sample ID: | | A96-4499 A6449901 | A96-4499 A6449902 | A96-4499 A6449903 | A96-4499 A6449904 | A96-4499 A6449905 |
| Sample Date: | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| TCLP Date/HT Met: | | | | | - - | - - |
| Extraction Date/HT Met: | | | | | 09/14/96 00:00 YES | 09/14/96 00:00 YES |
| Analysis Date/Ht Met: | | | | | 09/16/96 20:30 YES | 09/16/96 21:01 YES |
| Dilution Factor: | | | | | 1.0 | 1.0 |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8080 - TCL PESTICIDES/PCBS | | | | | | |
| Aroclor 1016 | 40 | NA | NA | NA | 40 U | 40 U |
| Aroclor 1221 | 80 | NA | NA | NA | 80 U | 80 U |
| Aroclor 1232 | 40 | NA | NA | NA | 40 U | 40 U |
| Aroclor 1242 | 40 | NA | NA | NA | 40 U | 40 U |
| Aroclor 1248 | 40 | NA | NA | NA | 40 U | 40 U |
| Aroclor 1254 | 40 | NA | NA | NA | 40 U | 40 U |
| Aroclor 1260 | 40 | NA | NA | NA | 40 U | 40 U |
| SURROGATES | | | | | | |
| Tetrachloro-m-xylene | 27-132 | NA | NA | NA | 105 | 62 |
| Decachlorobiphenyl | 58-150 | NA | NA | NA | 127 | 75 |

* Indicates Result is Outside QC Limits
NA = Not Applicable



09/18/96 15:39 ☎ 017/023

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Client Sampl ID: | | W-TR00-06 | W-TR00-07 | W-TR01-16 | W-TR01-17 | W-TR01-23 |
| Job Number & Lab Sample ID: | | A96-4499 A6449906 | A96-4499 A6449907 | A96-4499 A6449908 | A96-4499 A6449909 | A96-4499 A6449910 |
| Sample Dat : | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| TCLP Date/HT Met: | | - - | - - | | | |
| Extraction Date/HT Met: | | 09/14/96 00:00 YES | 09/14/96 00:00 YES | | | |
| Analysis Date/Ht Met: | | 09/16/96 04:55 YES | 09/16/96 05:09 YES | | | |
| Dilution Factor: | | 1.0 | 1.0 | | | |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8080 - POLYCHLORINATED BIPHENYLS | | | | | | |
| Aroclor 1016 | 40 | 40 U | 40 U | NA | NA | NA |
| Aroclor 1221 | 80 | 80 U | 80 U | NA | NA | NA |
| Aroclor 1232 | 40 | 40 U | 40 U | NA | NA | NA |
| Aroclor 1242 | 40 | 40 U | 40 U | NA | NA | NA |
| Aroclor 1248 | 40 | 40 U | 40 U | NA | NA | NA |
| Aroclor 1254 | 40 | 40 U | 40 U | NA | NA | NA |
| Aroclor 1260 | 40 | 40 U | 40 U | NA | NA | NA |
| SURROGATES | | | | | | |
| Tetrachloro-m-xylene | 27-132 | 76 | 76 | NA | NA | NA |
| Decachlorobiphenyl | 58-150 | 85 | 84 | NA | NA | NA |

| | | | | | | |
|---|---|---|---|---|---|---|
| TCLP Date/HT Met: | | | | - - | - - | - - |
| Extraction Date/HT Met: | | | | 09/14/96 00:00 YES | 09/14/96 00:00 YES | 09/14/96 00:00 YES |
| Analysis Date/Ht Met: | | | | 09/16/96 21:33 YES | 09/16/96 22:05 YES | 09/16/96 23:40 YES |
| Dilution Factor: | | | | 1.0 | 1.0 | 1.0 |
| Analyte (UG/KG) | RL | Result | Result | Result | Result | Result |
| METHOD 8080 - TCL PESTICIDES/PCBS | | | | | | |
| Aldrin | 8.0 | NA | NA | 8.0 U | 8.0 U | 8.0 U |
| alpha-BHC | 8.0 | NA | NA | 8.0 U | 8.0 U | 8.0 U |
| beta-BHC | 8.0 | NA | NA | 8.0 U | 8.0 U | 8.0 U |
| gamma-BHC (Lindane) | 8.0 | NA | NA | 8.0 U | 8.0 U | 8.0 U |
| delta-BHC | 8.0 | NA | NA | 8.0 U | 8.0 U | 8.0 U |
| Chlordane | 80 | NA | NA | 80 U | 80 U | 80 U |
| 4,4'-DDD | 16 | NA | NA | 16 U | 16 U | 16 U |
| 4,4'-DDE | 16 | NA | NA | 16 U | 16 U | 16 U |
| 4,4'-DDT | 16 | NA | NA | 4.5 J | 16 U | 16 U |
| Dieldrin | 16 | NA | NA | 16 U | 16 U | 16 U |
| Endosulfan I | 16 | NA | NA | 16 U | 16 U | 16 U |
| Endosulfan II | 16 | NA | NA | 16 U | 16 U | 16 U |
| Endosulfan Sulfate | 16 | NA | NA | 16 U | 16 U | 16 U |
| Endrin | 16 | NA | NA | 16 U | 16 U | 16 U |
| Endrin aldehyde | 32 | NA | NA | 32 U | 32 U | 32 U |
| Heptachlor | 8.0 | NA | NA | 8.0 U | 8.0 U | 8.0 U |
| Heptachl r epoxide | 8.0 | NA | NA | 8.0 U | 8.0 U | 8.0 U |
| Methoxychlor | 80 | NA | NA | 80 U | 80 U | 80 U |
| Toxaphene | 160 | NA | NA | 160 U | 160 U | 160 U |

* Indicates Result is Outside QC Limits
NA = Not Applicable



09/18/96 15:40 P.03
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ANALYTICAL RESULTS



| Analyte | UNITS OF MEASURE | RL | Result | Result | Result | Result | Result |
|---|---|---|---|---|---|---|---|
| Client Sampl ID: | | | W-TR00-01 | W-TR00-02 | W-TR00-03 | W-TR00-04 | W-TR00-05 |
| Job Number & Lab Sample ID: | | | A96-4499 A6449901 | A96-4499 A6449902 | A96-4499 A6449903 | A96-4499 A6449904 | A96-4499 A6449905 |
| Sample Date: | | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| TOTAL METALS | | | | | | | |
| Thallium - Total | MG/KG | 0.36 | 2.1 | 1.2 | 1.2 | NA | NA |
| TOTAL HSL METALS | | | | | | | |
| Aluminum - Total | MG/KG | 0.77 | NA | NA | NA | 9550 | 10800 |
| Antimony - Total | MG/KG | 0.57 | NA | NA | NA | 0.65 U | 1.2 |
| Arsenic - Total | MG/KG | 0.28 | NA | NA | NA | 2.2 | 2.1 |
| Barium - Total | MG/KG | 0.024 | NA | NA | NA | 85.8 | 62.7 |
| Beryllium - Total | MG/KG | 0.010 | NA | NA | NA | 0.84 | 0.67 |
| Cadmium - Total | MG/KG | 0.021 | NA | NA | NA | 0.024 U | 0.024 U |
| Calcium - Total | MG/KG | 0.54 | NA | NA | NA | 1000 | 575 |
| Chromium - T tal | MG/KG | 0.26 | NA | NA | NA | 14.0 | 12.5 |
| Cobalt - Total | MG/KG | 0.12 | NA | NA | NA | 7.1 | 29.0 |
| Copper - Total | MG/KG | 0.087 | NA | NA | NA | 14.1 | 18.5 |
| Iron - Total | MG/KG | 2.4 | NA | NA | NA | 13600 | 16400 |
| Lead - Total | MG/KG | 0.13 | NA | NA | NA | 6.5 | 7.9 |
| Magnesium - Total | MG/KG | 0.87 | NA | NA | NA | 1450 | 1360 |
| Manganese - Total | MG/KG | 0.036 | NA | NA | NA | 533 | 1340 |
| Mercury - Total | MG/KG | 0.033 | NA | NA | NA | 0.038 U | 0.038 U |
| Nickel - Total | MG/KG | 0.25 | NA | NA | NA | 9.1 | 8.7 |
| Potassium - Total | MG/KG | 9.3 | NA | NA | NA | 533 | 505 |
| Selenium - Total | MG/KG | 0.28 | NA | NA | NA | 1.3 | 1.7 |
| Silver - Total | MG/KG | 0.25 | NA | NA | NA | 0.29 U | 0.29 U |
| Sodium - Total | MG/KG | 56.8 | NA | NA | NA | 138 | 164 |
| Thallium - Total | MG/KG | 0.36 | NA | NA | NA | 1.2 | 1.8 |
| Vanadium - Total | MG/KG | 0.087 | NA | NA | NA | 24.2 | 23.4 |
| Zinc - Total | MG/KG | 0.024 | NA | NA | NA | 22.9 | 20.1 |

* Indicates Result is Outside QC Limits
NA = Not Applicable



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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Client Sampl ID: | | | W-TR00-06 | W-TR00-07 | W-TR01-16 | W-TR01-17 | W-TR01-23 |
| Job Number & Lab Sample ID: | | | A96-4499 A6449906 | A96-4499 A6449907 | A96-4499 A6449908 | A96-4499 A6449909 | A96-4499 A6449910 |
| Sample Date: | | | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 | 09/12/96 |
| Analyte | UNITS OF MEASURE | RL | Result | Result | Result | Result | Result |
| TOTAL METALS | | | | | | | |
| Thallium - Total | MG/KG | 0.36 | 1.1 | 0.98 | NA | NA | NA |
| TOTAL HSL METALS | | | | | | | |
| Aluminum - Total | MG/KG | 0.77 | NA | NA | 15400 | 16600 | 15100 |
| Antimony - Total | MG/KG | 0.57 | NA | NA | 0.72 | 1.2 | 1.3 |
| Arsenic - Total | MG/KG | 0.28 | NA | NA | 2.8 | 2.2 | 4.3 |
| Barium - Total | MG/KG | 0.024 | NA | NA | 64.0 | 32.8 | 34.4 |
| Beryllium - Total | MG/KG | 0.010 | NA | NA | 0.78 | 0.68 | 0.67 |
| Cadmium - T tal | MG/KG | 0.021 | NA | NA | 0.026 U | 0.025 U | 0.024 U |
| Calcium - Total | MG/KG | 0.54 | NA | NA | 1160 | 596 | 474 |
| Chromium - Total | MG/KG | 0.26 | NA | NA | 22.3 | 21.3 | 20.6 |
| Cobalt - Total | MG/KG | 0.12 | NA | NA | 9.6 | 9.8 | 8.2 |
| Copper - Total | MG/KG | 0.087 | NA | NA | 32.0 | 42.7 | 40.4 |
| Iron - Total | MG/KG | 2.4 | NA | NA | 20600 | 19800 | 17800 |
| Lead - Total | MG/KG | 0.13 | NA | NA | 13.6 | 7.7 | 6.9 |
| Magnesium - Total | MG/KG | 0.87 | NA | NA | 2490 | 2410 | 2120 |
| Manganese - Total | MG/KG | 0.036 | NA | NA | 404 | 405 | 282 |
| Mercury - Total | MG/KG | 0.033 | NA | NA | 0.040 U | 0.039 U | 0.040 U |
| Nickel - Total | MG/KG | 0.25 | NA | NA | 12.2 | 12.7 | 11.9 |
| Potassium - Total | MG/KG | 9.3 | NA | NA | 1240 | 883 | 684 |
| Selenium - Total | MG/KG | 0.28 | NA | NA | 1.4 | 1.5 | 3.3 |
| Silver - Total | MG/KG | 0.25 | NA | NA | 0.30 U | 0.30 U | 0.29 U |
| Sodium - Total | MG/KG | 56.8 | NA | NA | 189 | 223 | 174 |
| Thallium - Total | MG/KG | 0.36 | NA | NA | 1.4 | 1.4 | 3.9 |
| Vanadium - Total | MG/KG | 0.087 | NA | NA | 35.0 | 33.5 | 32.2 |
| Zinc - Total | MG/KG | 0.024 | NA | NA | 44.4 | 42.5 | 28.0 |

* Indicates Result is Outside QC Limits
NA = Not Applicable