N65928.AR.001512
NTC ORLANDO
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# FOURTH QUARTER 2004 GROUNDWATER SAMPLING STUDY AREA 36 NW MAIN BASE NTC ORLANDO FL

3/1/2005

TERRAINE ENVIRONMENTAL

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# Fourth Quarter 2004

# GROUNDWATER SAMPLING

# STUDY AREA 36 – MAIN BASE

# Naval Training Center
# Orlando, Florida

## Southern Division
## Naval Facilities Engineering Command

**Contract Number: N62467-02-G-0352**

**Contract Task Order: 0004**

Prepared by:

TERRAINE
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March 2005

## SIGNATURE PAGE

We, the undersigned, do hereby affirm that the information contained in this report is accurate and correct to the best of our knowledge and belief.

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## ACRONYMS

| | |
|---|---|
| BGSV | Background Screening Values |
| bls | below land surface |
| °C | Degrees Celsius |
| CCI | CH2M HILL Constructors, Inc. |
| Cis-1, 2 -DCE | Cis-1, 2-dichloroethene |
| COC | Contaminant of Concern |
| CTO | Contract Task Order |
| DO | Dissolved Oxygen |
| EPA | Environmental Protection Agency |
| FDEP | Florida Department of Environmental Protection |
| FL-PRO | Florida Petroleum Residual Organic |
| GCTL | Groundwater Cleanup Target Levels |
| HLA | Harding Lawson Associates |
| IDW | Investigation Derived Waste |
| IRA | Interim Remedial Action |
| µg/L | micrograms per liter |
| mg/L | milligrams per liter |
| MEE | Methane, Ethane, and Ethene |
| mL/min | milliliters per minute |
| mS/cm | millisiemens per centimeter |
| mV | millivolts |
| NM | Not Measured |
| nM | nanomoles |
| nM/L | nanomoles per liter |
| NTC | Naval Training Center |
| NTU | Nephelometric Turbidity Units |
| OPT | Orlando Partnering Team |
| ORP | Oxidation-Reduction Potential |
| PAH | Polynuclear Aromatic Hydrocarbons |
| PCE | Tetrachloroethene |
| SA | Study Area |
| SI | Site Investigation |
| SU | Standard Unit |
| TCE | Trichloroethene |
| TERRAINE | Terraine, Inc. |
| TOC | Total Organic Compound |
| TPH | Total Petroleum Hydrocarbon |
| TRPH | Total Recoverable Petroleum Hydrocarbons |
| TtNUS | TetraTech NUS |
| VOC | Volatile Organic Compound |

# EXECUTIVE SUMMARY

## SCOPE

The scope of work for the 2004 year of groundwater monitoring at Study Area 36 (SA36) consists of four rounds of quarterly groundwater monitoring, including groundwater-level measurements, purging, and low-flow sampling. This groundwater monitoring report summarizes the field activities and sampling results and provides an evaluation of concentration trends for the groundwater data from the fourth quarter of sampling in 2004.

## NATURE AND EXTENT OF CONTAMINATION

In the shallow (A) zone, no contaminants of concern (COC) were noted above their respective groundwater cleanup target levels (GCTLs). In the Intermediate (B) zone, the GCTL for iron was exceeded at one well. No other COC was noted above the GCTL in the B zone. In the Deep (C) zone, trichloroethene (TCE) was detected above the screening value in groundwater sampled from monitoring well OLD-36-09CR. Tetrachloroethene (PCE) was detected above the screening value in groundwater sampled from monitoring well OLD-36-23CR. Dissolved iron was also detected above the GCTL at four of the six deep wells, OLD36-09CR, -18CR, 23CR, and -35CR.

## CONCLUSION & RECOMMENDATION

Based on the evaluation of the 4$^{th}$ quarter analytical results, and analytical data to date, the following is recommended for this site:

- Reduce sampling (VOCs) from a quarterly basis to a semi-annual basis.
- Reduce natural attenuation sampling to an annual basis.

# GROUNDWATER SAMPLING AT STUDY AREA 36
# NAVAL TRAINING CENTER, ORLANDO
# December 2004

| | |
|---|---|
| *PREPARED FOR:* | Ms. Barbara Nwokike - SOUTHDIV |
| *PREPARED BY:* | *TERRAINE, Inc.* - Environmental Services |
| *PERIOD OF PERFORMANCE:* | September 11, 2004 – December 6, 2004 |
| *FIELD TEAM:* | Karen Baer and Larry Wolski |
| *CONTRACT NUMBER:* | N62467-02-G-0352 |
| *TASK ORDER NUMBER:* | 0004 |
| *TASK ORDER MANAGER:* | James L. Young, P.G.; REM |
| *SUBMITTAL DATE:* | March 2005 |

## 1.0 INTRODUCTION

This report presents the results of the Fourth Quarter 2004 groundwater sampling performed by TERRAINE, Inc. at Study Area 36 (SA-36) at the Naval Training Center (NTC) Orlando in Orlando, Florida, completed in December 2004. The December 2004 sampling event represents the thirteenth round (Round 13) of groundwater data collected 48 months after vegetable oil injection. CH2M Hill (CCI) is currently performing remediation.

This work was performed under **Contract No. N62467-02-G-0352, Contract Task Order (CTO) No. 0004.** Field activities were performed in accordance with the *Work Plan: Long Term Monitoring Services at Former Naval Training Center, Orlando, Florida* [Terraine, Inc., 2003].

### 1.1 Site Location and Description

Study Area 36 is located within the southwest corner of the Main Base at NTC, Orlando as shown on ***Figure 1***. The Main Base has been modified by Orlando NTC Partners to develop the land for residential use. The site previously contained Buildings 2121, 2122 and the western half of the Public Works Yard. The areas to the east and south of Building 2121 were used to store a variety of items including pipes, fire hydrants, bricks and hazardous materials such as waste oil drums, transformers and batteries. Building 2122 was the Paint Shop, where paints and paint thinner were stored. A flammable materials storage cabinet was located at the north end of the building.

### 1.2 Site Background and History

Harding Lawson Associates (HLA) conducted an initial site-screening investigation in 1997. The initial screening investigation detected concentrations of metals, Total Recoverable Petroleum Hydrocarbons (TRPH), and Polynuclear Aromatic Hydrocarbons (PAH) in soil samples exceeding screening criteria. The investigation also detected volatile organic compound (VOC) concentrations in groundwater samples above screening criteria.

Subsequently, the Orlando Partnering Team (OPT) requested that HLA perform supplemental screening investigations in 1998 to evaluate and characterize the VOC contamination at the site. Concentrations of

Trichloroethene (TCE) and Tetrachloroethene (PCE) were detected exceeding the Groundwater Cleanup Target Levels (GCTL).

The investigation results indicated that surface soils contain arsenic, barium, mercury, TRPH, and benzo(a)pyrene at concentrations exceeding the regulatory screening criteria (HLA, 1999). In addition, groundwater had exceedances of aluminum, antimony, TCE and PCE. The maximum TCE concentration detected in a monitoring well at the site was 300 μg/L. The results of the groundwater investigation at the site indicate that TCE and PCE concentrations in groundwater exceed the GCTL in an area of approximately 5,000 square feet in the North Storage Area (HLA, 1999). Chlorinated solvent detections exceeded screening criteria to a depth of 35 feet below land surface (bls). As a result of the TCE/PCE contamination detected at the site, the OPT requested that TetraTech NUS (TtNUS) conduct an additional Site Investigation (SI). The SI report was submitted in September of 2002. The OPT also requested CCI implement an Interim Remedial Action plan (IRA) at the site consisting of enhanced biodegradation using vegetable oil.

Thirteen sampling events for laboratory analysis have been completed to date as part of this IRA. The first sampling event (December 2000) was performed prior to injection activities (injection completed in January 2001), and was used as the IRA baseline data. Twelve subsequent sampling events have been completed to monitor performance of the treatment activities. Round 1 of the performance monitoring was conducted in March 2001. Round 2 of the performance monitoring was conducted in July 2001. Round 3 of the performance monitoring was conducted in October 2001. On November 15, 2001, approximately 750 gallons of vegetable oil were injected into nine injection points (B and C zones) to further enhance the biodegradation of chlorinated solvents in site groundwater. Rounds 4 and 5 of the performance monitoring were conducted in May 2002 and December 2002, respectively. In December 2002, all monitoring wells at the site were abandoned to facilitate Baldwin Park development in the vicinity of the site. In March and April 2002, 17 new wells were installed adjacent to the old locations. Rounds 6, 7, 8, 9, 10, 11, 12, and 13 of the performance monitoring were conducted in March 2003, June 2003, September 2003, December 2003, March 2004, June 2004, September 2004, and December 2004 respectively. The results of the Round 13 sampling event are described in this report, and monitoring wells sampled from Round 13 are shown in ***Figure 2***.

## 2.0 INVESTIGATION & METHODOLGY SUMMARY

### 2.1 Summary of Field Activities and Results

#### 2.1.1 Water level measurements

Groundwater level measurements were collected from each monitoring well on December 4, 2004 (***Table 1***).

#### 2.1.2 Groundwater Sampling

##### 2.1.2.1 Methodology

Groundwater sampling was conducted at SA36 on December 6, 2004. Fifteen (15) wells were purged and sampled using the low-flow method described in the work plan. Purging of wells consisted of removing groundwater with a peristaltic pump at a flow rate equal to or less than the groundwater recharge rate until field parameters (temperature, pH, conductivity, turbidity, Dissolved Oxygen (DO), and Oxidation-Reduction Potential (ORP) had stabilized. Water levels in the wells were continuously monitored to maintain drawdown at less than 0.3 feet. The 4$^{th}$ quarter 2004 groundwater sampling event was conducted in accordance with the *Work Plan: Long Term Monitoring Services at Former Naval Training Center, Orlando, Florida* [Terraine, Inc., 2003]. Field-testing equipment was calibrated according to the manufacturer's instructions.

##### 2.1.2.2 Chemical Analysis Suite

Groundwater samples from the monitoring wells were laboratory analyzed for the following analyte suite:

- VOCs by U.S. Environmental Protection Agency (EPA) Method 8260B
- Nitrate, Nitrite, Total Sulfate, and Chloride by EPA Method 300.0A
- Alkalinity by EPA Method 310.1
- Sulfide by EPA Method 376.1
- Dissolved Iron by EPA Method 6010B
- Total Dissolved Solids by EPA Method 160.1
- Total Organic Compounds (TOC) by EPA Method 415.1
- Total Petroleum Hydrocarbons (TPH) by Florida Petroleum Residual Organic (FL-PRO)
- Dissolved Hydrogen by VaporTech analytical method VA3.01
- Volatile Fatty Acids by Method STL SOP VG43 based on EPA Method 8015
- Methane, ethane and ethene (MEE) by RSK175M

In addition, the field team measured natural attenuation parameters of ferrous iron, hydrogen sulfide, and carbon dioxide using Colorimetric HACH test kits. Temperature, ORP, DO, pH, specific conductivity, and turbidity were also recorded. This information is summarized in ***Tables 2*** and ***3***.

### 2.1.3 Investigation Derived Waste

In accordance with the Work Plan, purge waters were collected and containerized. Groundwater analytical results were used to determine the disposal requirements of the purge water. All investigation derived waste (IDW) was stored offsite in 55-gallon drums pending receipt and evaluation of analytical results. After obtaining results, the IDW was properly disposed as non-hazardous waste in accordance with all pretreatment standards in the City of Orlando's sanitary sewer system in an existing manhole located at the area C site located off Warehouse Road on February 28, 2005.

## 2.2 Graphical and Statistical Analysis

### 2.2.1 Data Validation

The data were validated using EarthSoft's Electronic Lab Data Checker, Version 1.01. The validation process results in qualifiers that are shown with the analyte concentrations in ***Tables 2 through 5***.

### 2.2.2 Contour Maps - Techniques

Information gathered from point locations were converted to groundwater potentiometric and exceedance plume maps using a kriging interpolation method. Kriging uses a set of known vector point elements to predict a grid of values that are assigned to raster cells, with the output representing a geophysical surface. The potentiometric and exceedance plume maps were created using Surfer™ (Golden, Inc.) software and the linear-variogram model.

### 2.2.3 Natural Attenuation Evaluation

Data collected from 15 groundwater samples (***Table 2***) were screened for anaerobic degradation processes to evaluate where geochemical environments indicate natural attenuation is plausible. Both field and laboratory-based data were utilized from each well, assigning a plus/minus score to each parameter according to Wiedemier (1998). The parameter scores were totaled for each well, and the results indicate the potential for natural biodegradation; higher scores indicate greater evidence of biodegradation. Contour maps of the natural attenuation parameter scores were generated for each aquifer and superimposed on the site map to indicate regions where there is strong evidence of anaerobic biodegradation. The data used in the natural attenuation evaluation are presented in ***Tables 2 and 5***.

## 3.0 EVALUATION OF RESULTS

### 3.1 Water Level Measurements

***Table 1*** presents a summary of the groundwater elevations as noted on December 4, 2004. ***Figures 3, 4,*** and ***5*** illustrate the recent groundwater flow directions in the Shallow (A), Intermediate (B), and Deep (C) surficial aquifer zones, respectively. Based on groundwater elevation data, the groundwater in the A zone flows locally toward the center of the study area and well OLD-SA36-07AR. Based on groundwater elevation data, groundwater flow in the B Zone flows locally away from the center of the study area and well OLD-SA36-10BR. The groundwater in the C Zone flows to the northeast. Due to construction activities at the site, top-of-casing measurements for monitoring wells could be inaccurate therefore explaining radial groundwater flow in the shallow and intermediate aquifers. A complete resurvey of monitoring well top-of-casings is scheduled for 2$^{nd}$ quarter 2005.

### 3.2 Analytical Results

Round 13 groundwater analyte detections are shown in ***Table 3.*** ***Table 4*** presents a summary of detected constituents from the baseline sampling event in December, 2000 and the seven most current sampling events (March, June, September, and December 2003; March, June, September, and December 2004) ***Table 5*** presents a summary of the validated analytical results from the Round 13 sampling event.

For organic analytes, the screening criterion is the Florida Department of Environmental Protection (FDEP) GCTL; for inorganic analytes with an established GCTL and background screening value (BGSV), the screening criterion is the greater of the GCTL or the BGSV. Shaded cells within the table indicate analyte concentrations above the FDEP GCTL or background screening values.

In the shallow (A) zone, no contaminants of concerns were noted above their respective GCTL (***Figure 6***). In the Intermediate (B) zone, iron exceeded the GCTL in groundwater sampled one well (OLD-SA36-08BR, 0.5240 mg/L); no other COC was noted above the GCTL in the B Zone (***Figure 7***). In the Deep (C) zone, TCE was detected above the screening value in groundwater sampled from monitoring well OLD-36-09CR (25.60 μg/L), which is a slight decrease in comparison to the previous quarter (38.90 μg/L). PCE was detected above the screening value in groundwater sampled from monitoring well OLD-36-23CR (9.740 μg/L), which is a slight increase in comparison to the previous quarter (8.79 μg/L), though concentrations of PCE at this location have not varied by more than 3 μg/L since 2003. Iron was also detected above the GCTL at four of the six deep wells, OLD36-09CR, -18CR, -23CR, and -35CR (***Figure 8***).

### 3.3 Evaluation of Natural Attenuation

The December 2004 groundwater-sampling results for SA-36 indicate potential for the enhanced biodegradation of TCE as a remedial alternative due to the following observations:

- TCE concentrations in groundwater in all zones have decreased from baseline levels.

- Cis-1,2-dichloroethene (*Cis*-1,2-DCE) was detected simultaneously with TCE in the vicinity of the reductive/treatment zone (-09CR). The formation of *cis*-1, 2-DCE in groundwater sampled from this well is indicative of the reductive dechlorination process.
- The ORP of the aquifer was within the range favorable for anaerobic reactions (i.e., less than 100 mV) at 14 of the 15 locations where ORP was measured. Groundwater from 8 of the 15 wells sampled had negative ORP which is indicative of reducing conditions (***Table 2***).
- The nitrate concentrations were below 0.6 mg/L in groundwater sampled from 14 of the 15 wells sampled; therefore,nitrate reduction should not interfere with reductive dechlorination.
- Nitrate and sulfate concentrations were lowest in the area of the reductive/treatment zone, while methane and dissolved iron concentrations were elevated in groundwater sampled from wells OLD-36-08BR and -09CR. Elevated methane further indicates that reducing conditions prevail in the aquifer.
- Total organic carbon (TOC) was detected in groundwater from all wells sampled.
- Chloride was detected in groundwater from all wells sampled.
- Hydrogen levels were greater than 1 nm/L in groundwater sampled from all wells. Hydrogen levels greater than 1nm/L indicate that reductive dechlorination is possible.
- Natural attenuation potential score contour maps indicating zones of high potential for reductive dechlorination overlap locations where TCE & PCE concentrations were noted above GCTL (***Figures 7 & 8***).

## 4.0 CONCLUSIONS AND RECOMMENDATIONS

The data collected to date indicate that vegetable oil injections have created a reducing environment in the aquifers. As a result, TCE concentrations have decreased in comparison to the baseline sampling event. The presence of by-products such as methane, *cis*-1,2-DCE, and chloride are indicative of the reductive dechlorination process.

Based on analytical data to date, the following is recommended for this site:

- Reduce sampling (VOCs) from a quarterly basis to a semi-annual basis.
- Reduce natural attenuation sampling to an annual basis.

## 5.0 REFERENCES

Florida Department of Environmental Protection. *Chapter 62-777 Contaminant Cleanup Target Levels*, 1999.

Harding Lawson Associates. *BRAC Environmental Site Screening Report for Study Area 36*, 1999.

Terraine, Inc*. Work Plan: Long Term Monitoring Services At Former Naval Training Center, Orlando, Florida,* 2003*.*

# TABLES


| | |
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| **Table 1** | *Groundwater Level Elevations – December 2004* |
| **Table 2** | *Water Quality Data, Natural Attenuation Field Parameters, December 2004* |
| **Table 3** | *Summary of Detected Constituents—December 2004* |
| **Table 4** | *Summary of Historical Detected Constituents* |
| **Table 5** | *Summary of Validated Analytical Results—December 2004* |

**TABLE 1**

**WATER-LEVEL ELEVATIONS SUMMARY**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Number | Northing | Easting | Well Type | Screen Interval (BGS) | TOC ELEVATION (AMSL) | Depth-to-Water on 03/11/04 | Water Elevation on 03/11/04 | Depth-to-Water on 06/11/04 | Water Elevation on 06/11/04 | Depth-to-Water on 09/10/04 | Water Elevation on 09/10/04 | Depth-to-Water on 12/4/04 | Water Elevation on 12/4/04 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SHALLOW MONITORING WELLS** | | | | | | | | | | | | | |
| **OLD-36-01AR** | 1,537,944.63 | 549,500.75 | 2" well | NA | 115.24 | 6.4 | 110.79 | 5.85 | 111.34 | 2.08 | 113.16 | 4.11 | 111.13 |
| **OLD-36-02AR** | 1,537,979.36 | 549,528.51 | 2" well | NA | 114.37 | 5.58 | 111.32 | 4.92 | 111.98 | 1.22 | 113.15 | 3.20 | 111.17 |
| **OLD-36-07AR** | 1,537,896.11 | 549,527.86 | 2" well | NA | 113.82 | 20.14[a] | 93.68 | 7.52 | 106.3 | 0.97 | 112.85 | 7.8* | 106.02 |
| **OLD-36-19AR** | 1,537,909.92 | 549,443.90 | 2" well | NA | 115.46 | 6.63 | 111.22 | 6.3 | 111.55 | 2.37 | 113.09 | 4.46 | 111 |
| **OLD-36-33AR** | 1,537,824.26 | 549,646.92 | 2" well | NA | 115.075 | 5.7 | 109.375 | 5.56 | 109.515 | 1.5 | 113.57 | 3.75 | 111.325 |
| **INTERMEDIATE MONITORING WELLS** | | | | | | | | | | | | | |
| **OLD-36-08BR** | 1,537,888.76 | 549,525.42 | 2" well | NA | 113.84 | 5.81 | 108.03 | 4.45 | 109.39 | 0.62 | 113.22 | 2.65 | 111.19 |
| **OLD-36-10BR** | 1,537,944.37 | 549,506.04 | 2" well | NA | 115.16 | 6.1 | 112.33 | 5.51 | 112.92 | 1.75 | 113.41 | 3.75 | 111.41 |
| **OLD-36-20BR** | 1,537,914.20 | 549,444.00 | 2" well | NA | 115.43 | 6.62 | 110.79 | 6.3 | 111.11 | 2.33 | 113.1 | 4.46 | 110.97 |
| **OLD-36-22BR** | 1,537,983.82 | 549,531.50 | 2" well | NA | 114.38 | 5.6 | 112.12 | 4.96 | 112.76 | 1.25 | 113.13 | 3.26 | 111.12 |
| **OLD-36-24BR** | 1,537,828.82 | 549,648.87 | 2" well | NA | 115.08 | 6.01 | 109.07 | 5.81 | 109.27 | 1.82 | 113.26 | 3.95 | 111.13 |
| **DEEP MONITORING WELLS** | | | | | | | | | | | | | |
| **OLD-36-09CR** | 1,537,884.91 | 549,523.79 | 2" well | NA | 113.82 | 9.1 | 104.72 | 8.55 | 105.27 | 4.37 | 109.51 | 6.95 | 106.87 |
| **OLD-36-11CR** | 1,537,949.16 | 549,503.20 | 2" well | NA | 115.34 | 9.81 | 109.27 | 10 | 109.08 | 5.75 | 109.59 | 8.25 | 107.09 |
| **OLD-36-18CR** | 1,537,805.46 | 549,485.73 | 2" well | NA | 115.38 | 8.08 | 107.3 | 8.26 | 107.12 | 4.21 | 111.17 | 6.5 | 108.88 |
| **OLD-36-23CR** | 1,537,987.62 | 549,534.13 | 2" well | NA | 114.43 | 8.98 | 105.71 | 9.2 | 105.49 | 4.92 | 109.51 | 7.54 | 106.89 |
| **OLD-36-35CR** | 1.537.878.57 | 549,674.58 | 2" well | NA | 120.47 | 8.25 | 112.22 | NA | NA | NA | NA | 8.35 | NA |
| **OLD-36-36CR** | 1,537,834.15 | 549,651.13 | 2" well | NA | 115.075 | 9.1 | 105.975 | 8.97 | 106.105 | 5.5 | 109.57 | 7.9 | 107.175 |

AMSL = Above mean sea level
BGS = below ground surface
NA = Not Available
TOC = Top of Casing
Easting and Northing are Florida State Plane Coordinates
* Depth to vegetable oil was 1.98 feet
[a] Reading suspected inaccurate

**TABLE 2**

**NATURAL ATTENUATION PARAMETER RESULTS**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | Screening Criteria | OLD-36-01AR | OLD-36-02AR | OLD-36-08BR | OLD-36-09CR | OLD-36-10BR | OLD-36-11CR | OLD-36-18CR | OLD-36-19AR | OLD-36-20BR | OLD-36-22BR | OLD-36-23CR | OLD-36-24BR | OLD-36-33AR | OLD-36-35CR | OLD-36-36CR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | | Florida GCTL [a] | | | | | | | | | | | | | | | |
| Sample Date | CAS Number | | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 |
| **Water Chemistry (mg/L)** | | | | | | | | | | | | | | | | | |
| Nitrate | 14797-55-8 | 10 | | 0.054 | 0.0150 | | | | | 1.54 | 0.088 | | | 0.301 | | | 0.181 |
| Nitrite | 14797-65-0 | 1 | | 0.005 | | | | | | | | | | | | | |
| Sulfate | 14808-79-8 | 250 | 54.3 | 95.4 | | 10.2 | 17.5 | 18.6 | 16.6 | 18.4 | 22.3 | 35.4 | 22.9 | 38.9 | 20.2 | 25.2 | 28.2 |
| Alkalinity | | * | 207 J3 | 191 | 83.3 J3 | 4.1 J3 | 50.0 J3 | 49.2 J3 | 4.0 J3 | 213 J3 | 104 J3 | 6.0 J3 | | 41.0 J3 | 174 J3 | 18.4 J3 | 88.3 |
| Total Organic Carbon | | | 13.69 | 13.22 | 11.4 | 3.45 | 7.85 | 7.66 | 4.69 | 9.43 | 8.5 | 8.06 | 4.92 | 4.97 | 9.88 | 6.6 | 5.70 |
| Total Dissolved Solids | | | 354.0 | 392 | 172 | 70 | 120.0 | 118 | 104 | 318 | 210 | 98.0 | 84.0 | 178 | 272 | 128 | 186 |
| Total Sulfide | | | | | | 1.52 | | | | | | 1.44 | | | | | |
| Chloride | 16887-00-6 | 250 | 4.60 | 7.04 | 6.27 | 7.75 | 3.41 | 5.04 | 6.3 | 15.3 | 17.4 | 8.13 | 7.00 | 9.04 | 7.29 | 6.68 | 7.23 |
| **Gases (nm/L)** | | | | | | | | | | | | | | | | | |
| Hydrogen | 1333-74-0 | * | 1.5 | 1.6 | 2.9 | 1.6 | 1.6 | 1.3 | 1.4 | 1.4 | 1.4 | 1.6 | 1.4 | 1.2 | 1.4 | 1.9 | 1.3 |
| **Inorganics (mg/L)** | | | | | | | | | | | | | | | | | |
| Dissolved Iron | 7439-89-6 | 0.3 | 0.0494 I V | 0.0437 I V | 0.5240 | 0.4873 | 0.1152 V | 0.1520 | 1.136 | 0.0260 I V | 0.0268 I | 0.0895 V | 0.7357 | 0.0558 V | 0.0686 V | 0.8620 | 0.1113 V |
| **Volatile Gases (µg/L)** | | | | | | | | | | | | | | | | | |
| Ethane | 74-84-0 | * | | | | | | | | | | | | | | | |
| Ethene | 74-85-1 | * | | | | | | | | | | | | | | | |
| Methane | 74-82-8 | * | 641 | | 13100 | 4890 | | 177 | | | | 100 | | | | 32 | 32 |
| **Field Parameters (mg/L)** | | | | | | | | | | | | | | | | | |
| Carbon Dioxide | 124-38-9 | | 126.00 | 155 | 70.00 | 205.00 | 94 | 110 | | 77 | 127 | 181 | 132 | 162 | 95 | 88 | 94 |
| Dissolved Oxygen | | | 0.36 | 0.36 | 0.27 | 0.41 | 0.4 | 0.48 | 0.4 | 1.16 | 0.31 | 0.42 | 0.59 | 4.12 | 0.62 | 0.47 | 1.63 |
| Ferrous Iron | | | | 0.2 | 1.2 | 1 | 0.3 | 0.2 | | | 0.2 | 0.2 | 1.8 | 0.5 | | 1.6 | 0.8 |
| Hydrogen Sulfide | 7783-06-4 | | | | 5 | 2 | 2 | | | 0.3 | | | 2 | 0.1 | | 1 | |
| Redox Potential (mV) | | | -122.3 | -125.6 | -190.6 | -120.6 | -13.3 | -92.3 | -32.2 | -7.1 | 36.9 | 72.6 | 3.4 | 103.4 | 22 | -81.8 | 67 |
| Temperature ($^{o}$C) | | | 25.04 | 24.93 | 25.42 | 25.63 | 25.4 | 25.47 | 25.93 | 24.88 | 25.55 | 25.32 | 25.24 | 26.16 | 27.07 | 26.43 | 26.12 |
| pH | | | 6.99 | 6.82 | 5.82 | 4.86 | 5.96 | 5.97 | 4.83 | 6.9 | 6.37 | 4.95 | 4.73 | 6.89 | 6.93 | 5.66 | 6.57 |
| Conductivity (µS/cm) | | | 591 | 1,314.00 | 444 | 188 | 185 | 191 | 213 | 582 | 377 | 352 | 256 | 211 | 481 | 309 | 334 |

Notes:
mV = millivolts, ($^{o}$C) = degrees Celcius, SU = Standard Units
[a] Groundwater Cleanup Target Level [Development of Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, F.A.C., May 26, 1999].
"J3" qualifier indicates the reported value is between the established quality control criteria for either precision and/or accurancy
"V" qualifier indicates the analyte was detected in both the sample and the associated method blank.
"I" the reported value is between the laboratory method detection
* Indicates that the screening value is not available.
Empty cells indicate non-detects.
nM/L - nanomoles per liter, mg/L - millgrams per liter, µg/L - micrograms per liter
Values in shaded cells are equal to or exceed the screening criteria.

TABLE 3

DETECTIONS IN GROUNDWATER
STUDY AREA 36

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

| Well Designation | | | | OLD-36-01AR | OLD-36-02AR | OLD-36-08BR | OLD-36-09CR | OLD-36-10BR | OLD-36-11CR | OLD-36-18CR | OLD-36-19AR | OLD-36-20BR | OLD-36-22BR | OLD-36-23CR | OLD-36-24BR | OLD-36-33AR | OLD-36-35CR | OLD-36-36CR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL [a] | | | | | | | | | | | | | | | |
| Sample Date | | | | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 |
| Organic Parameters | | | | | | | | | | | | | | | | | | |
| TRPH | 5289290-40-0 | mg/L | 5 | 0.03 I V | 0.03 I V | 0.16 I V | 0.06 I V | 0.03 I V | 0.03 I V | 0.06 I V | 0.04 I V | 0.03 I V | 0.03 I V | 0.2 I V | 0.03 I V | 0.03 I V | 0.04 I V | 0.04 I V |
| Volatiles | | | | | | | | | | | | | | | | | | |
| Methane | 74-82-8 | µg/L | * | 641 | | 13100 | 4890 | | 177 | | | | 100 | | | | 32 | |
| Bromodichlormethane | 75-27-4 | µg/L | 0.6 | | | | | | | | | | | | | | | 0.4500 I |
| Carbon disulfide | 75-15-0 | µg/L | 700 | | | | | | | | | | | | | | | |
| Chloroform | 67-66-3 | µg/L | 5.7 | | | | | | | | | | | | | | | 5.19 |
| cis-1,2-Dichloroethene | 156-59-2 | µg/L | 70 | | | 62.39 | 4.820 | 3.200 | | | | | | | | | | |
| Tetrachloroethene | 127-18-4 | µg/L | 3 | | | | | | | | | | | 9.740 | | | | |
| Trichloroethene | 79-01-6 | µg/L | 3 | | | | 25.60 | | | | | | | 2.060 | | | | |
| Inorganics | | | | | | | | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | mg/L | 0.3 | 0.0494 I V | 0.0437 I V | 0.5240 | 0.4873 | 0.1152 I V | 0.1520 | 1.136 | 0.0260 I V | 0.0268 I | 0.0895 V | 0.7357 | 0.0558 V | 0.0686 V | 0.8620 | 0.1113 V |
| Water Chemistry | | | | | | | | | | | | | | | | | | |
| Nitrate | 14797-55-8 | mg/L | 10 | | 0.054 | 0.0150 | | | | | 1.54 | 0.088 | | | 0.301 | | | 0.181 |
| Nitrite | 14797-65-0 | mg/L | 1 | | 0.005 | | | | | | | | | | | | | |
| Sulfate | 14808-79-8 | mg/L | 250 | 54.3 | 95.4 | | 10.2 | 17.5 | 18.6 | 16.6 | 18.4 | 22.3 | 35.4 | 22.9 | 38.9 | 20.2 | 25.2 | 28.2 |
| Alkalinity | ALK | mg/L | * | 207 J3 | 191 | 83.3 J3 | 4.1 J3 | 50.0 J3 | 49.2 J3 | 4.0 J3 | 213 J3 | 104 J3 | 6.0 J3 | | 41.0 J3 | 174 J3 | 18.4 J3 | 88.3 |
| Total Organic Carbon | TOC | mg/L | * | 13.69 | 13.22 | 11.4 | 3.45 | 7.85 | 7.66 | 4.69 | 9.43 | 8.5 | 8.06 | 4.92 | 4.97 | 9.88 | 6.6 | 5.70 |
| Total Disolved Solids | TDS | mg/L | * | 354.0 | 392 | 172 | 70 | 120.0 | 118 | 104 | 318 | 210 | 98.0 | 84.0 | 178 | 272 | 128 | 186 |
| Total Sulfide | 18496-25-8 | mg/L | * | | | | 1.52 | | | | | | 1.44 | | | | | |
| Chloride | 16887-00-6 | mg/L | 250 | 4.60 | 7.04 | 6.27 | 7.75 | 3.41 | 5.04 | 6.3 | 15.3 | 17.4 | 8.13 | 7.00 | 9.04 | 7.29 | 6.68 | 7.23 |
| Gases | | | | | | | | | | | | | | | | | | |
| Hydrogen (nm/L) | 1333-74-0 | nM/L | * | 1.5 | 1.6 | 2.9 | 1.6 | 1.6 | 1.3 | 1.4 | 1.4 | 1.4 | 1.6 | 1.4 | 1.2 | 1.4 | 1.9 | 1.3 |

Notes:

[a] Groundwater Cleanup Target Level [Development of Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, F.A.C., May 26, 1999].

* Indicates that the screening value is not available.

Empty cells indicate non-detects.

"J3" qualifier the reported value failed to meet the established quality control criteria for either precision and/or accuracy

"I" the reported value is between the laboratory method detection

"V" qualifier indicates the analyte was detected in both the sample and the associated method blank.

nM/L - nanomoles per liter, mg/L - millgrams per liter, mg/L - micrograms per liter

Values in shaded cells are equal to or exceed the screening criteria.

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-01AR | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-01AR | OLD-36-01AR | OLD-36-01AR-DUP | OLD-36-01AR | OLD-36-01AR-DUP | OLD-36-01AR | OLD-36-01AR-DUP | OLD-36-01AR | OLD-36-01AR-DUP | OLD-36-01AR | OLD-36-01AR-DUP | OLD-36-01AR |
| Sample Date | | | | 3/26/2003 | 6/16/2003 | 6/16/2003 | 9/16/2003 | 9/16/2003 | 12/2/2003 | 12/2/2003 | 3/22/2004 | 3/22/2004 | 6/13/2004 | 6/13/2004 | 9/11/2004 |
| **Organic Parameters** | | | | | | | | | | | | | | | |
| TRPH | 5289290-40-0 | mg/L | 5 | | 0.22 U | 0.21 U | 0.20 U | 0.22 U | 0.22 U | 0.21 U | 0.20 U | 0.21 U | 0.22 U | 0.21 U | 0.21 U |
| **Volatiles** | | | | | | | | | | | | | | | |
| Acetic Acid (mg/L) | 64-19-7 | mg/L | * | | 1.00 U | 1.00 U | 1.000 U | 1.000 U | 1.000 U | | 0.5000 U | | 0.5000 U | | 0.5000 U |
| Propionic Acid (mg/L) | 79-09-4 | mg/L | * | | 1.00 U | 1.00 U | 1.000 U | 1.000 U | 1.000 U | | 0.5000 U | | 0.5000 U | | 0.5000 U |
| Pyruvic Acid (mg/L) | 127-17-3 | mg/L | * | | 1.00 U | 1.00 U | 10.00 U | 10.00 U | 10.00 U | | 2.000 U | | 2.000 U | | 2.000 U |
| n-Butyric Acid (mg/L) | 107-92-6 | mg/L | * | | 1.00 U | 1.00 U | 1.000 U | 1.000 U | 1.000 U | | 0.5000 U | | 0.5000 U | | 0.5000 U |
| 1,1-Dichloropropene | 563-58-6 | µg/L | * | | | | | | | | | | | | 1.0000 U |
| L-Lactic Acid (mg/L) | 50-21-5 | mg/L | * | | 25.00 U | 25.00 U | 25.00 U | 25.00 U | 25.00 U | | 10.00 U | | 10.00 U | | 10.00 U |
| Methane | 74-82-8 | µg/L | * | | **58** | 26 U | 26 U | 26 U | **357** | | **407** | | **400** | | **495** |
| Ethene | 74-85-1 | µg/L | * | | 26 U | 26 U | 26 U | 26 U | 26 U | | 26 U | | 26 U | | 26 U |
| Ethane | 74-84-0 | µg/L | * | | 26 U | 26 U | 26 U | 26 U | 26 U | | 26 U | | 26 U | | 26 U |
| Acetone | 67-64-1 | µg/L | 700 | 10 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.00 U | 10.0 U | 10.00 U | 10.0 U |
| Benzene | 71-43-2 | µg/L | 1 | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Bromobenzene | 108-86-1 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Bromochloromethane | 74-97-5 | µg/L | 91 | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Bromoform | 75-25-2 | µg/L | 4.4 | 4 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Bromomethane | 74-83-9 | µg/L | 9.8 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 2-Butanone (MEK) | 78-93-3 | µg/L | 4200 | | | | | | | | | | | | 1.00 U |
| n-butylbenzene | 104-51-8 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| sec-Butylbenzene | 135-98-8 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| t-Butylbenzene | 98-06-6 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Carbon disulfide | 75-15-0 | µg/L | 700 | 5 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Carbon Tetrachloride | 56-23-5 | µg/L | 3 | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Chlorobenzene | 108-90-7 | µg/L | 100 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Chloroethane | 75-00-3 | µg/L | 12 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 2-chloroethylvinylether | 110-75-8 | µg/L | 175 | | | | | | | | | | | | 1.00 U |
| Chloroform | 67-66-3 | µg/L | 5.7 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Chloromethane | 74-87-3 | µg/L | 2.7 | 2.7 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 2-Chlorotoluene | 95-49-8 | µg/L | 140 | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 4-Chlorotoluene | 106-43-4 | µg/L | 140 | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | µg/L | * | | | | | | | | | | | | 1.00 U |
| Dibromochloromethane | 124-48-1 | µg/L | 0.4 | 0.4 U | 0.180 U | 0.180 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U |
| 1,2 - Dibromoethane | 106-93-4 | µg/L | * | 0.2 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Dibromomethane | 74-95-3 | µg/L | * | | 0.180 U | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2 - Dichlorobenzene | 95-50-1 | µg/L | 600 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,3 - Dichlorobenzene | 541-73-1 | µg/L | 10 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,4-Dichlorobenzene | 106-46-7 | µg/L | 75 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Dichlorodifluoromethane | 75-71-8 | µg/L | 1400 | 5 U | 0.180 U | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,1-Dichloroethane | 75-35-3 | µg/L | 70 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2-Dichloroethane | 107-06-2 | µg/L | 3 | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,1-Dichloroethene | 75-35-4 | µg/L | 7 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| cis-1,2-Dichloroethene | 156-59-2 | µg/L | 70 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Trans-1,2-Dichloroethene | 156-60-5 | µg/L | 100 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2-Dichloropropane | 78-87-5 | µg/L | 5 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,3 - Dichloropropane | 142-28-9 | µg/L | * | | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U |
| 2,2 -Dichloropropane | 594-20-7 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| *cis* -1,3-Dichloropropene[d] | 542-75-6 | µg/L | 0.2 | 5 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U |
| Trans-1,3-Dichloropropene | 10061-02-6 | µg/L | 0.2 | 5 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U |
| Ethylbenzene | 100-41-4 | µg/L | 30 | 5 U | 0.080 U | 0.080 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Hexachlorobutadiene | 87-68-3 | µg/L | * | | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U |
| 2-Hexanone | 591-78-6 | µg/L | 280 | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-01AR | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-01AR | OLD-36-01AR | OLD-36-01AR-DUP | OLD-36-01AR | OLD-36-01AR-DUP | OLD-36-01AR | OLD-36-01AR-DUP | OLD-36-01AR | OLD-36-01AR-DUP | OLD-36-01AR | OLD-36-01AR-DUP | OLD-36-01AR |
| Sample Date | | | | 3/26/2003 | 6/16/2003 | 6/16/2003 | 9/16/2003 | 9/16/2003 | 12/2/2003 | 12/2/2003 | 3/22/2004 | 3/22/2004 | 6/13/2004 | 6/13/2004 | 9/11/2004 |
| **Volatiles Continued** | | | | | | | | | | | | | | | |
| Isopropylbenzene | 98-82-8 | µg/L | * | 0.8 U | 0.460 U | 0.460 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 4-Isopropyltoluene | 99-87-6 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 4-Methyl-2-Pentanone | 108-10-1 | µg/L | 560 | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Methylene Chloride | 75-09-2 | µg/L | 5 | 5 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U |
| Naphthalene | 91-20-3 | µg/L | 20 | | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U |
| n-propylbenzene | 103-65-1 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Styrene | 100-42-5 | µg/L | 100 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,1,1,2 - Tetrachloroethane | 630-20-6 | µg/L | 1.3 | | 1.00 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 2.00 U | 1.00 U | 2.00 U | 1.00 U |
| 1,1,2,2 - Tetrachloroethane | 79-34-5 | µg/L | 0.2 | 0.2 UJ | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U |
| Tetrachloroethene | 127-18-4 | µg/L | 3 | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Toluene | 108-88-3 | µg/L | 40 | 5 U | 1.00 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2,3 - Trichlorobenzene | 87-61-6 | µg/L | 70 | | 1.00 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | µg/L | 70 | 5 U | 1.00 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,1,1 - Trichloroethane | 71-55-6 | µg/L | 200 | 5 U | 1.00 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,1,2-Trichloroethane | 79-00-5 | µg/L | 5 | 5 U | 1.00 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Trichloroethene | 79-01-6 | µg/L | 3 | 3 U | 1.00 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2,3 - Trichloropropane | 96-18-4 | µg/L | 200 | | 0.200 U | 0.200 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | µg/L | 10 | | 1.00 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | µg/L | 10 | | 1.00 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Vinyl chloride | 75-01-4 | µg/L | 1 | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Xylenes | 1330-20-7 | µg/L | 20 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Bromodichloromethane | 75-27-4 | µg/L | 0.6 | | | | | | | | | | | | 0.600 U |
| Trichlorofluoromethane | 79-69-4 | µg/L | 2100 | 5 U | 1.00 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Methyl *tert* -butyl ether | 1634-04-4 | µg/L | 50 | 5 U | 0.490 U | 0.490 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| **Inorganics** | | | | | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | µg/L | 300 | | **74.6** | **80.3** | **70.7** | **76.4** | **20.5 I** | | **42.8** | | **35.3** | | **38.5** |
| **Water Chemistry** | | | | | | | | | | | | | | | |
| Nitrate | 14797-55-8 | mg/L | 10 | | **2.76** | **2.76** | **1.41** | **1.49** | **1.42** | | **0.0550** | | **1.94** | | 0.076 |
| Nitrite | 14797-65-0 | mg/L | 1 | | 0.005 U | 0.005 U | 0.0050 U | 0.0050 U | 0.0050 U | | 0.0035 U | | 0.0035 U | | 0.0035 U |
| Sulfate | 14808-79-8 | mg/L | 250 | | | | | | **30** | | **20.7** | | **23.3** | | 27.1 |
| Alkalinity | ALK | mg/L | * | | **161** | **157** | **169** | **165** | **164** | | **160** | | **154** | | 209 |
| Total Organic Carbon | TOC | mg/L | * | | **6.82** | **7.24** | **13.38** | **NS** | **13.65** | | **12.56** | | **12.38** | | 13.64 |
| Total Disolved Solids | TDS | mg/L | * | | **284** | **300** | **328** | **324** | **282** | | **252** | | **276** | | 292 |
| Total Sulfide | 18496-25-8 | mg/L | * | | 0.10 U | 0.10 U | 0.10 U | NS | 0.10 U | | **0.49** | | **0.52** | | 0.10 U |
| Chloride | 16887-00-6 | mg/L | 250 | | **14.5** | **13.2** | **6.84** | **7.15** | **5.08** | | **7.06** | | **17.4** | | 11.7 |
| Nitrate-Nitrite Nitrogen | | mg/L | * | | **2.76** | **2.76** | | | **1.42** | | | | | | |
| **Gases** | | | | | | | | | | | | | | | |
| Hydrogen (nm/L) | 1333-74-0 | nM/L | * | | NS | NS | **5.6** | NS | **2.7** | | **2.6** | | **2.3** | | 3.6 |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-01AR-DUP | | OLD-36-02AR | | | | | | | | OLD-36-07AR | OLD-36-08BR | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-01AR-DUP | OLD-36-01AR | OLD-36-02AR | OLD-36-02AR | OLD-36-02AR | OLD-36-02AR | OLD-36-02AR | OLD-36-02AR | OLD-36-02AR | OLD-36-02AR | OLD-36-07AR | OLD-36-08BR | OLD-36-08BR | OLD-36-08BR |
| Sample Date | | | | 9/11/2004 | 12/6/2004 | 3/25/2003 | 6/16/2003 | 9/15/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 9/17/2003 | 3/25/2003 | 6/17/2003 | 9/16/2003 |
| **Organic Parameters** | | | | | | | | | | | | | | | | | |
| TRPH | 5289290-40-0 | mg/L | 5 | 0.22 U | **0.03 I V** | | 0.21 U | 0.22 U | 0.21 U | 0.22 U | 0.21 U | 0.22 U | **0.03 I V** | 204 | | 7.72 | 5.37 |
| **Volatiles** | | | | | | | | | | | | | | | | | |
| Acetic Acid (mg/L) | 64-19-7 | mg/L | * | NM | 500.0 U | | 1.00 U | 1.000 U | **1.800** | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | **10.00** | | **18.00** | **11.00** |
| Propionic Acid (mg/L) | 79-09-4 | mg/L | * | NM | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | **10.00** | | **11.00** | **2.600** |
| Pyruvic Acid (mg/L) | 127-17-3 | mg/L | * | NM | 2000 U | | 1.00 U | 10.00 U | 10.00 U | 2.000 U | 2.000 U | 2.000 U | 2000 U | 10.00 U | | 1.00 U | 10.00 U |
| n-Butyric Acid (mg/L) | 107-92-6 | mg/L | * | NM | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | **3.600** | | **5.900** | **1.500** |
| 1,1-Dichloropropene | 563-58-6 | µg/L | * | 1.0000 U | 0.010400 U | | | | | | | 1.0000 U | 0.010400 U | | | | |
| L-Lactic Acid (mg/L) | 50-21-5 | mg/L | * | 10.00 U | 10000 U | | 25.00 U | 25.00 U | 25.00 U | 10.00 U | 10.00 U | 10.00 U | 10000 U | 25.00 U | | 25.00 U | 25.00 U |
| Methane | 74-82-8 | µg/L | * | NM | **641** | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 5 U | **9070** | | **8230** | **14400** |
| Ethene | 74-85-1 | µg/L | * | NM | 18 U | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 18 U | 26 U | | 26 U | 26 U |
| Ethane | 74-84-0 | µg/L | * | NM | 15 U | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 15 U | 26 U | | 26 U | 26 U |
| Acetone | 67-64-1 | µg/L | 700 | 10.0 U | 1.299 U | 10 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 1.299 U | 10.0 U | 10 U | **14.2** | 10.0 U |
| Benzene | 71-43-2 | µg/L | 1 | 1.00 U | 0.143 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.143 U | 1.00 U | 1 U | **1.15** | 1.00 U |
| Bromobenzene | 108-86-1 | µg/L | * | 1.00 U | 0.175 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.175 U | 1.00 U | | 1.00 U | 1.00 U |
| Bromochloromethane | 74-97-5 | µg/L | 91 | 1.00 U | 0.301 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.301 U | 1.00 U | | 1.00 U | 1.00 U |
| Bromoform | 75-25-2 | µg/L | 4.4 | 1.00 U | 0.245 U | 4 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.245 U | 1.00 U | 4 U | 1.00 U | 1.00 U |
| Bromomethane | 74-83-9 | µg/L | 9.8 | 1.00 U | 0.357 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.357 U | 1.00 U | 5 U | 1.00 U | 1.00 U |
| 2-Butanone (MEK) | 78-93-3 | µg/L | 4200 | 1.00 U | 0.729 U | | | | | | | 1.00 U | 0.729 U | | | | |
| n-butylbenzene | 104-51-8 | µg/L | * | 1.00 U | 0.159 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.159 U | 1.00 U | | 1.00 U | 1.00 U |
| sec-Butylbenzene | 135-98-8 | µg/L | * | 1.00 U | 0.262 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.262 U | 1.00 U | | 1.00 U | 1.00 U |
| t-Butylbenzene | 98-06-6 | µg/L | * | 1.00 U | 0.347 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.347 U | 1.00 U | | 1.00 U | 1.00 U |
| Carbon disulfide | 75-15-0 | µg/L | 700 | 1.00 U | 0.140 U | 5 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.140 U | 2.00 U | 5 U | 2.00 U | 2.00 U |
| Carbon Tetrachloride | 56-23-5 | µg/L | 3 | 1.00 U | 0.406 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.406 U | 1.00 U | 3 U | 1.00 U | 1.00 U |
| Chlorobenzene | 108-90-7 | µg/L | 100 | 1.00 U | 0.105 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.105 U | 1.00 U | 5 U | 1.00 U | 1.00 U |
| Chloroethane | 75-00-3 | µg/L | 12 | 1.00 U | 0.316 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.316 U | 1.00 U | 5 U | 1.00 U | 1.00 U |
| 2-chloroethylvinylether | 110-75-8 | µg/L | 175 | 1.00 U | 4.62 U | | | | | | | 1.00 U | 4.62 U | | | | |
| Chloroform | 67-66-3 | µg/L | 5.7 | 1.00 U | 0.111 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.111 U | 1.00 U | 5 U | 1.00 U | 1.00 U |
| Chloromethane | 74-87-3 | µg/L | 2.7 | 1.00 U | 0.320 U | 2.7 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.320 U | 1.00 U | 2.7 U | 1.00 U | 1.00 U |
| 2-Chlorotoluene | 95-49-8 | µg/L | 140 | 1.00 U | 0.366 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.366 U | 1.00 U | | 1.00 U | 1.00 U |
| 4-Chlorotoluene | 106-43-4 | µg/L | 140 | 1.00 U | 0.099 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.099 U | 1.00 U | | 1.00 U | 1.00 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | µg/L | * | 1.00 U | 0.880 U | | | | | | | 1.00 U | 0.880 U | | | | |
| Dibromochloromethane | 124-48-1 | µg/L | 0.4 | 0.400 U | 0.157 U | 0.4 U | 0.180 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.157 U | 0.180 U | 0.4 U | 0.180 U | 0.400 U |
| 1,2 - Dibromoethane | 106-93-4 | µg/L | * | 1.00 U | 0.147 U | 0.2 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.147 U | 1.00 U | 0.2 U | 1.00 U | 1.00 U |
| Dibromomethane | 74-95-3 | µg/L | * | 1.00 U | 0.216 U | | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.216 U | 0.180 U | | 0.180 U | 1.00 U |
| 1,2 - Dichlorobenzene | 95-50-1 | µg/L | 600 | 1.00 U | 0.151 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.151 U | 1.00 U | 5 U | 1.00 U | 1.00 U |
| 1,3 - Dichlorobenzene | 541-73-1 | µg/L | 10 | 1.00 U | 0.078 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.078 U | 1.00 U | 5 U | 1.00 U | 1.00 U |
| 1,4-Dichlorobenzene | 106-46-7 | µg/L | 75 | 1.00 U | 0.0398 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.0398 U | 1.00 U | 5 U | 1.00 U | 1.00 U |
| Dichlorodifluoromethane | 75-71-8 | µg/L | 1400 | 1.00 U | 0.392 U | 5 U | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.392 U | 0.180 U | 5 U | 0.180 U | 1.00 U |
| 1,1-Dichloroethane | 75-35-3 | µg/L | 70 | 1.00 U | 0.172 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.172 U | 1.00 U | 5 U | 1.00 U | 1.00 U |
| 1,2-Dichloroethane | 107-06-2 | µg/L | 3 | 1.00 U | 0.087 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | **1.26** | 1.00 U | 0.087 U | 1.00 U | 3 U | 1.00 U | 1.00 U |
| 1,1-Dichloroethene | 75-35-4 | µg/L | 7 | 1.00 U | 0.2682 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2682 U | 1.00 U | 5 U | 1.00 U | 1.00 U |
| cis-1,2-Dichloroethene | 156-59-2 | µg/L | 70 | 1.00 U | 0.2776 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2776 U | **6.63** | **27.9 =** | **41.6** | **43.4** |
| Trans-1,2-Dichloroethene | 156-60-5 | µg/L | 100 | 1.00 U | 0.2371 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2371 U | 1.00 U | 5 U | 1.00 U | 1.00 U |
| 1,2-Dichloropropane | 78-87-5 | µg/L | 5 | 1.00 U | 0.886 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.886 U | 1.00 U | 5 U | 1.00 U | 1.00 U |
| 1,3 - Dichloropropane | 142-28-9 | µg/L | * | 0.220 U | 0.2000 U | | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.2000 U | 0.220 U | | 0.220 U | 0.220 U |
| 2,2 -Dichloropropane | 594-20-7 | µg/L | * | 1.00 U | 0.2341 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2341 U | 1.00 U | | 1.00 U | 1.00 U |
| *cis*-1,3-Dichloropropene[d] | 542-75-6 | µg/L | 0.2 | 0.230 U | 0.1515 U | 5 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.1515 U | 0.230 U | 5 U | 0.230 U | 0.230 U |
| Trans-1,3-Dichloropropene | 10061-02-6 | µg/L | 0.2 | 0.200 U | 0.1919 U | 5 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1919 U | 0.200 U | 5 U | 0.200 U | 0.200 U |
| Ethylbenzene | 100-41-4 | µg/L | 30 | 1.00 U | 0.2010 U | 5 U | 0.080 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2010 U | 0.080 U | 5 U | 0.080 U | 1.00 U |
| Hexachlorobutadiene | 87-68-3 | µg/L | * | 0.550 U | 0.7084 U | | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.7084 U | 0.550 U | | 0.550 U | 0.550 U |
| 2-Hexanone | 591-78-6 | µg/L | 280 | 1.00 U | 0.8353 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8353 U | 1.00 U | **40 J** | 1.00 U | 1.00 U |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-01AR-DUP | | OLD-36-02AR | | | | | | | | OLD-36-07AR | OLD-36-08BR | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-01AR-DUP | OLD-36-01AR | OLD-36-02AR | OLD-36-02AR | OLD-36-02AR | OLD-36-02AR | OLD-36-02AR | OLD-36-02AR | OLD-36-02AR | OLD-36-02AR | OLD-36-07AR | OLD-36-08BR | OLD-36-08BR | OLD-36-08BR |
| Sample Date | | | | 9/11/2004 | 12/6/2004 | 3/25/2003 | 6/16/2003 | 9/15/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 9/17/2003 | 3/25/2003 | 6/17/2003 | 9/16/2003 |
| **Volatiles Continued** | | | | | | | | | | | | | | | | | |
| Isopropylbenzene | 98-82-8 | µg/L | * | 1.00 U | 0.1416 U | 0.8 U | 0.460 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1416 U | 0.460 U | 0.8 U | 0.460 U | 1.00 U |
| 4-Isopropyltoluene | 99-87-6 | µg/L | * | 1.00 U | 0.1757 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1757 U | 1.00 U | | 1.00 U | 1.00 U |
| 4-Methyl-2-Pentanone | 108-10-1 | µg/L | 560 | 1.00 U | 0.3544 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3544 U | 1.00 U | 10 U | 1.00 U | 1.00 U |
| Methylene Chloride | 75-09-2 | µg/L | 5 | 5.00 U | 0.1735 U | 5 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1735 U | 5.00 U | 5 U | 5.00 U | 5.00 U |
| Naphthalene | 91-20-3 | µg/L | 20 | 5.00 U | 0.1804 U | | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1804 U | 5.00 U | | 5.00 U | 5.00 U |
| n-propylbenzene | 103-65-1 | µg/L | * | 1.00 U | 0.2416 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2416 U | 1.00 U | | 1.00 U | 1.00 U |
| Styrene | 100-42-5 | µg/L | 100 | 1.00 U | 0.1731 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1731 U | 1.00 U | 5 U | 1.00 U | 1.00 U |
| 1,1,1,2 - Tetrachloroethane | 630-20-6 | µg/L | 1.3 | 1.00 U | 0.1988 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1988 U | 1.00 U | | 1.00 U | 2.00 U |
| 1,1,2,2 - Tetrachloroethane | 79-34-5 | µg/L | 0.2 | 0.200 U | 0.1154 U | 0.2 UJ | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1154 U | 0.200 U | 0.2 UJ | 0.200 U | 0.200 U |
| Tetrachloroethene | 127-18-4 | µg/L | 3 | 1.00 U | 0.2419 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2419 U | 1.00 U | 3 U | 1.00 U | 1.00 U |
| Toluene | 108-88-3 | µg/L | 40 | 1.00 U | 0.1417 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1417 U | 1.00 U | 5 U | 1.00 U | 2.00 U |
| 1,2,3 - Trichlorobenzene | 87-61-6 | µg/L | 70 | 1.00 U | 0.8373 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8373 U | 1.00 U | | 1.00 U | 2.00 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | µg/L | 70 | 1.00 U | 0.3331 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3331 U | 1.00 U | 5 U | 1.00 U | 2.00 U |
| 1,1,1 - Trichloroethane | 71-55-6 | µg/L | 200 | 1.00 U | 0.2710 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2710 U | 1.00 U | 5 U | 1.00 U | 2.00 U |
| 1,1,2-Trichloroethane | 79-00-5 | µg/L | 5 | 1.00 U | 0.3098 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3098 U | 1.00 U | 5 U | 1.00 U | 2.00 U |
| Trichloroethene | 79-01-6 | µg/L | 3 | 1.00 U | 0.2242 U | 3 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | **12.9** | 1.00 U | 0.2242 U | **3.16** | **26.8 J** | **20.5** | **7.16** |
| 1,2,3 - Trichloropropane | 96-18-4 | µg/L | 200 | 1.00 U | 0.2766 U | | 0.200 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2766 U | 0.200 U | | 0.200 U | 1.00 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | µg/L | 10 | 1.00 U | 0.1026 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1026 U | 1.00 U | | 1.00 U | 2.00 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | µg/L | 10 | 1.00 U | 0.1720 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1720 U | 1.00 U | | 1.00 U | 2.00 U |
| Vinyl chloride | 75-01-4 | µg/L | 1 | 1.00 U | 0.3022 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3022 U | 1.00 U | 1 U | 1.00 U | 1.00 U |
| Xylenes | 1330-20-7 | µg/L | 20 | 1.00 U | 0.220 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.220 U | 1.00 U | 5 U | 1.00 U | 1.00 U |
| Bromodichloromethane | 75-27-4 | µg/L | 0.6 | 0.600 U | 0.1837 U | | | | | | | 0.600 U | 0.1837 U | | | | |
| Trichlorofluoromethane | 79-69-4 | µg/L | 2100 | 1.00 U | 0.3268 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3268 U | 1.00 U | 5 U | 1.00 U | 2.00 U |
| Methyl *tert* -butyl ether | 1634-04-4 | µg/L | 50 | 1.00 U | 0.2359 U | 5 U | 0.490 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2359 U | 0.490 U | 5 U | 0.490 U | 1.00 U |
| **Inorganics** | | | | | | | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | µg/L | 300 | NM | **49.4 I V** | | **61.4** | **15.3** | **25.5 I** | **18.5 I** | **28.4 I** | **52.8** | **43.7 I V** | **208.4** | | **664** | **598.3** |
| **Water Chemistry** | | | | | | | | | | | | | | | | | |
| Nitrate | 14797-55-8 | mg/L | 10 | NM | 0.0031 U | | **3.23** | **2.12** | **0.74** | **0.3600** | **0.406** | 0.558 | **0.054** | **0.131** | | 0.02 U | 0.0200 U |
| Nitrite | 14797-65-0 | mg/L | 1 | NM | 0.0035 U | | **0.016** | 0.0050 U | **0.0520** | **0.0840** | 0.0035 U | 0.0035 U | **0.005** | 0.0050 U | | 0.005 U | 0.0050 U |
| Sulfate | 14808-79-8 | mg/L | 250 | NM | **54.3** | | | | **37.1** | **23.7** | **32.4** | 43.7 | **95.4** | | | | |
| Alkalinity | ALK | mg/L | * | NM | **207 J3** | | **125** | **117** | **108** | **146** | **178** | 226 | **191** | **26.4** | | **52.8** | **62.5** |
| Total Organic Carbon | TOC | mg/L | * | NM | **13.69** | | **12.20** | **14.36** | **13.57** | **12.39** | **14.19** | 13.89 | **13.22** | **90.3** | | **88.48** | **32.49** |
| Total Disolved Solids | TDS | mg/L | * | NM | **354.0** | | **276** | **276** | **224** | **186** | **282** | 372 | **392** | **238** | | **298** | **248** |
| Total Sulfide | 18496-25-8 | mg/L | * | NM | 0.10 U | | 0.10 U | 0.10 U | 0.10 U | **0.27** | 0.10 U | 0.10 U | 0.10 U | 0.10 U | | 0.10 U | **0.28** |
| Chloride | 16887-00-6 | mg/L | 250 | NM | **4.60** | | **8.25** | **7.21** | **17.2** | **8.33** | **10.1** | 9.29 | **7.04** | 5.00 U | | 5 U | **6.46** |
| Nitrate-Nitrite Nitrogen | | mg/L | * | | | | **3.25** | | **0.787** | | | | | | | 0.020 U | |
| **Gases** | | | | | | | | | | | | | | | | | |
| Hydrogen (nm/L) | 1333-74-0 | nM/L | * | NM | **1.5** | | NS | **3.8** | **2.4** | **2.4** | **2.6** | 5.5 | **1.6** | **S** | | **3.2** | **5.5** |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-08BR | | | | OLD-36-08BR | OLD-36-09CR | | | | | | | OLD-36-09CR | OLD-36-010BR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-08BR | OLD-36-08BR | OLD-36-08BR | OLD-36-08BR | OLD-36-08BR | OLD-36-09CR | OLD-36-09CR | OLD-36-09CR | OLD-36-09CR | OLD-36-09CR | OLD-36-09CR | OLD-36-09CR | OLD-36-09CR | OLD-36-010BR |
| Sample Date | | | | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/25/2003 | 6/17/2003 | 9/16/2003 | 12/3/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/25/2003 |
| **Organic Parameters** | | | | | | | | | | | | | | | | | |
| TRPH | 5289290-40-0 | mg/L | 5 | 1.71 | 2.09 | 0.56 | 0.22 U | **0.16 I V** | | 0.24 U | 0.21 U | 0.21 U | 0.21 U | 0.22 U | 0.22 U | **0.06 I V** | |
| **Volatiles** | | | | | | | | | | | | | | | | | |
| Acetic Acid (mg/L) | 64-19-7 | mg/L | * | **1.500** | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | |
| Propionic Acid (mg/L) | 79-09-4 | mg/L | * | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | |
| Pyruvic Acid (mg/L) | 127-17-3 | mg/L | * | 10.00 U | 2.000 U | 2.000 U | 2.000 U | 2000 U | | 1.00 U | 10.00 U | 10.00 U | 2.000 U | 2.000 U | 2.000 U | 2000 U | |
| n-Butyric Acid (mg/L) | 107-92-6 | mg/L | * | 1.00 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | |
| 1,1-Dichloropropene | 563-58-6 | µg/L | * | | | | 1.0000 U | 0.10400 U | | | | | | | 1.0000 U | 0.10400 U | |
| L-Lactic Acid (mg/L) | 50-21-5 | mg/L | * | 25.00 U | 10.00 U | 10.00 U | 10.00 U | 10000 U | | 25.00 U | 25.00 U | 25.00 U | 10.00 U | 10.00 U | 10.00 U | 10000 U | |
| Methane | 74-82-8 | µg/L | * | **16700** | **12200** | **9980** | **14600** | **13100** | | **1380** | **2550** | **1830** | **3160** | **3230** | **6080** | **4890** | |
| Ethene | 74-85-1 | µg/L | * | 130 U | 130 U | 130 U | 26 U | 18 U | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 18 U | |
| Ethane | 74-84-0 | µg/L | * | 130 U | 130 U | 130 U | 26 U | 15 U | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 15 U | |
| Acetone | 67-64-1 | µg/L | 700 | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 1.299 U | 10 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 1.299 U | 10 U |
| Benzene | 71-43-2 | µg/L | 1 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.143 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.143 U | 1 U |
| Bromobenzene | 108-86-1 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.175 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.175 U | |
| Bromochloromethane | 74-97-5 | µg/L | 91 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.301 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.301 U | |
| Bromoform | 75-25-2 | µg/L | 4.4 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.245 U | 4 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.245 U | 4 U |
| Bromomethane | 74-83-9 | µg/L | 9.8 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.357 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.357 U | 5 U |
| 2-Butanone (MEK) | 78-93-3 | µg/L | 4200 | | | | 1.00 U | 0.729 U | | | | | | | 1.00 U | 0.729 U | |
| n-butylbenzene | 104-51-8 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.159 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.159 U | |
| sec-Butylbenzene | 135-98-8 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.262 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.262 U | |
| t-Butylbenzene | 98-06-6 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.347 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.347 U | |
| Carbon disulfide | 75-15-0 | µg/L | 700 | 2.00 U | **1.03** | 1.00 U | 1.00 U | 0.140 U | 5 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | **1.35** | 0.140 U | 5 U |
| Carbon Tetrachloride | 56-23-5 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.406 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.406 U | 3 U |
| Chlorobenzene | 108-90-7 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.105 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.105 U | 5 U |
| Chloroethane | 75-00-3 | µg/L | 12 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.316 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.316 U | 5 U |
| 2-chloroethylvinylether | 110-75-8 | µg/L | 175 | | | | 1.00 U | 4.62 U | | | | | | | 1.00 U | 4.62 U | |
| Chloroform | 67-66-3 | µg/L | 5.7 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.111 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.111 U | 5 U |
| Chloromethane | 74-87-3 | µg/L | 2.7 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.320 U | 2.7 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.320 U | 2.7 U |
| 2-Chlorotoluene | 95-49-8 | µg/L | 140 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.366 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.366 U | |
| 4-Chlorotoluene | 106-43-4 | µg/L | 140 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.099 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.099 U | |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | µg/L | * | | | | 1.00 U | 0.880 U | | | | | | | 1.00 U | 0.880 U | |
| Dibromochloromethane | 124-48-1 | µg/L | 0.4 | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.157 U | 0.4 U | 0.180 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.157 U | 0.4 U |
| 1,2 - Dibromoethane | 106-93-4 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.147 U | 0.2 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.147 U | 0.2 U |
| Dibromomethane | 74-95-3 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.216 U | | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.216 U | |
| 1,2 - Dichlorobenzene | 95-50-1 | µg/L | 600 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.151 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.151 U | 5 U |
| 1,3 - Dichlorobenzene | 541-73-1 | µg/L | 10 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.078 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.078 U | 5 U |
| 1,4-Dichlorobenzene | 106-46-7 | µg/L | 75 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.0398 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.0398 U | 5 U |
| Dichlorodifluoromethane | 75-71-8 | µg/L | 1400 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.392 U | 5 U | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.392 U | 5 U |
| 1,1-Dichloroethane | 75-35-3 | µg/L | 70 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.172 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.172 U | 5 U |
| 1,2-Dichloroethane | 107-06-2 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.087 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.087 U | 3 U |
| 1,1-Dichloroethene | 75-35-4 | µg/L | 7 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2682 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2682 U | 5 U |
| cis-1,2-Dichloroethene | 156-59-2 | µg/L | 70 | **50.1** | **45.4** | **61** | **31.6** | **62.39** | **1.59 J** | **2.18** | **1.71** | **3.50** | **8.39** | **14.90** | **9.99** | **4.820** | **1.6 J** |
| Trans-1,2-Dichloroethene | 156-60-5 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2371 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2371 U | 5 U |
| 1,2-Dichloropropane | 78-87-5 | µg/L | 5 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.886 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.886 U | 5 U |
| 1,3 - Dichloropropane | 142-28-9 | µg/L | * | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.2000 U | | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.2000 U | |
| 2,2 -Dichloropropane | 594-20-7 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2341 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2341 U | |
| *cis*-1,3-Dichloropropene[d] | 542-75-6 | µg/L | 0.2 | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.1515 U | 5 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.1515 U | 5 U |
| Trans-1,3-Dichloropropene | 10061-02-6 | µg/L | 0.2 | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1919 U | 5 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1919 U | 5 U |
| Ethylbenzene | 100-41-4 | µg/L | 30 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2010 U | 5 U | 0.080 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2010 U | 5 U |
| Hexachlorobutadiene | 87-68-3 | µg/L | * | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.7084 U | | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.7084 U | |
| 2-Hexanone | 591-78-6 | µg/L | 280 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8353 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8353 U | 10 U |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-08BR | | | | OLD-36-08BR | OLD-36-09CR | | | | | | | OLD-36-09CR | OLD-36-010BR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-08BR | OLD-36-08BR | OLD-36-08BR | OLD-36-08BR | OLD-36-08BR | OLD-36-09CR | OLD-36-09CR | OLD-36-09CR | OLD-36-09CR | OLD-36-09CR | OLD-36-09CR | OLD-36-09CR | OLD-36-09CR | OLD-36-010BR |
| Sample Date | | | | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/25/2003 | 6/17/2003 | 9/16/2003 | 12/3/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/25/2003 |
| **Volatiles Continued** | | | | | | | | | | | | | | | | | |
| Isopropylbenzene | 98-82-8 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1416 U | 0.8 U | 0.460 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1416 U | 0.8 U |
| 4-Isopropyltoluene | 99-87-6 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1757 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1757 U | |
| 4-Methyl-2-Pentanone | 108-10-1 | µg/L | 560 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3544 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3544 U | 10 U |
| Methylene Chloride | 75-09-2 | µg/L | 5 | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1735 U | 5 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1735 U | 5 U |
| Naphthalene | 91-20-3 | µg/L | 20 | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1804 U | | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1804 U | |
| n-propylbenzene | 103-65-1 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2416 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2416 U | |
| Styrene | 100-42-5 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1731 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1731 U | 5 U |
| 1,1,1,2 - Tetrachloroethane | 630-20-6 | µg/L | 1.3 | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.1988 U | | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.1988 U | |
| 1,1,2,2 - Tetrachloroethane | 79-34-5 | µg/L | 0.2 | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1154 U | 0.2 UJ | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1154 U | 0.2 UJ |
| Tetrachloroethene | 127-18-4 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2419 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2419 U | 3 U |
| Toluene | 108-88-3 | µg/L | 40 | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.1417 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.1417 U | 5 U |
| 1,2,3 - Trichlorobenzene | 87-61-6 | µg/L | 70 | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.8373 U | | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.8373 U | |
| 1,2,4-Trichlorobenzene | 120-82-1 | µg/L | 70 | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.3331 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.3331 U | 5 U |
| 1,1,1 - Trichloroethane | 71-55-6 | µg/L | 200 | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.2710 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.2710 U | 5 U |
| 1,1,2-Trichloroethane | 79-00-5 | µg/L | 5 | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.3098 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.3098 U | 5 U |
| Trichloroethene | 79-01-6 | µg/L | 3 | **2.55** | **1.31** | 1.00 U | 1.00 U | 0.2242 U | **6.49 J** | **6.96** | **6.13** | **16.6** | **27.3** | **43.0** | **38.9** | **25.60** | **1.42 J** |
| 1,2,3 - Trichloropropane | 96-18-4 | µg/L | 200 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2766 U | | 0.200 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2766 U | |
| 1,2,4-Trimethylbenzene | 95-63-6 | µg/L | 10 | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1026 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1026 U | |
| 1,3,5-Trimethylbenzene | 108-67-8 | µg/L | 10 | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1720 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1720 U | |
| Vinyl chloride | 75-01-4 | µg/L | 1 | 1.00 U | **1.07** | 1.00 U | 1.00 U | 0.3022 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3022 U | 1 U |
| Xylenes | 1330-20-7 | µg/L | 20 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.220 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.220 U | 5 U |
| Bromodichloromethane | 75-27-4 | µg/L | 0.6 | | | | 0.600 U | 0.1837 U | | | | | | | 0.600 U | 0.1837 U | |
| Trichlorofluoromethane | 79-69-4 | µg/L | 2100 | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3268 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3268 U | 5 U |
| Methyl *tert* -butyl ether | 1634-04-4 | µg/L | 50 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2359 U | 5 U | 0.490 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2359 U | 5 U |
| **Inorganics** | | | | | | | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | µg/L | 300 | **541.1** | **499.5** | **355.0** | **536.3** | **524.0** | | **1536** | **1408** | **1092** | **988.1** | **897.6** | **533.8** | **487.3** | |
| **Water Chemistry** | | | | | | | | | | | | | | | | | |
| Nitrate | 14797-55-8 | mg/L | 10 | 0.02 U | **0.005** | **0.025** | 0.0031 U | **0.0150** | | 0.02 U | 0.0200 U | 0.200 U | 0.0031 U | 0.0031 U | 0.0031 U | 0.0031 U | |
| Nitrite | 14797-65-0 | mg/L | 1 | 0.0050 U | 0.0035 U | 0.0035 U | 0.0035 U | 0.0035 U | | **0.012** | 0.0050 U | 0.0050 U | 0.0035 U | 0.0035 U | 0.0035 U | 0.0035 U | |
| Sulfate | 14808-79-8 | mg/L | 250 | 5.00 U | 2.00 U | 2.00 U | 11.6 | 2.00 U | | | | **14.2** | **14.1** | **8.97** | 14.2 | **10.2** | |
| Alkalinity | ALK | mg/L | * | **54.3** | **66.9** | **56.2** | 58 | **83.3 J3** | | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | 1.0 U | **4.1 J3** | |
| Total Organic Carbon | TOC | mg/L | * | **17.65** | **13.2** | **13.12** | 8.59 | **11.4** | | **5.29** | **8.78** | **4.51** | **5.55** | **5.5** | 4.85 | **3.45** | |
| Total Disolved Solids | TDS | mg/L | * | **192** | **176** | **170** | 178 | **172** | | **148** | **302** | **146** | **92** | **148** | 108 | **70** | |
| Total Sulfide | 18496-25-8 | mg/L | * | **0.34** | **0.49** | 0.10 U | 0.10 U | 0.10 U | | 0.10 U | 0.10 U | 0.10 U | **1.9** | 0.10 U | 0.10 U | **1.52** | |
| Chloride | 16887-00-6 | mg/L | 250 | **6.67** | **6.94** | **4.69** | 5.04 | **6.27** | | **13.5** | **7.09** | **5.14** | **6.36** | **6.77** | 8.13 | **7.75** | |
| Nitrate-Nitrite Nitrogen | | mg/L | * | 0.020 U | | | | | | 0.020 U | | 0.200 U | | | | | |
| **Gases** | | | | | | | | | | | | | | | | | |
| Hydrogen (nm/L) | 1333-74-0 | nM/L | * | **8.7** | **4.1** | **2.6** | 6.3 | **2.9** | | **3.1** | **5.6** | **2.4** | **2.7** | **2.4** | 4 | **1.6** | |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-10BR | | | | | | | OLD-36-11CR | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[d] | OLD-36-10BR | OLD-36-10BR | OLD-36-10BR | OLD-36-10BR | OLD-36-10BR | OLD-36-10BR | OLD-36-10BR | OLD-36-11CR | OLD-36-11CR | OLD-36-11CR | OLD-36-11CR | OLD-36-11CR | OLD-36-11CR |
| Sample Date | | | | 6/17/2003 | 9/15/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/25/2003 | 6/16/2003 | 9/15/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 |
| **Organic Parameters** | | | | | | | | | | | | | | | | |
| TRPH | 5289290-40-0 | mg/L | 5 | 0.22 U | 0.22 U | 0.21 U | 0.20 U | 0.21 U | 0.21 U | **0.03 I V** | | 0.10 U | 0.22 U | 0.22 U | 0.20 U | 0.21 U |
| **Volatiles** | | | | | | | | | | | | | | | | |
| Acetic Acid (mg/L) | 64-19-7 | mg/L | * | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U |
| Propionic Acid (mg/L) | 79-09-4 | mg/L | * | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U |
| Pyruvic Acid (mg/L) | 127-17-3 | mg/L | * | 1.00 U | 10.00 U | 10.00 U | 2.000 U | 2.000 U | 2.000 U | 2000 U | | 1.00 U | 10.00 U | 10.00 U | 2.000 U | 2.000 U |
| n-Butyric Acid (mg/L) | 107-92-6 | mg/L | * | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U |
| 1,1-Dichloropropene | 563-58-6 | µg/L | * | | | | | | 1.0000 U | 0.10400 U | | | | | | |
| L-Lactic Acid (mg/L) | 50-21-5 | mg/L | * | 25.00 U | 25.00 U | 25.00 U | 10.00 U | 10.00 U | 10.00 U | 10000 U | | 25.00 U | 25.00 U | 25.00 U | 10.00 U | 10.00 U |
| Methane | 74-82-8 | µg/L | * | **930** | **562** | **52** | 26 U | **162** | **231** | 5 U | | **302** | **934** | **387** | **351** | **1040** |
| Ethene | 74-85-1 | µg/L | * | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 18 U | | 26 U | 26 U | 26 U | 26 U | 26 U |
| Ethane | 74-84-0 | µg/L | * | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 15 U | | 26 U | 26 U | 26 U | 26 U | 26 U |
| Acetone | 67-64-1 | µg/L | 700 | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 1.299 U | 10 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U |
| Benzene | 71-43-2 | µg/L | 1 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.143 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Bromobenzene | 108-86-1 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.175 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Bromochloromethane | 74-97-5 | µg/L | 91 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.301 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Bromoform | 75-25-2 | µg/L | 4.4 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.245 U | 4 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Bromomethane | 74-83-9 | µg/L | 9.8 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.357 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 2-Butanone (MEK) | 78-93-3 | µg/L | 4200 | | | | | | 1.00 U | 0.729 U | | | | | | |
| n-butylbenzene | 104-51-8 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.159 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| sec-Butylbenzene | 135-98-8 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.262 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| t-Butylbenzene | 98-06-6 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.347 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Carbon disulfide | 75-15-0 | µg/L | 700 | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.140 U | 5 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U |
| Carbon Tetrachloride | 56-23-5 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.406 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Chlorobenzene | 108-90-7 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.105 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Chloroethane | 75-00-3 | µg/L | 12 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.316 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 2-chloroethylvinylether | 110-75-8 | µg/L | 175 | | | | | | 1.00 U | 4.62 U | | | | | | |
| Chloroform | 67-66-3 | µg/L | 5.7 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.111 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Chloromethane | 74-87-3 | µg/L | 2.7 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.320 U | 2.7 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 2-Chlorotoluene | 95-49-8 | µg/L | 140 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.366 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 4-Chlorotoluene | 106-43-4 | µg/L | 140 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.099 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | µg/L | * | | | | | | 1.00 U | 0.880 U | | | | | | |
| Dibromochloromethane | 124-48-1 | µg/L | 0.4 | 0.180 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.157 U | 0.4 U | 0.180 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U |
| 1,2 - Dibromoethane | 106-93-4 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.147 U | 0.2 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Dibromomethane | 74-95-3 | µg/L | * | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.216 U | | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2 - Dichlorobenzene | 95-50-1 | µg/L | 600 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.151 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,3 - Dichlorobenzene | 541-73-1 | µg/L | 10 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.078 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,4-Dichlorobenzene | 106-46-7 | µg/L | 75 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.0398 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Dichlorodifluoromethane | 75-71-8 | µg/L | 1400 | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.392 U | 5 U | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,1-Dichloroethane | 75-35-3 | µg/L | 70 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.172 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2-Dichloroethane | 107-06-2 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.087 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,1-Dichloroethene | 75-35-4 | µg/L | 7 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2682 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| cis-1,2-Dichloroethene | 156-59-2 | µg/L | 70 | **1.58** | **2.87** | **4.63** | **5.77** | **7.61** | **4.34** | **3.200** | 5 U | 1.00 U | 1.00 U | 1.00 U | **1.60** | **1.94** |
| Trans-1,2-Dichloroethene | 156-60-5 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2371 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2-Dichloropropane | 78-87-5 | µg/L | 5 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.886 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,3 - Dichloropropane | 142-28-9 | µg/L | * | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.2000 U | | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U |
| 2,2 -Dichloropropane | 594-20-7 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2341 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| *cis* -1,3-Dichloropropene[d] | 542-75-6 | µg/L | 0.2 | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.1515 U | 5 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U |
| Trans-1,3-Dichloropropene | 10061-02-6 | µg/L | 0.2 | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1919 U | 5 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U |
| Ethylbenzene | 100-41-4 | µg/L | 30 | 0.080 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2010 U | 5 U | 0.080 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Hexachlorobutadiene | 87-68-3 | µg/L | * | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.7084 U | | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U |
| 2-Hexanone | 591-78-6 | µg/L | 280 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8353 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-10BR | | | | | | | OLD-36-11CR | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-10BR | OLD-36-10BR | OLD-36-10BR | OLD-36-10BR | OLD-36-10BR | OLD-36-10BR | OLD-36-10BR | OLD-36-11CR | OLD-36-11CR | OLD-36-11CR | OLD-36-11CR | OLD-36-11CR | OLD-36-11CR |
| Sample Date | | | | 6/17/2003 | 9/15/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/25/2003 | 6/16/2003 | 9/15/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 |
| **Volatiles Continued** | | | | | | | | | | | | | | | | |
| Isopropylbenzene | 98-82-8 | µg/L | * | 0.460 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1416 U | 0.8 U | 0.460 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 4-Isopropyltoluene | 99-87-6 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1757 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 4-Methyl-2-Pentanone | 108-10-1 | µg/L | 560 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3544 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Methylene Chloride | 75-09-2 | µg/L | 5 | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1735 U | 5 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U |
| Naphthalene | 91-20-3 | µg/L | 20 | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1804 U | | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U |
| n-propylbenzene | 103-65-1 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2416 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Styrene | 100-42-5 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1731 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,1,1,2 - Tetrachloroethane | 630-20-6 | µg/L | 1.3 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1988 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U |
| 1,1,2,2 - Tetrachloroethane | 79-34-5 | µg/L | 0.2 | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1154 U | 0.2 UJ | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U |
| Tetrachloroethene | 127-18-4 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2419 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Toluene | 108-88-3 | µg/L | 40 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1417 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U |
| 1,2,3 - Trichlorobenzene | 87-61-6 | µg/L | 70 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8373 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | µg/L | 70 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3331 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U |
| 1,1,1 - Trichloroethane | 71-55-6 | µg/L | 200 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2710 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U |
| 1,1,2-Trichloroethane | 79-00-5 | µg/L | 5 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3098 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U |
| Trichloroethene | 79-01-6 | µg/L | 3 | **1.80** | 2.00 U | **2.34** | **2.11** | **1.48** | **1.07** | 0.2242 U | 3 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U |
| 1,2,3 - Trichloropropane | 96-18-4 | µg/L | 200 | 0.200 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2766 U | | 0.200 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | µg/L | 10 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1026 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | µg/L | 10 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1720 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U |
| Vinyl chloride | 75-01-4 | µg/L | 1 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3022 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Xylenes | 1330-20-7 | µg/L | 20 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.220 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| Bromodichloromethane | 75-27-4 | µg/L | 0.6 | | | | | | 0.600 U | 0.1837 U | | | | | | |
| Trichlorofluoromethane | 79-69-4 | µg/L | 2100 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3268 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U |
| Methyl *tert* -butyl ether | 1634-04-4 | µg/L | 50 | 0.490 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2359 U | 5 U | 0.490 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U |
| **Inorganics** | | | | | | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | µg/L | 300 | **165.4** | **137.2** | **111.7** | **126.9** | **117.3** | **138.9** | **115.2 I V** | | **218.8** | **137.2** | **62.9** | **147.3** | **48.1** |
| **Water Chemistry** | | | | | | | | | | | | | | | | |
| Nitrate | 14797-55-8 | mg/L | 10 | 0.02 U | 0.0200 U | 0.02 U | **0.0100** | 0.0031 U | 0.0031 U | 0.0031 U | | 0.02 U | 0.0200 U | 0.02 U | 0.0031 U | 0.0031 U |
| Nitrite | 14797-65-0 | mg/L | 1 | 0.005 U | 0.0050 U | 0.0050 U | 0.0035 U | 0.0035 U | 0.0035 U | 0.0035 U | | **0.022** | 0.0050 U | 0.0050 U | 0.0035 U | 0.0035 U |
| Sulfate | 14808-79-8 | mg/L | 250 | | | **17.3** | **17.9** | **15.7** | 19.2 | **17.5** | | | | **24.1** | **23.7** | **22.6** |
| Alkalinity | ALK | mg/L | * | **65.5** | **65.1** | **52** | **55** | **59.8** | 54 | **50.0 J3** | | **40** | **42.2** | **45.1** | **46.2** | **89.5** |
| Total Organic Carbon | TOC | mg/L | * | **7.31** | **8.75** | **7.78** | **7.46** | **10.02** | 9.07 | **7.85** | | **8.10** | **7.81** | **7.38** | **7.55** | **8.68** |
| Total Disolved Solids | TDS | mg/L | * | **176** | **170** | **136** | **134** | **128** | 118 | **120.0** | | **194** | **150** | **146** | **126** | **112** |
| Total Sulfide | 18496-25-8 | mg/L | * | 0.10 U | 0.10 U | 0.10 U | **0.49** | **0.52** | 0.10 U | 0.10 U | | 0.10 U | 150 | 0.10 U | 0.10 U | **0.52** |
| Chloride | 16887-00-6 | mg/L | 250 | **6.98** | **6.37** | **10.1** | **5.25** | **4.59** | 4.52 | **3.41** | | 0.02 U | **8.94** | **6.26** | **6.39** | **5.10** |
| Nitrate-Nitrite Nitrogen | | mg/L | * | 0.018 U | | 0.020 U | | | | | | 0.018 U | | 0.020 U | | |
| **Gases** | | | | | | | | | | | | | | | | |
| Hydrogen (nm/L) | 1333-74-0 | nM/L | * | NS | **3.9** | **6.8** | **2.4** | **2.5** | NM | **1.6** | | NS | **4.8** | **2.5** | **2.3** | **2.5** |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-11CR | | OLD-36-18CR | | | | | | | | OLD-36-19AR | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-11CR | OLD-36-11CR | OLD-36-18CR | OLD-36-18CR | OLD-36-18CR | OLD-36-18CR | OLD-36-18CR | OLD-36-18CR | OLD-36-18CR | OLD-36-18CR | OLD-36-19AR | OLD-36-19AR | OLD-36-19AR | OLD-36-19AR |
| Sample Date | | | | 9/11/2004 | 12/6/2004 | 3/26/2003 | 6/17/2003 | 9/16/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/25/2003 | 6/17/2003 | 9/17/2003 | 12/2/2003 |
| **Organic Parameters** | | | | | | | | | | | | | | | | | |
| TRPH | 5289290-40-0 | mg/L | 5 | 0.20 U | **0.03 I V** | | 0.27 U | 0.22 U | 0.22 U | 0.20 U | 0.22 U | 0.20 U | **0.06 I V** | | 0.10 U | 0.21 U | 0.21 U |
| **Volatiles** | | | | | | | | | | | | | | | | | |
| Acetic Acid (mg/L) | 64-19-7 | mg/L | * | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.00 U | 1.000 U |
| Propionic Acid (mg/L) | 79-09-4 | mg/L | * | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.00 U | 1.000 U |
| Pyruvic Acid (mg/L) | 127-17-3 | mg/L | * | 2.000 U | 2000 U | | 1.00 U | 10.00 U | 10.00 U | 2.000 U | 2.000 U | 2.000 U | 2000 U | | 1.00 U | 10.00 U | 10.00 U |
| n-Butyric Acid (mg/L) | 107-92-6 | mg/L | * | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.00 U | 1.000 U |
| 1,1-Dichloropropene | 563-58-6 | µg/L | * | 1.0000 U | 0.10400 U | | | | | | | 1.0000 U | 0.10400 U | | | | |
| L-Lactic Acid (mg/L) | 50-21-5 | mg/L | * | 10.00 U | 10000 U | | 25.00 U | 25.00 U | 25.00 U | 10.00 U | 10.00 U | 10.00 U | 10000 U | | 25.00 U | 25.00 U | 25.00 U |
| Methane | 74-82-8 | µg/L | * | **996** | **177** | | **186** | **141** | 26 U | 26 U | 26 U | 26 U | 5 U | | 26 U | **132** | 26 U |
| Ethene | 74-85-1 | µg/L | * | 26 U | 18 U | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 18 U | | 26 U | **115** | 26 U |
| Ethane | 74-84-0 | µg/L | * | 26 U | 15 U | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 15 U | | 26 U | 26 U | 26 U |
| Acetone | 67-64-1 | µg/L | 700 | 10.0 U | 1.299 U | 10 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 1.299 U | 10 U | 10.0 U | 10.0 U | 10.0 U |
| Benzene | 71-43-2 | µg/L | 1 | 1.00 U | 0.143 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.143 U | 1 U | 1.00 U | 1.00 U | 1.00 U |
| Bromobenzene | 108-86-1 | µg/L | * | 1.00 U | 0.175 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.175 U | | 1.00 U | 1.00 U | 1.00 U |
| Bromochloromethane | 74-97-5 | µg/L | 91 | 1.00 U | 0.301 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.301 U | | 1.00 U | 1.00 U | 1.00 U |
| Bromoform | 75-25-2 | µg/L | 4.4 | 1.00 U | 0.245 U | 4 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.245 U | 4 U | 1.00 U | 1.00 U | 1.00 U |
| Bromomethane | 74-83-9 | µg/L | 9.8 | 1.00 U | 0.357 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.357 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| 2-Butanone (MEK) | 78-93-3 | µg/L | 4200 | 1.00 U | 0.729 U | | | | | | | 1.00 U | 0.729 U | | | | |
| n-butylbenzene | 104-51-8 | µg/L | * | 1.00 U | 0.159 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.159 U | | 1.00 U | 1.00 U | 1.00 U |
| sec-Butylbenzene | 135-98-8 | µg/L | * | 1.00 U | 0.262 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.262 U | | 1.00 U | 1.00 U | 1.00 U |
| t-Butylbenzene | 98-06-6 | µg/L | * | 1.00 U | 0.347 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.347 U | | 1.00 U | 1.00 U | 1.00 U |
| Carbon disulfide | 75-15-0 | µg/L | 700 | 1.00 U | 0.140 U | **4.01 J** | 2.00 U | 2.00 U | 2.00 U | 1.00 U | **2.07** | 1.00 U | 0.140 U | 5 U | 2.00 U | 2.00 U | 2.00 U |
| Carbon Tetrachloride | 56-23-5 | µg/L | 3 | 1.00 U | 0.406 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.406 U | 3 U | 1.00 U | 1.00 U | 1.00 U |
| Chlorobenzene | 108-90-7 | µg/L | 100 | 1.00 U | 0.105 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.105 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| Chloroethane | 75-00-3 | µg/L | 12 | 1.00 U | 0.316 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.316 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| 2-chloroethylvinylether | 110-75-8 | µg/L | 175 | 1.00 U | 4.62 U | | | | | | | 1.00 U | 4.62 U | | | | |
| Chloroform | 67-66-3 | µg/L | 5.7 | 1.00 U | 0.111 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.111 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| Chloromethane | 74-87-3 | µg/L | 2.7 | 1.00 U | 0.320 U | 2.7 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.320 U | 2.7 U | 1.00 U | 1.00 U | 1.00 U |
| 2-Chlorotoluene | 95-49-8 | µg/L | 140 | 1.00 U | 0.366 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.366 U | | 1.00 U | 1.00 U | 1.00 U |
| 4-Chlorotoluene | 106-43-4 | µg/L | 140 | 1.00 U | 0.099 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.099 U | | 1.00 U | 1.00 U | 1.00 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | µg/L | * | 1.00 U | 0.880 U | | | | | | | 1.00 U | 0.880 U | | | | |
| Dibromochloromethane | 124-48-1 | µg/L | 0.4 | 0.400 U | 0.157 U | 0.4 U | 0.180 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.157 U | 0.4 U | 0.180 U | 0.180 U | 0.400 U |
| 1,2 - Dibromoethane | 106-93-4 | µg/L | * | 1.00 U | 0.147 U | 0.2 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.147 U | 0.2 U | 1.00 U | 1.00 U | 1.00 U |
| Dibromomethane | 74-95-3 | µg/L | * | 1.00 U | 0.216 U | | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.216 U | | 0.180 U | 0.180 U | 1.00 U |
| 1,2 - Dichlorobenzene | 95-50-1 | µg/L | 600 | 1.00 U | 0.151 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.151 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| 1,3 - Dichlorobenzene | 541-73-1 | µg/L | 10 | 1.00 U | 0.078 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.078 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| 1,4-Dichlorobenzene | 106-46-7 | µg/L | 75 | 1.00 U | 0.0398 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.0398 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| Dichlorodifluoromethane | 75-71-8 | µg/L | 1400 | 1.00 U | 0.392 U | 5 U | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.392 U | 5 U | 0.180 U | 0.180 U | 1.00 U |
| 1,1-Dichloroethane | 75-35-3 | µg/L | 70 | 1.00 U | 0.172 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.172 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2-Dichloroethane | 107-06-2 | µg/L | 3 | 1.00 U | 0.087 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.087 U | 3 U | 1.00 U | 1.00 U | 1.00 U |
| 1,1-Dichloroethene | 75-35-4 | µg/L | 7 | 1.00 U | 0.2682 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2682 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| cis-1,2-Dichloroethene | 156-59-2 | µg/L | 70 | **1.68** | 0.2776 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2776 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| Trans-1,2-Dichloroethene | 156-60-5 | µg/L | 100 | 1.00 U | 0.2371 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2371 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| 1,2-Dichloropropane | 78-87-5 | µg/L | 5 | 1.00 U | 0.886 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.886 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| 1,3 - Dichloropropane | 142-28-9 | µg/L | * | 0.220 U | 0.2000 U | | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.2000 U | | 0.220 U | 0.220 U | 0.220 U |
| 2,2 -Dichloropropane | 594-20-7 | µg/L | * | 1.00 U | 0.2341 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2341 U | | 1.00 U | 1.00 U | 1.00 U |
| *cis*-1,3-Dichloropropene[d] | 542-75-6 | µg/L | 0.2 | 0.230 U | 0.1515 U | 5 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.1515 U | 5 U | 0.230 U | 0.230 U | 0.230 U |
| Trans-1,3-Dichloropropene | 10061-02-6 | µg/L | 0.2 | 0.200 U | 0.1919 U | 5 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1919 U | 5 U | 0.200 U | 0.200 U | 0.200 U |
| Ethylbenzene | 100-41-4 | µg/L | 30 | 1.00 U | 0.2010 U | 5 U | 0.080 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2010 U | 5 U | 0.080 U | 0.080 U | 1.00 U |
| Hexachlorobutadiene | 87-68-3 | µg/L | * | 0.550 U | 0.7084 U | | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.7084 U | | 0.550 U | 0.550 U | 0.550 U |
| 2-Hexanone | 591-78-6 | µg/L | 280 | 1.00 U | 0.8353 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8353 U | 10 U | 1.00 U | 1.00 U | 1.00 U |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-11CR | | OLD-36-18CR | | | | | | | | OLD-36-19AR | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-11CR | OLD-36-11CR | OLD-36-18CR | OLD-36-18CR | OLD-36-18CR | OLD-36-18CR | OLD-36-18CR | OLD-36-18CR | OLD-36-18CR | OLD-36-18CR | OLD-36-19AR | OLD-36-19AR | OLD-36-19AR | OLD-36-19AR |
| Sample Date | | | | 9/11/2004 | 12/6/2004 | 3/26/2003 | 6/17/2003 | 9/16/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/25/2003 | 6/17/2003 | 9/17/2003 | 12/2/2003 |
| **Volatiles Continued** | | | | | | | | | | | | | | | | | |
| Isopropylbenzene | 98-82-8 | µg/L | * | 1.00 U | 0.1416 U | 0.8 U | 0.460 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1416 U | 0.8 U | 0.460 U | 0.460 U | 1.00 U |
| 4-Isopropyltoluene | 99-87-6 | µg/L | * | 1.00 U | 0.1757 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1757 U | | 1.00 U | 1.00 U | 1.00 U |
| 4-Methyl-2-Pentanone | 108-10-1 | µg/L | 560 | 1.00 U | 0.3544 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3544 U | 10 U | 1.00 U | 1.00 U | 1.00 U |
| Methylene Chloride | 75-09-2 | µg/L | 5 | 5.00 U | 0.1735 U | 5 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1735 U | 5 U | 5.00 U | 5.00 U | 5.00 U |
| Naphthalene | 91-20-3 | µg/L | 20 | 5.00 U | 0.1804 U | | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1804 U | | 5.00 U | 5.00 U | 5.00 U |
| n-propylbenzene | 103-65-1 | µg/L | * | 1.00 U | 0.2416 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2416 U | | 1.00 U | 1.00 U | 1.00 U |
| Styrene | 100-42-5 | µg/L | 100 | 1.00 U | 0.1731 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1731 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| 1,1,1,2 - Tetrachloroethane | 630-20-6 | µg/L | 1.3 | 1.00 U | 0.1988 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1988 U | | 1.00 U | 1.00 U | 2.00 U |
| 1,1,2,2 - Tetrachloroethane | 79-34-5 | µg/L | 0.2 | 0.200 U | 0.1154 U | 0.2 UJ | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1154 U | 0.2 UJ | 0.200 U | 0.200 U | 0.200 U |
| Tetrachloroethene | 127-18-4 | µg/L | 3 | 1.00 U | 0.2419 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2419 U | 3 U | 1.00 U | 1.00 U | 1.00 U |
| Toluene | 108-88-3 | µg/L | 40 | 1.00 U | 0.1417 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1417 U | 5 U | 1.00 U | 1.00 U | 2.00 U |
| 1,2,3 - Trichlorobenzene | 87-61-6 | µg/L | 70 | 1.00 U | 0.8373 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8373 U | | 1.00 U | 1.00 U | 2.00 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | µg/L | 70 | 1.00 U | 0.3331 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3331 U | 5 U | 1.00 U | 1.00 U | 2.00 U |
| 1,1,1 - Trichloroethane | 71-55-6 | µg/L | 200 | 1.00 U | 0.2710 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2710 U | 5 U | 1.00 U | 1.00 U | 2.00 U |
| 1,1,2-Trichloroethane | 79-00-5 | µg/L | 5 | 1.00 U | 0.3098 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3098 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| Trichloroethene | 79-01-6 | µg/L | 3 | 1.00 U | 0.2242 U | 3 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2242 U | 3 U | 1.00 U | 1.00 U | 2.00 U |
| 1,2,3 - Trichloropropane | 96-18-4 | µg/L | 200 | 1.00 U | 0.2766 U | | 0.200 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2766 U | | 0.200 U | 0.200 U | 1.00 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | µg/L | 10 | 1.00 U | 0.1026 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1026 U | | 1.00 U | 1.00 U | 2.00 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | µg/L | 10 | 1.00 U | 0.1720 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1720 U | | 1.00 U | 1.00 U | 2.00 U |
| Vinyl chloride | 75-01-4 | µg/L | 1 | 1.00 U | 0.3022 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3022 U | 1 U | 1.00 U | 1.00 U | 1.00 U |
| Xylenes | 1330-20-7 | µg/L | 20 | 1.00 U | 0.220 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.220 U | 5 U | 1.00 U | 1.00 U | 1.00 U |
| Bromodichloromethane | 75-27-4 | µg/L | 0.6 | 0.600 U | 0.1837 U | | | | | | | 0.600 U | 0.1837 U | | | | |
| Trichlorofluoromethane | 79-69-4 | µg/L | 2100 | 1.00 U | 0.3268 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3268 U | 5 U | 1.00 U | 1.00 U | 2.00 U |
| Methyl *tert* -butyl ether | 1634-04-4 | µg/L | 50 | 1.00 U | 0.2359 U | 5 U | 0.490 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2359 U | 5 U | 0.490 U | 0.490 U | 1.00 U |
| **Inorganics** | | | | | | | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | µg/L | 300 | **79.3** | **152.0** | | **1959** | **1446** | **1499** | **910.2** | **1744** | **1356** | **1136** | | **59.7** | **15.5** | **16.6 I** |
| **Water Chemistry** | | | | | | | | | | | | | | | | | |
| Nitrate | 14797-55-8 | mg/L | 10 | 0.0031 U | 0.0031 U | | **0.03** | 0.0200 U | 0.02 U | **0.0060** | 0.0031 U | 0.0031 U | 0.0031 U | | **2.16** | **1.34** | **1.01** |
| Nitrite | 14797-65-0 | mg/L | 1 | 0.0035 U | 0.0035 U | | 0.005 U | 0.0050 U | 0.0050 U | 0.0035 U | 0.0035 U | 0.0035 U | 0.0035 U | | 0.005 U | 0.0050 U | 0.0050 U |
| Sulfate | 14808-79-8 | mg/L | 250 | 22.5 | **18.6** | | | | **21.2** | **22.4** | **19.1** | 16.9 | **16.6** | | | | **37.1** |
| Alkalinity | ALK | mg/L | * | 49 | **49.2 J3** | | **2.6** | **2.4** | 1.0 U | 1.0 U | **8.1** | 2.3 | **4.0 J3** | | **152** | **112** | **142** |
| Total Organic Carbon | TOC | mg/L | * | 9.03 | **7.66** | | **3.95** | **3.03** | **7.25** | **5.37** | **10.12** | 5.863 | **4.69** | | **8.64** | **8.96** | **6.98** |
| Total Disolved Solids | TDS | mg/L | * | 132 | **118** | | **70** | **76.0** | **186** | **422** | **354** | 134 | **104** | | **256** | **298** | **272** |
| Total Sulfide | 18496-25-8 | mg/L | * | 0.10 U | 0.10 U | | 0.10 U | 0.10 U | 0.10 U | 0.10 U | **0.52** | 0.10 U | 0.10 U | | 0.10 U | 0.10 U | 0.10 U |
| Chloride | 16887-00-6 | mg/L | 250 | 4.46 | **5.04** | | 5 U | 5.00 U | 5.00 U | **3.69** | **3.44** | 4.05 | **6.3** | | **7.32** | **15.1** | **17.2** |
| Nitrate-Nitrite Nitrogen | | mg/L | * | | | | **0.029** | | 0.020 U | | | | | | **2.16** | | **1.01** |
| **Gases** | | | | | | | | | | | | | | | | | |
| Hydrogen (nm/L) | 1333-74-0 | nM/L | * | 4.2 | **1.3** | | **3.5** | **11.4** | **7.8** | **2.2** | **2.2** | 4.4 | **1.4** | | NS | **3.1** | **2.6** |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-19AR | | | | OLD-36-20BR | | | | | | | | OLD-36-22BR | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-19AR | OLD-36-19AR | OLD-36-19AR | OLD-36-19AR | OLD-36-20BR | OLD-36-20BR | OLD-36-20BR | OLD-36-20BR | OLD-36-20BR | OLD-36-20BR | OLD-36-20BR | OLD-36-20BR | OLD-36-22BR | OLD-36-22BR |
| Sample Date | | | | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/25/2003 | 6/17/2003 | 9/16/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/25/2003 | 6/16/2003 |
| **Organic Parameters** | | | | | | | | | | | | | | | | | |
| TRPH | 5289290-40-0 | mg/L | 5 | 0.21 U | 0.21 U | 0.22 U | **0.04 I V** | | 0.20 U | 0.20 U | 0.21 U | 0.21 U | 0.20 U | 0.21 U | **0.03 I V** | | 0.22 U |
| **Volatiles** | | | | | | | | | | | | | | | | | |
| Acetic Acid (mg/L) | 64-19-7 | mg/L | * | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U |
| Propionic Acid (mg/L) | 79-09-4 | mg/L | * | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U |
| Pyruvic Acid (mg/L) | 127-17-3 | mg/L | * | 2.000 U | 2.000 U | 2.000 U | 2000 U | | 1.00 U | 10.00 U | 10.00 U | 2.000 U | 2.000 U | 2.000 U | 2000 U | | 1.00 U |
| n-Butyric Acid (mg/L) | 107-92-6 | mg/L | * | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U |
| 1,1-Dichloropropene | 563-58-6 | µg/L | * | | | 1.0000 U | 0.10400 U | | | | | | | 1.0000 U | 0.10400 U | | |
| L-Lactic Acid (mg/L) | 50-21-5 | mg/L | * | 10.00 U | 10.00 U | 10.00 U | 10000 U | | 25.00 U | 25.00 U | 25.00 U | 10.00 U | 10.00 U | 10.00 U | 10000 U | | 25.00 U |
| Methane | 74-82-8 | µg/L | * | 26 U | 26 U | 26 U | 5 U | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 5 U | | 26 U |
| Ethene | 74-85-1 | µg/L | * | 26 U | 26 U | 26 U | 18 U | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 18 U | | 26 U |
| Ethane | 74-84-0 | µg/L | * | 26 U | 26 U | 26 U | 15 U | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 15 U | | 26 U |
| Acetone | 67-64-1 | µg/L | 700 | 10.0 U | 10.0 U | 10.0 U | 1.299 U | 10 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 1.299 U | 10 U | 10.0 U |
| Benzene | 71-43-2 | µg/L | 1 | 1.00 U | 1.00 U | 1.00 U | 0.143 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.143 U | 1 U | 1.00 U |
| Bromobenzene | 108-86-1 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 0.175 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.175 U | | 1.00 U |
| Bromochloromethane | 74-97-5 | µg/L | 91 | 1.00 U | 1.00 U | 1.00 U | 0.301 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.301 U | | 1.00 U |
| Bromoform | 75-25-2 | µg/L | 4.4 | 1.00 U | 1.00 U | 1.00 U | 0.245 U | 4 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.245 U | 4 U | 1.00 U |
| Bromomethane | 74-83-9 | µg/L | 9.8 | 1.00 U | 1.00 U | 1.00 U | 0.357 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.357 U | 5 U | 1.00 U |
| 2-Butanone (MEK) | 78-93-3 | µg/L | 4200 | | | 1.00 U | 0.729 U | | | | | | | 1.00 U | 0.729 U | | |
| n-butylbenzene | 104-51-8 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 0.159 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.159 U | | 1.00 U |
| sec-Butylbenzene | 135-98-8 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 0.262 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.262 U | | 1.00 U |
| t-Butylbenzene | 98-06-6 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 0.347 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.347 U | | 1.00 U |
| Carbon disulfide | 75-15-0 | µg/L | 700 | 1.00 U | 1.00 U | 1.00 U | 0.140 U | 5 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.140 U | 5 U | 2.00 U |
| Carbon Tetrachloride | 56-23-5 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 0.406 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.406 U | 3 U | 1.00 U |
| Chlorobenzene | 108-90-7 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 0.105 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.105 U | 5 U | 1.00 U |
| Chloroethane | 75-00-3 | µg/L | 12 | 1.00 U | 1.00 U | 1.00 U | 0.316 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.316 U | 5 U | 1.00 U |
| 2-chloroethylvinylether | 110-75-8 | µg/L | 175 | | | 1.00 U | 4.62 U | | | | | | | 1.00 U | 4.62 U | | |
| Chloroform | 67-66-3 | µg/L | 5.7 | 1.00 U | 1.00 U | 1.00 U | 0.111 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.111 U | 5 U | 1.00 U |
| Chloromethane | 74-87-3 | µg/L | 2.7 | 1.00 U | 1.00 U | 1.00 U | 0.320 U | 2.7 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.320 U | 2.7 U | 1.00 U |
| 2-Chlorotoluene | 95-49-8 | µg/L | 140 | 1.00 U | 1.00 U | 1.00 U | 0.366 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.366 U | | 1.00 U |
| 4-Chlorotoluene | 106-43-4 | µg/L | 140 | 1.00 U | 1.00 U | 1.00 U | 0.099 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.099 U | | 1.00 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | µg/L | * | | | 1.00 U | 0.880 U | | | | | | | 1.00 U | 0.880 U | | |
| Dibromochloromethane | 124-48-1 | µg/L | 0.4 | 0.400 U | 0.400 U | 0.400 U | 0.157 U | 0.4 U | 0.180 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.157 U | 0.4 U | 0.180 U |
| 1,2 - Dibromoethane | 106-93-4 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 0.147 U | 0.2 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.147 U | 0.2 U | 1.00 U |
| Dibromomethane | 74-95-3 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 0.216 U | | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.216 U | | 0.180 U |
| 1,2 - Dichlorobenzene | 95-50-1 | µg/L | 600 | 1.00 U | 1.00 U | 1.00 U | 0.151 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.151 U | 5 U | 1.00 U |
| 1,3 - Dichlorobenzene | 541-73-1 | µg/L | 10 | 1.00 U | 1.00 U | 1.00 U | 0.078 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.078 U | 5 U | 1.00 U |
| 1,4-Dichlorobenzene | 106-46-7 | µg/L | 75 | 1.00 U | 1.00 U | 1.00 U | 0.0398 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.0398 U | 5 U | 1.00 U |
| Dichlorodifluoromethane | 75-71-8 | µg/L | 1400 | 1.00 U | 1.00 U | 1.00 U | 0.392 U | 5 U | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.392 U | 5 U | 0.180 U |
| 1,1-Dichloroethane | 75-35-3 | µg/L | 70 | 1.00 U | 1.00 U | 1.00 U | 0.172 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.172 U | 5 U | 1.00 U |
| 1,2-Dichloroethane | 107-06-2 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 0.087 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.087 U | 3 U | 1.00 U |
| 1,1-Dichloroethene | 75-35-4 | µg/L | 7 | 1.00 U | 1.00 U | 1.00 U | 0.2682 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2682 U | 5 U | 1.00 U |
| cis-1,2-Dichloroethene | 156-59-2 | µg/L | 70 | 1.00 U | 1.00 U | 1.00 U | 0.2776 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2776 U | 5 U | 1.00 U |
| Trans-1,2-Dichloroethene | 156-60-5 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 0.2371 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2371 U | 5 U | 1.00 U |
| 1,2-Dichloropropane | 78-87-5 | µg/L | 5 | 1.00 U | 1.00 U | 1.00 U | 0.886 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.886 U | 5 U | 1.00 U |
| 1,3 - Dichloropropane | 142-28-9 | µg/L | * | 0.220 U | 0.220 U | 0.220 U | 0.2000 U | | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.2000 U | | 0.220 U |
| 2,2 -Dichloropropane | 594-20-7 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 0.2341 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2341 U | | 1.00 U |
| *cis*-1,3-Dichloropropene[d] | 542-75-6 | µg/L | 0.2 | 0.230 U | 0.230 U | 0.230 U | 0.1515 U | 5 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.1515 U | 5 U | 0.230 U |
| Trans-1,3-Dichloropropene | 10061-02-6 | µg/L | 0.2 | 0.200 U | 0.200 U | 0.200 U | 0.1919 U | 5 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1919 U | 5 U | 0.200 U |
| Ethylbenzene | 100-41-4 | µg/L | 30 | 1.00 U | 1.00 U | 1.00 U | 0.2010 U | 5 U | 0.080 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2010 U | 5 U | 0.080 U |
| Hexachlorobutadiene | 87-68-3 | µg/L | * | 0.550 U | 0.550 U | 0.550 U | 0.7084 U | | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.7084 U | | 0.550 U |
| 2-Hexanone | 591-78-6 | µg/L | 280 | 1.00 U | 1.00 U | 1.00 U | 0.8353 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8353 U | 10 U | 1.00 U |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-19AR | | | | OLD-36-20BR | | | | | | | | OLD-36-22BR | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-19AR | OLD-36-19AR | OLD-36-19AR | OLD-36-19AR | OLD-36-20BR | OLD-36-20BR | OLD-36-20BR | OLD-36-20BR | OLD-36-20BR | OLD-36-20BR | OLD-36-20BR | OLD-36-20BR | OLD-36-22BR | OLD-36-22BR |
| Sample Date | | | | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/25/2003 | 6/17/2003 | 9/16/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/25/2003 | 6/16/2003 |
| **Volatiles Continued** | | | | | | | | | | | | | | | | | |
| Isopropylbenzene | 98-82-8 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 0.1416 U | 0.8 U | 0.460 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1416 U | 0.8 U | 0.460 U |
| 4-Isopropyltoluene | 99-87-6 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 0.1757 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1757 U | | 1.00 U |
| 4-Methyl-2-Pentanone | 108-10-1 | µg/L | 560 | 1.00 U | 1.00 U | 1.00 U | 0.3544 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3544 U | 10 U | 1.00 U |
| Methylene Chloride | 75-09-2 | µg/L | 5 | 5.00 U | 5.00 U | 5.00 U | 0.1735 U | 5 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1735 U | 5 U | 5.00 U |
| Naphthalene | 91-20-3 | µg/L | 20 | 5.00 U | 5.00 U | 5.00 U | 0.1804 U | | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1804 U | | 5.00 U |
| n-propylbenzene | 103-65-1 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 0.2416 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2416 U | | 1.00 U |
| Styrene | 100-42-5 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 0.1731 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1731 U | 5 U | 1.00 U |
| 1,1,1,2 - Tetrachloroethane | 630-20-6 | µg/L | 1.3 | 1.00 U | 1.00 U | 1.00 U | 0.1988 U | | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.1988 U | | 1.00 U |
| 1,1,2,2 - Tetrachloroethane | 79-34-5 | µg/L | 0.2 | 0.200 U | 0.200 U | 0.200 U | 0.1154 U | 0.2 UJ | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1154 U | 0.2 UJ | 0.200 U |
| Tetrachloroethene | 127-18-4 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 0.2419 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2419 U | **2.1 J** | 1.00 U |
| Toluene | 108-88-3 | µg/L | 40 | 1.00 U | 1.00 U | 1.00 U | 0.1417 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.1417 U | 5 U | 1.00 U |
| 1,2,3 - Trichlorobenzene | 87-61-6 | µg/L | 70 | 1.00 U | 1.00 U | 1.00 U | 0.8373 U | | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.8373 U | | 1.00 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | µg/L | 70 | 1.00 U | 1.00 U | 1.00 U | 0.3331 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.3331 U | 5 U | 1.00 U |
| 1,1,1 - Trichloroethane | 71-55-6 | µg/L | 200 | 1.00 U | 1.00 U | 1.00 U | 0.2710 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.2710 U | 5 U | 1.00 U |
| 1,1,2-Trichloroethane | 79-00-5 | µg/L | 5 | 1.00 U | 1.00 U | 1.00 U | 0.3098 U | 5 U | 1.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3098 U | 5 U | 1.00 U |
| Trichloroethene | 79-01-6 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 0.2242 U | 3 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2242 U | **2.25 J** | 1.00 U |
| 1,2,3 - Trichloropropane | 96-18-4 | µg/L | 200 | 1.00 U | 1.00 U | 1.00 U | 0.2766 U | | 0.200 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2766 U | | 0.200 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | µg/L | 10 | 1.00 U | 1.00 U | 1.00 U | 0.1026 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1026 U | | 1.00 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | µg/L | 10 | 1.00 U | 1.00 U | 1.00 U | 0.1720 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1720 U | | 1.00 U |
| Vinyl chloride | 75-01-4 | µg/L | 1 | 1.00 U | 1.00 U | 1.00 U | 0.3022 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3022 U | 1 U | 1.00 U |
| Xylenes | 1330-20-7 | µg/L | 20 | 1.00 U | 1.00 U | 1.00 U | 0.220 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.220 U | 5 U | 1.00 U |
| Bromodichloromethane | 75-27-4 | µg/L | 0.6 | | | 0.600 U | 0.1837 U | | | | | | | 0.600 U | 0.1837 U | | |
| Trichlorofluoromethane | 79-69-4 | µg/L | 2100 | 1.00 U | 1.00 U | 1.00 U | 0.3268 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3268 U | 5 U | 1.00 U |
| Methyl *tert* -butyl ether | 1634-04-4 | µg/L | 50 | 1.00 U | 1.00 U | 1.00 U | 0.2359 U | 5 U | 0.490 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2359 U | 5 U | 0.490 U |
| **Inorganics** | | | | | | | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | µg/L | 300 | **18.3 I** | **26.4 I** | 28.3 I | **26.0 I V** | | **52.4** | **13.1** | **25.9 I** | **22.1 I** | **24.8 I** | 19.9 I | **26.8 I** | | **96.9** |
| **Water Chemistry** | | | | | | | | | | | | | | | | | |
| Nitrate | 14797-55-8 | mg/L | 10 | **2.39** | **3.74** | 0.586 | **1.54** | | **3.84** | **1.86** | **0.89** | **2.26** | **1.28** | 0.101 | **0.088** | | **0.07** |
| Nitrite | 14797-65-0 | mg/L | 1 | 0.0035 U | 0.0035 U | 0.0035 U | 0.0035 U | | 0.005 U | 0.0050 U | **0.066** | **0.911** | **0.034** | 0.0035 U | 0.0035 U | | 0.005 U |
| Sulfate | 14808-79-8 | mg/L | 250 | **41.3** | **52.6** | 20.3 | **18.4** | | | | **33** | **40.9** | **41.6** | 25.4 | **22.3** | | |
| Alkalinity | ALK | mg/L | * | **133** | **158** | 262 | **213 J3** | | **62.5** | **105** | **106** | **110** | **120** | 105 | **104 J3** | | **22** |
| Total Organic Carbon | TOC | mg/L | * | **5.49** | **11.61** | 11 | **9.43** | | **7.61** | **10.3** | **10.95** | **8.22** | **10.74** | 11.77 | **8.5** | | **4.97** |
| Total Disolved Solids | TDS | mg/L | * | **234** | **314** | 340 | **318** | | **258** | **232** | **236** | **262** | **252** | 196 | **210** | | **144** |
| Total Sulfide | 18496-25-8 | mg/L | * | 0.10 U | 0.10 U | 0.10 U | 0.10 U | | 0.10 U | 0.10 U | 0.10 U | **0.16** | 0.10 U | 0.10 U | 0.10 U | | 0.10 U |
| Chloride | 16887-00-6 | mg/L | 250 | **21.3** | **18.3** | 16.3 | **15.3** | | **8.65** | **15** | **19.1** | **21.7** | **18.8** | 8.46 | **17.4** | | **7.3** |
| Nitrate-Nitrite Nitrogen | | mg/L | * | | | | | | **3.84** | | **0.96** | | | | | | **0.074** |
| **Gases** | | | | | | | | | | | | | | | | | |
| Hydrogen (nm/L) | 1333-74-0 | nM/L | * | **2** | **2.3** | 3.9 | **1.4** | | NS | **7.1** | **2.2** | **2.2** | **2.4** | 3.8 | **1.4** | | NS |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-22BR | | | | | | | OLD-36-23CR | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-22BR | OLD-36-22BR | OLD-36-22BR | OLD-36-22BR | OLD-36-22BR | OLD-36-22BR | OLD-36-22BR-DUP | OLD-36-23CR | OLD-36-23CR | OLD-36-23CR | OLD-36-23CR | OLD-36-23CR | OLD-36-23CR | OLD-36-23CR | OLD-36-23CR |
| Sample Date | | | | 9/15/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 12/6/2004 | 3/25/2003 | 6/16/2003 | 9/15/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 |
| **Organic Parameters** | | | | | | | | | | | | | | | | | | |
| TRPH | 5289290-40-0 | mg/L | 5 | 0.22 U | 0.22 U | 0.21 U | 0.22 U | 0.22 U | **0.03 I V** | **0.09 I V** | | 0.21 U | 0.22 U | 0.22 U | 0.21 U | 0.21 U | 0.22 U | **0.2 I V** |
| **Volatiles** | | | | | | | | | | | | | | | | | | |
| Acetic Acid (mg/L) | 64-19-7 | mg/L | * | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U |
| Propionic Acid (mg/L) | 79-09-4 | mg/L | * | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U |
| Pyruvic Acid (mg/L) | 127-17-3 | mg/L | * | 10.00 U | 10.00 U | 2.000 U | 2.000 U | 2.000 U | 2000 U | | | 1.00 U | 10.00 U | 10.00 U | 2.000 U | 2.000 U | 2.000 U | 2000 U |
| n-Butyric Acid (mg/L) | 107-92-6 | mg/L | * | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U |
| 1,1-Dichloropropene | 563-58-6 | µg/L | * | | | | | 1.0000 U | 0.10400 U | 0.10400 U | | | | | | | 1.0000 U | 0.10400 U |
| L-Lactic Acid (mg/L) | 50-21-5 | mg/L | * | 25.00 U | 25.00 U | 10.00 U | 10.00 U | 10.00 U | 10000 U | | | 25.00 U | 25.00 U | 25.00 U | 10.00 U | 10.00 U | 10.00 U | 10000 U |
| Methane | 74-82-8 | µg/L | * | 26 U | 232 | 26 U | **149** | 26 U | **100** | | | **86** | 26 U | 26 U | 26 U | 26 U | 26 U | 5 U |
| Ethene | 74-85-1 | µg/L | * | 26 U | 26 U | 26 U | 26 U | 26 U | 18 U | | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 18 U |
| Ethane | 74-84-0 | µg/L | * | 26 U | 26 U | 26 U | 26 U | 26 U | 15 U | | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 15 U |
| Acetone | 67-64-1 | µg/L | 700 | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 1.299 U | 1.299 U | 10 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 1.299 U |
| Benzene | 71-43-2 | µg/L | 1 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.143 U | 0.143 U | **14.4 =** | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.143 U |
| Bromobenzene | 108-86-1 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.175 U | 0.175 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.175 U |
| Bromochloromethane | 74-97-5 | µg/L | 91 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.301 U | 0.301 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.301 U |
| Bromoform | 75-25-2 | µg/L | 4.4 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.245 U | 0.245 U | 4 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.245 U |
| Bromomethane | 74-83-9 | µg/L | 9.8 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.357 U | 0.357 U | 5 U | 1.00 U | 1.00 U | 1.00U | 1.00U | 1.00U | 1.00 U | 0.357 U |
| 2-Butanone (MEK) | 78-93-3 | µg/L | 4200 | | | | | 1.00 U | 0.729 U | 0.729 U | | | | | | | 1.00 U | 0.729 U |
| n-butylbenzene | 104-51-8 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.159 U | 0.159 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.159 U |
| sec-Butylbenzene | 135-98-8 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.262 U | 0.262 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.262 U |
| t-Butylbenzene | 98-06-6 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.347 U | 0.347 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.347 U |
| Carbon disulfide | 75-15-0 | µg/L | 700 | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.140 U | 0.140 U | 5 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.140 U |
| Carbon Tetrachloride | 56-23-5 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.406 U | 0.406 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.406 U |
| Chlorobenzene | 108-90-7 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.105 U | 0.105 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.105 U |
| Chloroethane | 75-00-3 | µg/L | 12 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.316 U | 0.316 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.316 U |
| 2-chloroethylvinylether | 110-75-8 | µg/L | 175 | | | | | 1.00 U | 4.62 U | 4.62 U | | | | | | | 1.00 U | 4.62 U |
| Chloroform | 67-66-3 | µg/L | 5.7 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.111 U | 0.111 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.111 U |
| Chloromethane | 74-87-3 | µg/L | 2.7 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.320 U | 0.320 U | 2.7 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.320 U |
| 2-Chlorotoluene | 95-49-8 | µg/L | 140 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.366 U | 0.366 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.366 U |
| 4-Chlorotoluene | 106-43-4 | µg/L | 140 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.099 U | 0.099 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.099 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | µg/L | * | | | | | 1.00 U | 0.880 U | 0.880 U | | | | | | | 1.00 U | 0.880 U |
| Dibromochloromethane | 124-48-1 | µg/L | 0.4 | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.157 U | 0.157 U | 0.4 U | 0.180 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.157 U |
| 1,2 - Dibromoethane | 106-93-4 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.147 U | 0.147 U | 0.2 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.147 U |
| Dibromomethane | 74-95-3 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.216 U | 0.216 U | | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.216 U |
| 1,2 - Dichlorobenzene | 95-50-1 | µg/L | 600 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.151 U | 0.151 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.151 U |
| 1,3 - Dichlorobenzene | 541-73-1 | µg/L | 10 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.078 U | 0.078 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.078 U |
| 1,4-Dichlorobenzene | 106-46-7 | µg/L | 75 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.0398 U | 0.0398 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.0398 U |
| Dichlorodifluoromethane | 75-71-8 | µg/L | 1400 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.392 U | 0.392 U | 5 U | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.392 U |
| 1,1-Dichloroethane | 75-35-3 | µg/L | 70 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.172 U | 0.172 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.172 U |
| 1,2-Dichloroethane | 107-06-2 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.087 U | 0.087 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.087 U |
| 1,1-Dichloroethene | 75-35-4 | µg/L | 7 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2682 U | 0.2682 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2682 U |
| cis-1,2-Dichloroethene | 156-59-2 | µg/L | 70 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2776 U | 0.2776 U | **1.07 J** | 1.10 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2776 U |
| Trans-1,2-Dichloroethene | 156-60-5 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2371 U | 0.2371 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2371 U |
| 1,2-Dichloropropane | 78-87-5 | µg/L | 5 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.886 U | 0.886 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.886 U |
| 1,3 - Dichloropropane | 142-28-9 | µg/L | * | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.2000 U | 0.2000 U | | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.2000 U |
| 2,2 -Dichloropropane | 594-20-7 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2341 U | 0.2341 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2341 U |
| *cis*-1,3-Dichloropropene[d] | 542-75-6 | µg/L | 0.2 | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.1515 U | 0.1515 U | 5 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.1515 U |
| Trans-1,3-Dichloropropene | 10061-02-6 | µg/L | 0.2 | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1919 U | 0.1919 U | 5 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1919 U |
| Ethylbenzene | 100-41-4 | µg/L | 30 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2010 U | 0.2010 U | 5 U | 0.080 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2010 U |
| Hexachlorobutadiene | 87-68-3 | µg/L | * | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.7084 U | 0.7084 U | | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.7084 U |
| 2-Hexanone | 591-78-6 | µg/L | 280 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8353 U | 0.8353 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8353 U |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-22BR | | | | | | | OLD-36-23CR | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-22BR | OLD-36-22BR | OLD-36-22BR | OLD-36-22BR | OLD-36-22BR | OLD-36-22BR | OLD-36-22BR-DUP | OLD-36-23CR | OLD-36-23CR | OLD-36-23CR | OLD-36-23CR | OLD-36-23CR | OLD-36-23CR | OLD-36-23CR | OLD-36-23CR |
| Sample Date | | | | 9/15/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 12/6/2004 | 3/25/2003 | 6/16/2003 | 9/15/2003 | 12/2/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 |
| **Volatiles Continued** | | | | | | | | | | | | | | | | | | |
| Isopropylbenzene | 98-82-8 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1416 U | 0.1416 U | 0.8 U | 0.460 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1416 U |
| 4-Isopropyltoluene | 99-87-6 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1757 U | 0.1757 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1757 U |
| 4-Methyl-2-Pentanone | 108-10-1 | µg/L | 560 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3544 U | 0.3544 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3544 U |
| Methylene Chloride | 75-09-2 | µg/L | 5 | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1735 U | 0.1735 U | 5 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1735 U |
| Naphthalene | 91-20-3 | µg/L | 20 | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1804 U | 0.1804 U | | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1804 U |
| n-propylbenzene | 103-65-1 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2416 U | 0.2416 U | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2416 U |
| Styrene | 100-42-5 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1731 U | 0.1731 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1731 U |
| 1,1,1,2 - Tetrachloroethane | 630-20-6 | µg/L | 1.3 | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.1988 U | 0.1988 U | | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.1988 U |
| 1,1,2,2 - Tetrachloroethane | 79-34-5 | µg/L | 0.2 | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1154 U | 0.1154 U | 0.2 UJ | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1154 U |
| Tetrachloroethene | 127-18-4 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2419 U | 0.2419 U | **10 =** | **8.56** | **9.95** | **8.89** | **8.3** | **7.62** | **8.79** | **9.740** |
| Toluene | 108-88-3 | µg/L | 40 | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1417 U | 0.1417 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.1417 U |
| 1,2,3 - Trichlorobenzene | 87-61-6 | µg/L | 70 | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8373 U | 0.8373 U | | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.8373 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | µg/L | 70 | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3331 U | 0.3331 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.3331 U |
| 1,1,1 - Trichloroethane | 71-55-6 | µg/L | 200 | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2710 U | 0.2710 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.2710 U |
| 1,1,2-Trichloroethane | 79-00-5 | µg/L | 5 | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3098 U | 0.3098 U | 5 U | 1.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3098 U |
| Trichloroethene | 79-01-6 | µg/L | 3 | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2242 U | 0.2242 U | **2.59 J** | **3.01** | 2.00 U | **2.18** | **1.68** | **1.56** | **1.85** | **2.060** |
| 1,2,3 - Trichloropropane | 96-18-4 | µg/L | 200 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2766 U | 0.2766 U | | 0.200 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2766 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | µg/L | 10 | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1026 U | 0.1026 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1026 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | µg/L | 10 | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1720 U | 0.1720 U | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1720 U |
| Vinyl chloride | 75-01-4 | µg/L | 1 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3022 U | 0.3022 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3022 U |
| Xylenes | 1330-20-7 | µg/L | 20 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.220 U | 0.220 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.220 U |
| Bromodichloromethane | 75-27-4 | µg/L | 0.6 | | | | | 0.600 U | 0.1837 U | 0.1837 U | | | | | | | 0.600 U | 0.1837 U |
| Trichlorofluoromethane | 79-69-4 | µg/L | 2100 | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3268 U | 0.3268 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3268 U |
| Methyl *tert* -butyl ether | 1634-04-4 | µg/L | 50 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2359 U | 0.2359 U | **2.89 J** | 0.490 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2359 U |
| **Inorganics** | | | | | | | | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | µg/L | 300 | **71.7** | **85.5** | **77.3** | **67.3** | **74.8** | **89.5 V** | | | **1477** | **1084** | **883.9** | **424.3** | **753.0** | **822.7** | **735.7** |
| **Water Chemistry** | | | | | | | | | | | | | | | | | | |
| Nitrate | 14797-55-8 | mg/L | 10 | 0.199 | 0.02 U | **0.013** | 0.0031 U | 0.0031 U | 0.0031 U | | | 0.02 U | 0.0200 U | 0.02 U | **0.013** | 0.0031 U | 0.0031 U | 0.0031 U |
| Nitrite | 14797-65-0 | mg/L | 1 | 0.0050 U | 0.0050 U | 0.0035 U | 0.0035 U | 0.0035 U | 0.0035 U | | | 0.005 U | 0.0050 U | 0.0050 U | 0.0035 U | 0.0035 U | 0.0035 U | 0.0035 U |
| Sulfate | 14808-79-8 | mg/L | 250 | | **43.1** | **40.4** | **29.4** | 34.7 | **35.4** | | | | | **28.8** | **32** | **27.3** | 26.4 | **22.9** |
| Alkalinity | ALK | mg/L | * | **1.0** | 1.0 U | **5.3** | **12.6** | 10 | **6.0 J3** | | | 1.0 U | 1.0 U | 1.0 U | **108** | 1.0 U | 1.0 U | 1.0 U J3 |
| Total Organic Carbon | TOC | mg/L | * | **7.73** | **5.11** | **6.57** | **10.39** | 9.28 | **8.06** | | | **5.27** | **4.81** | **4.88** | **4.07** | **5.78** | 5.1 | **4.92** |
| Total Disolved Solids | TDS | mg/L | * | **126** | **108** | **122** | **90** | 138 | **98.0** | | | **64** | **98** | **88** | **248** | **70** | 90 | **84.0** |
| Total Sulfide | 18496-25-8 | mg/L | * | 0.10 U | 0.10 U | 0.10 U | **0.52** | 0.10 U | **1.44** | | | 0.10 U | 0.10 U | **0.11** | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Chloride | 16887-00-6 | mg/L | 250 | **5.62** | **5.63** | **8.25** | **6.19** | 12.4 | **8.13** | | | 5 U | **5.13** | **5.54** | **6.24** | **5.91** | 7.15 | **7.00** |
| Nitrate-Nitrite Nitrogen | | mg/L | * | | 0.020 U | | | | | | | 0.020 U | | 0.020 U | | | | |
| **Gases** | | | | | | | | | | | | | | | | | | |
| Hydrogen (nm/L) | 1333-74-0 | nM/L | * | **5.8** | **2.6** | **2.4** | **2.5** | 4.6 | **1.6** | | | NS | **4.3** | **2.5** | **2.4** | **2.2** | 4.1 | **1.4** |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-24BR | | | | | | | | OLD-36-25CR | | | | OLD-36-33AR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[d] | OLD-36-24BR | OLD-36-24BR | OLD-36-24BR | OLD-36-24BR | OLD-36-24BR | OLD-36-24BR | OLD-36-24BR | OLD-36-24BR | OLD-36-25CR | OLD-36-25CR | OLD-36-25CR | OLD-36-25CR | OLD-36-33AR |
| Sample Date | | | | 3/26/2003 | 6/17/2003 | 9/16/2003 | 12/3/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/26/2003 | 6/17/2003 | 9/16/2003 | 12/2/2003 | 3/26/2003 |
| **Organic Parameters** | | | | | | | | | | | | | | | | |
| TRPH | 5289290-40-0 | mg/L | 5 | | 0.22 U | 0.20 U | 0.21 U | 0.24 | 0.22 U | 0.20 U | **0.03 I V** | | 0.22 U | 0.22 U | 0.22 U | |
| **Volatiles** | | | | | | | | | | | | | | | | |
| Acetic Acid (mg/L) | 64-19-7 | mg/L | * | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | |
| Propionic Acid (mg/L) | 79-09-4 | mg/L | * | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | |
| Pyruvic Acid (mg/L) | 127-17-3 | mg/L | * | | 1.00 U | 10.00 U | 10.00 U | 2.000 U | 2.000 U | 2.000 U | 2000 U | | 1.00 U | 10.00 U | 10.00 U | |
| n-Butyric Acid (mg/L) | 107-92-6 | mg/L | * | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | |
| 1,1-Dichloropropene | 563-58-6 | µg/L | * | | | | | | | 1.0000 U | 0.10400 U | | | | | |
| L-Lactic Acid (mg/L) | 50-21-5 | mg/L | * | | 25.00 U | 25.00 U | 25.00 U | 10.00 U | 10.00 U | 10.00 U | 10000 U | | 25.00 U | 25.00 U | 25.00 U | |
| Methane | 74-82-8 | µg/L | * | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 5 U | | 26 U | 26 U | 26 U | |
| Ethene | 74-85-1 | µg/L | * | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 18 U | | 26 U | 26 U | 26 U | |
| Ethane | 74-84-0 | µg/L | * | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 15 U | | 26 U | 26 U | 26 U | |
| Acetone | 67-64-1 | µg/L | 700 | 10 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 1.299 U | 10 U | 10.0 U | 10.0 U | 10.0 U | 10 U |
| Benzene | 71-43-2 | µg/L | 1 | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.143 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 1 U |
| Bromobenzene | 108-86-1 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.175 U | | 1.00 U | 1.00 U | 1.00 U | |
| Bromochloromethane | 74-97-5 | µg/L | 91 | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.301 U | | 1.00 U | 1.00 U | 1.00 U | |
| Bromoform | 75-25-2 | µg/L | 4.4 | 4 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.245 U | 4 U | 1.00 U | 1.00 U | 1.00 U | 4 U |
| Bromomethane | 74-83-9 | µg/L | 9.8 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.357 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| 2-Butanone (MEK) | 78-93-3 | µg/L | 4200 | | | | | | | 1.00 U | 0.729 U | | | | | |
| n-butylbenzene | 104-51-8 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.159 U | | 1.00 U | 1.00 U | 1.00 U | |
| sec-Butylbenzene | 135-98-8 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.262 U | | 1.00 U | 1.00 U | 1.00 U | |
| t-Butylbenzene | 98-06-6 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.347 U | | 1.00 U | 1.00 U | 1.00 U | |
| Carbon disulfide | 75-15-0 | µg/L | 700 | 5 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.140 U | 5 U | 2.00 U | 2.00 U | 2.00 U | 5 U |
| Carbon Tetrachloride | 56-23-5 | µg/L | 3 | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.406 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 3 U |
| Chlorobenzene | 108-90-7 | µg/L | 100 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.105 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| Chloroethane | 75-00-3 | µg/L | 12 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.316 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| 2-chloroethylvinylether | 110-75-8 | µg/L | 175 | | | | | | | 1.00 U | 4.62 U | | | | | |
| Chloroform | 67-66-3 | µg/L | 5.7 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.111 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| Chloromethane | 74-87-3 | µg/L | 2.7 | 2.7 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.320 U | 2.7 U | 1.00 U | 1.00 U | 1.00 U | 2.7 U |
| 2-Chlorotoluene | 95-49-8 | µg/L | 140 | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.366 U | | 1.00 U | 1.00 U | 1.00 U | |
| 4-Chlorotoluene | 106-43-4 | µg/L | 140 | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.099 U | | 1.00 U | 1.00 U | 1.00 U | |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | µg/L | * | | | | | | | 1.00 U | 0.880 U | | | | | |
| Dibromochloromethane | 124-48-1 | µg/L | 0.4 | 0.4 U | 0.180 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.157 U | 0.4 U | 0.180 U | 0.400 U | 0.400 U | 0.4 U |
| 1,2 - Dibromoethane | 106-93-4 | µg/L | * | 0.2 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.147 U | 0.2 U | 1.00 U | 1.00 U | 1.00 U | 0.2 U |
| Dibromomethane | 74-95-3 | µg/L | * | | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.216 U | | 0.180 U | 1.00 U | 1.00 U | |
| 1,2 - Dichlorobenzene | 95-50-1 | µg/L | 600 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.151 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| 1,3 - Dichlorobenzene | 541-73-1 | µg/L | 10 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.078 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| 1,4-Dichlorobenzene | 106-46-7 | µg/L | 75 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.0398 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| Dichlorodifluoromethane | 75-71-8 | µg/L | 1400 | 5 U | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.392 U | 5 U | 0.180 U | 1.00 U | 1.00 U | 5 U |
| 1,1-Dichloroethane | 75-35-3 | µg/L | 70 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.172 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| 1,2-Dichloroethane | 107-06-2 | µg/L | 3 | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.087 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 3 U |
| 1,1-Dichloroethene | 75-35-4 | µg/L | 7 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2682 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| cis-1,2-Dichloroethene | 156-59-2 | µg/L | 70 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2776 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| Trans-1,2-Dichloroethene | 156-60-5 | µg/L | 100 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2371 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| 1,2-Dichloropropane | 78-87-5 | µg/L | 5 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.886 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| 1,3 - Dichloropropane | 142-28-9 | µg/L | * | | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.2000 U | | 0.220 U | 0.220 U | 0.220 U | |
| 2,2 -Dichloropropane | 594-20-7 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2341 U | | 1.00 U | 1.00 U | 1.00 U | |
| *cis* -1,3-Dichloropropene[d] | 542-75-6 | µg/L | 0.2 | 5 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.1515 U | 5 U | 0.230 U | 0.230 U | 0.230 U | 5 U |
| Trans-1,3-Dichloropropene | 10061-02-6 | µg/L | 0.2 | 5 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1919 U | 5 U | 0.200 U | 0.200 U | 0.200 U | 5 U |
| Ethylbenzene | 100-41-4 | µg/L | 30 | 5 U | 0.080 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2010 U | 5 U | 0.080 U | 1.00 U | 1.00 U | 5 U |
| Hexachlorobutadiene | 87-68-3 | µg/L | * | | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.7084 U | | 0.550 U | 0.550 U | 0.550 U | |
| 2-Hexanone | 591-78-6 | µg/L | 280 | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8353 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 10 U |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-24BR | | | | | | | | OLD-36-25CR | | | | OLD-36-33AR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-24BR | OLD-36-24BR | OLD-36-24BR | OLD-36-24BR | OLD-36-24BR | OLD-36-24BR | OLD-36-24BR | OLD-36-24BR | OLD-36-25CR | OLD-36-25CR | OLD-36-25CR | OLD-36-25CR | OLD-36-33AR |
| Sample Date | | | | 3/26/2003 | 6/17/2003 | 9/16/2003 | 12/3/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/26/2003 | 6/17/2003 | 9/16/2003 | 12/2/2003 | 3/26/2003 |
| **Volatiles Continued** | | | | | | | | | | | | | | | | |
| Isopropylbenzene | 98-82-8 | µg/L | * | 0.8 U | 0.460 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1416 U | 0.8 U | 0.460 U | 1.00 U | 1.00 U | 0.8 U |
| 4-Isopropyltoluene | 99-87-6 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1757 U | | 1.00 U | 1.00 U | 1.00 U | |
| 4-Methyl-2-Pentanone | 108-10-1 | µg/L | 560 | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3544 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 10 U |
| Methylene Chloride | 75-09-2 | µg/L | 5 | 5 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1735 U | 5 U | 5.00 U | 5.00 U | 5.00 U | 5 U |
| Naphthalene | 91-20-3 | µg/L | 20 | | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1804 U | | 5.00 U | 5.00 U | 5.00 U | |
| n-propylbenzene | 103-65-1 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2416 U | | 1.00 U | 1.00 U | 1.00 U | |
| Styrene | 100-42-5 | µg/L | 100 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1731 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| 1,1,1,2 - Tetrachloroethane | 630-20-6 | µg/L | 1.3 | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1988 U | | 1.00 U | 2.00 U | 2.00 U | |
| 1,1,2,2 - Tetrachloroethane | 79-34-5 | µg/L | 0.2 | 0.2 UJ | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1154 U | 0.2 U | 0.200 U | 0.200 U | 0.200 U | 0.2 UJ |
| Tetrachloroethene | 127-18-4 | µg/L | 3 | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2419 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 3 U |
| Toluene | 108-88-3 | µg/L | 40 | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1417 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 5 U |
| 1,2,3 - Trichlorobenzene | 87-61-6 | µg/L | 70 | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8373 U | | 1.00 U | 2.00 U | 2.00 U | |
| 1,2,4-Trichlorobenzene | 120-82-1 | µg/L | 70 | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3331 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 5 U |
| 1,1,1 - Trichloroethane | 71-55-6 | µg/L | 200 | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2710 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 5 U |
| 1,1,2-Trichloroethane | 79-00-5 | µg/L | 5 | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3098 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 5 U |
| Trichloroethene | 79-01-6 | µg/L | 3 | 3 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2242 U | 3 U | 1.00 U | 2.00 U | 2.00 U | 3 U |
| 1,2,3 - Trichloropropane | 96-18-4 | µg/L | 200 | | 0.200 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2766 U | | 0.200 U | 1.00 U | 1.00 U | |
| 1,2,4-Trimethylbenzene | 95-63-6 | µg/L | 10 | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1026 U | | 1.00 U | 2.00 U | 2.00 U | |
| 1,3,5-Trimethylbenzene | 108-67-8 | µg/L | 10 | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1720 U | | 1.00 U | 2.00 U | 2.00 U | |
| Vinyl chloride | 75-01-4 | µg/L | 1 | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3022 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 1 U |
| Xylenes | 1330-20-7 | µg/L | 20 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.220 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 5 U |
| Bromodichloromethane | 75-27-4 | µg/L | 0.6 | | | | | | | 0.600 U | 0.1837 U | | | | | |
| Trichlorofluoromethane | 79-69-4 | µg/L | 2100 | 5 U | 1.00 U | 2.00 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 0.3268 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 5 U |
| Methyl *tert* -butyl ether | 1634-04-4 | µg/L | 50 | 5 U | 0.490 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2359 U | 5 U | 0.490 U | 1.00 U | 1.00 U | 5 U |
| **Inorganics** | | | | | | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | µg/L | 300 | | **41.6** | **82.0** | **220.6** | **38.9** | **38.5** | 21 I | **55.8 V** | | **681.3** | **684.4** | **656.1** | |
| **Water Chemistry** | | | | | | | | | | | | | | | | |
| Nitrate | 14797-55-8 | mg/L | 10 | | 0.02 U | 0.0200 U | **0.0340** | | **0.040** | 0.091 | **0.301** | | 0.02 U | 0.0200 U | 0.0200 U | |
| Nitrite | 14797-65-0 | mg/L | 1 | | 0.005 U | 0.0050 U | 0.0050 U | **0.027** | 0.0035 U | 0.0035 U | 0.0035 U | | 0.005 U | 0.0050 U | 0.0050 U | |
| Sulfate | 14808-79-8 | mg/L | 250 | | | | **134** | **0.0035 U** | **79.2** | 39.8 | **38.9** | | | | **67** | |
| Alkalinity | ALK | mg/L | * | | 1.0 U | 1.0 U | 1.0 U | **15** | **17.3** | 92 | **41.0 J3** | | 1.0 U | **1.0 U** | 1.0 U | |
| Total Organic Carbon | TOC | mg/L | * | | **6.59** | **6.84** | **4.82** | **4.73** | **8.74** | 10.11 | **4.97** | | **2.99** | **3.24** | **2.83** | |
| Total Disolved Solids | TDS | mg/L | * | | **132** | **200** | **298** | **254** | **172** | 218 | **178** | | **140** | **160** | **132** | |
| Total Sulfide | 18496-25-8 | mg/L | * | | 0.10 U | 0.10 U | 0.10 U | **0.38** | 0.10 U | 0.10 U | 0.10 U | | 0.10 U | 0.10 U | 0.10 U | |
| Chloride | 16887-00-6 | mg/L | 250 | | 5 U | 5.00 U | **5.61** | **8.9** | **3.01** | 7.99 | **9.04** | | 5 U | 5.0 U | 5.00 U | |
| Nitrate-Nitrite Nitrogen | | mg/L | * | | 0.018 U | | **0.0340** | | | | | | 0.018 U | | 0.0200 U | |
| **Gases** | | | | | | | | | | | | | | | | |
| Hydrogen (nm/L) | 1333-74-0 | nM/L | * | | **3.7** | **14.1** | **2.3** | **2.5** | **2.3** | 4.2 | **1.2** | | **2.7** | **4.1** | **6.6** | |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-33AR | | | | | | | OLD-36-35CR | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-33AR | OLD-36-33AR | OLD-36-33AR | OLD-36-33AR | OLD-36-33AR | OLD-36-33AR | OLD-36-33AR | OLD-36-35CR | OLD-36-35CR | OLD-36-35CR | OLD-36-35CR | OLD-36-35CR |
| Sample Date | | | | 6/17/2003 | 9/16/2003 | 12/3/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/26/2003 | 6/17/2003 | 9/16/2003 | 12/3/2003 | 12/6/2004 |
| **Organic Parameters** | | | | | | | | | | | | | | | |
| TRPH | 5289290-40-0 | mg/L | 5 | 0.28 | 0.22 U | 0.20 U | 0.22 U | 0.22 U | 0.20 U | **0.03 I V** | | 0.22 U | 0.21 U | 0.20 U | **0.04 I V** |
| **Volatiles** | | | | | | | | | | | | | | | |
| Acetic Acid (mg/L) | 64-19-7 | mg/L | * | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 500.0 U |
| Propionic Acid (mg/L) | 79-09-4 | mg/L | * | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 500.0 U |
| Pyruvic Acid (mg/L) | 127-17-3 | mg/L | * | 1.00 U | 10.00 U | 10.00 U | 2.000 U | 2.000 U | 2.000 U | 2000 U | | 1.00 U | 10.00 U | 10.00 U | 2000 U |
| n-Butyric Acid (mg/L) | 107-92-6 | mg/L | * | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U | | 1.00 U | 1.000 U | 1.000 U | 500.0 U |
| 1,1-Dichloropropene | 563-58-6 | µg/L | * | | | | | | 1.0000 U | 0.10400 U | | | | | 0.10400 U |
| L-Lactic Acid (mg/L) | 50-21-5 | mg/L | * | 25.00 U | 25.00 U | 25.00 U | 10.00 U | 10.00 U | 10.00 U | 10000 U | | 25.00 U | 25.00 U | 25.00 U | 10000 U |
| Methane | 74-82-8 | µg/L | * | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 5 U | | **285** | **197** | **163** | **32** |
| Ethene | 74-85-1 | µg/L | * | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 18 U | | 26 U | 26 U | 26 U | 18 U |
| Ethane | 74-84-0 | µg/L | * | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 15 U | | 26 U | 26 U | 26 U | 15 U |
| Acetone | 67-64-1 | µg/L | 700 | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 1.299 U | 10 U | 10.0 U | 10.0 U | 10.0 U | 1.299 U |
| Benzene | 71-43-2 | µg/L | 1 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.143 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 0.143 U |
| Bromobenzene | 108-86-1 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.175 U | | 1.00 U | 1.00 U | 1.00 U | 0.175 U |
| Bromochloromethane | 74-97-5 | µg/L | 91 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.301 U | | 1.00 U | 1.00 U | 1.00 U | 0.301 U |
| Bromoform | 75-25-2 | µg/L | 4.4 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.245 U | 4 U | 1.00 U | 1.00 U | 1.00 U | 0.245 U |
| Bromomethane | 74-83-9 | µg/L | 9.8 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.357 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.357 U |
| 2-Butanone (MEK) | 78-93-3 | µg/L | 4200 | | | | | | 1.00 U | 0.729 U | | | | | 0.729 U |
| n-butylbenzene | 104-51-8 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.159 U | | 1.00 U | 1.00 U | 1.00 U | 0.159 U |
| sec-Butylbenzene | 135-98-8 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.262 U | | 1.00 U | 1.00 U | 1.00 U | 0.262 U |
| t-Butylbenzene | 98-06-6 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.347 U | | 1.00 U | 1.00 U | 1.00 U | 0.347 U |
| Carbon disulfide | 75-15-0 | µg/L | 700 | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.140 U | 5 U | 2.00 U | 2.00 U | 2.00 U | 0.140 U |
| Carbon Tetrachloride | 56-23-5 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.406 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 0.406 U |
| Chlorobenzene | 108-90-7 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.105 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.105 U |
| Chloroethane | 75-00-3 | µg/L | 12 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.316 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.316 U |
| 2-chloroethylvinylether | 110-75-8 | µg/L | 175 | | | | | | 1.00 U | 4.62 U | | | | | 4.62 U |
| Chloroform | 67-66-3 | µg/L | 5.7 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.111 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.111 U |
| Chloromethane | 74-87-3 | µg/L | 2.7 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.320 U | 2.7 U | 1.00 U | 1.00 U | 1.00 U | 0.320 U |
| 2-Chlorotoluene | 95-49-8 | µg/L | 140 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.366 U | | 1.00 U | 1.00 U | 1.00 U | 0.366 U |
| 4-Chlorotoluene | 106-43-4 | µg/L | 140 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.099 U | | 1.00 U | 1.00 U | 1.00 U | 0.099 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | µg/L | * | | | | | | 1.00 U | 0.880 U | | | | | 0.880 U |
| Dibromochloromethane | 124-48-1 | µg/L | 0.4 | 0.180 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.157 U | 0.4 U | 0.180 U | 0.400 U | 0.400 U | 0.157 U |
| 1,2 - Dibromoethane | 106-93-4 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.147 U | 0.2 U | 1.00 U | 1.00 U | 1.00 U | 0.147 U |
| Dibromomethane | 74-95-3 | µg/L | * | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.216 U | | 0.180 U | 1.00 U | 1.00 U | 0.216 U |
| 1,2 - Dichlorobenzene | 95-50-1 | µg/L | 600 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.151 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.151 U |
| 1,3 - Dichlorobenzene | 541-73-1 | µg/L | 10 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.078 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.078 U |
| 1,4-Dichlorobenzene | 106-46-7 | µg/L | 75 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.0398 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.0398 U |
| Dichlorodifluoromethane | 75-71-8 | µg/L | 1400 | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.392 U | 5 U | 0.180 U | 1.00 U | 1.00 U | 0.392 U |
| 1,1-Dichloroethane | 75-35-3 | µg/L | 70 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.172 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.172 U |
| 1,2-Dichloroethane | 107-06-2 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.087 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 0.087 U |
| 1,1-Dichloroethene | 75-35-4 | µg/L | 7 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2682 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.2682 U |
| cis-1,2-Dichloroethene | 156-59-2 | µg/L | 70 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2776 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.2776 U |
| Trans-1,2-Dichloroethene | 156-60-5 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2371 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.2371 U |
| 1,2-Dichloropropane | 78-87-5 | µg/L | 5 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.886 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.886 U |
| 1,3 - Dichloropropane | 142-28-9 | µg/L | * | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.2000 U | | 0.220 U | 0.220 U | 0.220 U | 0.2000 U |
| 2,2 -Dichloropropane | 594-20-7 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2341 U | | 1.00 U | 1.00 U | 1.00 U | 0.2341 U |
| *cis* -1,3-Dichloropropene[d] | 542-75-6 | µg/L | 0.2 | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.1515 U | 5 U | 0.230 U | 0.230 U | 0.230 U | 0.1515 U |
| Trans-1,3-Dichloropropene | 10061-02-6 | µg/L | 0.2 | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1919 U | 5 U | 0.200 U | 0.200 U | 0.200 U | 0.1919 U |
| Ethylbenzene | 100-41-4 | µg/L | 30 | 0.080 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2010 U | 5 U | 0.080 U | 1.00 U | 1.00 U | 0.2010 U |
| Hexachlorobutadiene | 87-68-3 | µg/L | * | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.7084 U | | 0.550 U | 0.550 U | 0.550 U | 0.7084 U |
| 2-Hexanone | 591-78-6 | µg/L | 280 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8353 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 0.8353 U |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-33AR | | | | | | | OLD-36-35CR | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-33AR | OLD-36-33AR | OLD-36-33AR | OLD-36-33AR | OLD-36-33AR | OLD-36-33AR | OLD-36-33AR | OLD-36-35CR | OLD-36-35CR | OLD-36-35CR | OLD-36-35CR | OLD-36-35CR |
| Sample Date | | | | 6/17/2003 | 9/16/2003 | 12/3/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 | 3/26/2003 | 6/17/2003 | 9/16/2003 | 12/3/2003 | 12/6/2004 |
| **Volatiles Continued** | | | | | | | | | | | | | | | |
| Isopropylbenzene | 98-82-8 | µg/L | * | 0.460 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1416 U | 0.8 U | 0.460 U | 1.00 U | 1.00 U | 0.1416 U |
| 4-Isopropyltoluene | 99-87-6 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1757 U | | 1.00 U | 1.00 U | 1.00 U | 0.1757 U |
| 4-Methyl-2-Pentanone | 108-10-1 | µg/L | 560 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3544 U | 10 U | 1.00 U | 1.00 U | 1.00 U | 0.3544 U |
| Methylene Chloride | 75-09-2 | µg/L | 5 | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1735 U | 5 U | 5.00 U | 5.00 U | 5.00 U | 0.1735 U |
| Naphthalene | 91-20-3 | µg/L | 20 | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1804 U | | 5.00 U | 5.00 U | 5.00 U | 0.1804 U |
| n-propylbenzene | 103-65-1 | µg/L | * | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2416 U | | 1.00 U | 1.00 U | 1.00 U | 0.2416 U |
| Styrene | 100-42-5 | µg/L | 100 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1731 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.1731 U |
| 1,1,1,2 - Tetrachloroethane | 630-20-6 | µg/L | 1.3 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1988 U | | 1.00 U | 2.00 U | 2.00 U | 0.1988 U |
| 1,1,2,2 - Tetrachloroethane | 79-34-5 | µg/L | 0.2 | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1154 U | 0.2 UJ | 0.200 U | 0.200 U | 0.200 U | 0.1154 U |
| Tetrachloroethene | 127-18-4 | µg/L | 3 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2419 U | 3 U | 1.00 U | 1.00 U | 1.00 U | 0.2419 U |
| Toluene | 108-88-3 | µg/L | 40 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1417 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 0.1417 U |
| 1,2,3 - Trichlorobenzene | 87-61-6 | µg/L | 70 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8373 U | | 1.00 U | 2.00 U | 2.00 U | 0.8373 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | µg/L | 70 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3331 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 0.3331 U |
| 1,1,1 - Trichloroethane | 71-55-6 | µg/L | 200 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2710 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 0.2710 U |
| 1,1,2-Trichloroethane | 79-00-5 | µg/L | 5 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3098 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 0.3098 U |
| Trichloroethene | 79-01-6 | µg/L | 3 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2242 U | 3 U | 1.00 U | 2.00 U | 2.00 U | 0.2242 U |
| 1,2,3 - Trichloropropane | 96-18-4 | µg/L | 200 | 0.200 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2766 U | | 0.200 U | 1.00 U | 1.00 U | 0.2766 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | µg/L | 10 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1026 U | | 1.00 U | 2.00 U | 2.00 U | 0.1026 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | µg/L | 10 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1720 U | | 1.00 U | 2.00 U | 2.00 U | 0.1720 U |
| Vinyl chloride | 75-01-4 | µg/L | 1 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3022 U | 1 U | 1.00 U | 1.00 U | 1.00 U | 0.3022 U |
| Xylenes | 1330-20-7 | µg/L | 20 | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.220 U | 5 U | 1.00 U | 1.00 U | 1.00 U | 0.220 U |
| Bromodichloromethane | 75-27-4 | µg/L | 0.6 | | | | | | 0.600 U | 0.1837 U | | | | | 0.1837 U |
| Trichlorofluoromethane | 79-69-4 | µg/L | 2100 | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3268 U | 5 U | 1.00 U | 2.00 U | 2.00 U | 0.3268 U |
| Methyl *tert* -butyl ether | 1634-04-4 | µg/L | 50 | 0.490 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2359 U | 5 U | 0.490 U | 1.00 U | 1.00 U | 0.2359 U |
| **Inorganics** | | | | | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | µg/L | 300 | **77.8** | **33.2** | **49.6** | **43.8** | **35.8** | 29 I | **68.6 V** | | **378.3** | **478.6** | **374.3** | **862.0** |
| **Water Chemistry** | | | | | | | | | | | | | | | |
| Nitrate | 14797-55-8 | mg/L | 10 | **1.81** | **4.17** | **1.82** | **2.2** | **1.14** | 0.025 | 0.0331 U | | 0.02 U | 0.0200 U | 0.0200 U | 0.0031 U |
| Nitrite | 14797-65-0 | mg/L | 1 | 0.005 U | 0.0050 U | **0.105** | **0.941** | **0.0280** | 0.0035 U | 0.0035 U | | 0.005 U | 0.0050 U | 0.0050 U | 0.0035 U |
| Sulfate | 14808-79-8 | mg/L | 250 | | | **108** | **62** | **87.2** | 10.1 | **20.2** | | | | **10.9** | **25.2** |
| Alkalinity | ALK | mg/L | * | **69.5** | **106** | **151** | **71.5** | **16.8** | 132 | **174 J3** | | **4.4** | **6.6** | **2.3** | **18.4 J3** |
| Total Organic Carbon | TOC | mg/L | * | **6.38** | **8.23** | **8.29** | **8.9** | **9.48** | 5.5 | **9.88** | | **12.12** | **13.83** | **14.93** | **6.6** |
| Total Disolved Solids | TDS | mg/L | * | **236** | **496** | **388** | **292** | **368** | 198 | **272** | | **106** | **164** | **102** | **128** |
| Total Sulfide | 18496-25-8 | mg/L | * | 0.10 U | 0.10 U | 0.10 U | **0.38** | 0.10 U | 0.10 U | 0.10 U | | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Chloride | 16887-00-6 | mg/L | 250 | 5 U | 5.00 U | 5.00 U | **2.5** | **13.9** | 3.48 | **7.29** | | **6.75** | **6.60** | **6.94** | **6.68** |
| Nitrate-Nitrite Nitrogen | | mg/L | * | **1.81** | | **1.82** | | | | | | 0.018 U | | 0.0200 U | |
| **Gases** | | | | | | | | | | | | | | | |
| Hydrogen (nm/L) | 1333-74-0 | nM/L | * | NS | **5.9** | **2.8** | **2.6** | **2.5** | 3.9 | **1.4** | | **2.8** | **5.0** | **2.4** | **1.9** |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-36CR | | OLD-36-36CR | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-36CR | OLD-36-36CR | OLD-36-36CR | OLD-36-36CR | OLD-36-36CR | OLD-36-36CR | OLD-36-36CR | OLD-36-36CR |
| Sample Date | | | | 3/26/2003 | 6/17/2003 | 9/16/2003 | 12/3/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 |
| **Organic Parameters** | | | | | | | | | | | |
| TRPH | 5289290-40-0 | mg/L | 5 | | 0.22 U | 0.22 U | 0.21 U | 0.22 U | 0.20 U | 0.21 U | **0.04 I V** |
| **Volatiles** | | | | | | | | | | | |
| Acetic Acid (mg/L) | 64-19-7 | mg/L | * | | 1.00 U | 1.000 U | 1.000 U | **0.8900** | 0.5000 U | 0.5000 U | 500.0 U |
| Propionic Acid (mg/L) | 79-09-4 | mg/L | * | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U |
| Pyruvic Acid (mg/L) | 127-17-3 | mg/L | * | | 1.00 U | 10.00 U | 10.00 U | 2.000 U | 2.000 U | 2.000 U | 2000 U |
| n-Butyric Acid (mg/L) | 107-92-6 | mg/L | * | | 1.00 U | 1.000 U | 1.000 U | 0.5000 U | 0.5000 U | 0.5000 U | 500.0 U |
| 1,1-Dichloropropene | 563-58-6 | µg/L | * | | | | | | | 1.0000 U | 0.10400 U |
| L-Lactic Acid (mg/L) | 50-21-5 | mg/L | * | | 25.00 U | 25.00 U | 25.00 U | 10.00 U | 10.00 U | 10.00 U | 10000 U |
| Methane | 74-82-8 | µg/L | * | | **285** | 26 U | 26 U | 26 U | 26 U | 26 U | **32** |
| Ethene | 74-85-1 | µg/L | * | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 18 U |
| Ethane | 74-84-0 | µg/L | * | | 26 U | 26 U | 26 U | 26 U | 26 U | 26 U | 15 U |
| Acetone | 67-64-1 | µg/L | 700 | 10 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 10.0 U | 1.299 U |
| Benzene | 71-43-2 | µg/L | 1 | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U, J4 | 0.143 U |
| Bromobenzene | 108-86-1 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.175 U |
| Bromochloromethane | 74-97-5 | µg/L | 91 | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U, J4 | 0.301 U |
| Bromoform | 75-25-2 | µg/L | 4.4 | 4 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.245 U |
| Bromomethane | 74-83-9 | µg/L | 9.8 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.357 U |
| 2-Butanone (MEK) | 78-93-3 | µg/L | 4200 | | | | | | | 1.00 U | 0.729 U |
| n-butylbenzene | 104-51-8 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.159 U |
| sec-Butylbenzene | 135-98-8 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.262 U |
| t-Butylbenzene | 98-06-6 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.347 U |
| Carbon disulfide | 75-15-0 | µg/L | 700 | 5 U | 2.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.140 U |
| Carbon Tetrachloride | 56-23-5 | µg/L | 3 | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.406 U |
| Chlorobenzene | 108-90-7 | µg/L | 100 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U, J4 | 0.105 U |
| Chloroethane | 75-00-3 | µg/L | 12 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.316 U |
| 2-chloroethylvinylether | 110-75-8 | µg/L | 175 | | | | | | | 1.00 U, J4 | 4.62 U |
| Chloroform | 67-66-3 | µg/L | 5.7 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | **1.80 J4** | **5.19** |
| Chloromethane | 74-87-3 | µg/L | 2.7 | 2.7 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.320 U |
| 2-Chlorotoluene | 95-49-8 | µg/L | 140 | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.366 U |
| 4-Chlorotoluene | 106-43-4 | µg/L | 140 | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.099 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | µg/L | * | | | | | | | 1.00 U | 0.880 U |
| Dibromochloromethane | 124-48-1 | µg/L | 0.4 | 0.4 U | 0.180 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.400 U | 0.157 U |
| 1,2 - Dibromoethane | 106-93-4 | µg/L | * | 0.2 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.147 U |
| Dibromomethane | 74-95-3 | µg/L | * | | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.216 U |
| 1,2 - Dichlorobenzene | 95-50-1 | µg/L | 600 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U, J4 | 0.151 U |
| 1,3 - Dichlorobenzene | 541-73-1 | µg/L | 10 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.078 U |
| 1,4-Dichlorobenzene | 106-46-7 | µg/L | 75 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.0398 U |
| Dichlorodifluoromethane | 75-71-8 | µg/L | 1400 | 5 U | 0.180 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.392 U |
| 1,1-Dichloroethane | 75-35-3 | µg/L | 70 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U, J4 | 0.172 U |
| 1,2-Dichloroethane | 107-06-2 | µg/L | 3 | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.087 U |
| 1,1-Dichloroethene | 75-35-4 | µg/L | 7 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2682 U |
| cis-1,2-Dichloroethene | 156-59-2 | µg/L | 70 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2776 U |
| Trans-1,2-Dichloroethene | 156-60-5 | µg/L | 100 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2371 U |
| 1,2-Dichloropropane | 78-87-5 | µg/L | 5 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U, J4 | 0.886 U |
| 1,3 - Dichloropropane | 142-28-9 | µg/L | * | | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.2000 U |
| 2,2 -Dichloropropane | 594-20-7 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2341 U |
| *cis* -1,3-Dichloropropene[d] | 542-75-6 | µg/L | 0.2 | 5 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U | 0.230 U, J4 | 0.1515 U |
| Trans-1,3-Dichloropropene | 10061-02-6 | µg/L | 0.2 | 5 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.1919 U |
| Ethylbenzene | 100-41-4 | µg/L | 30 | 5 U | 0.080 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2010 U |
| Hexachlorobutadiene | 87-68-3 | µg/L | * | | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.550 U | 0.7084 U |
| 2-Hexanone | 591-78-6 | µg/L | 280 | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8353 U |

**TABLE 4**
**HISTORICAL DETECTIONS IN GROUNDWATER**
**STUDY AREA 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

| Well Designation | | | | OLD-36-36CR | | OLD-36-36CR | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | OLD-36-36CR | OLD-36-36CR | OLD-36-36CR | OLD-36-36CR | OLD-36-36CR | OLD-36-36CR | OLD-36-36CR | OLD-36-36CR |
| Sample Date | | | | 3/26/2003 | 6/17/2003 | 9/16/2003 | 12/3/2003 | 3/22/2004 | 6/13/2004 | 9/11/2004 | 12/6/2004 |
| **Volatiles Continued** | | | | | | | | | | | |
| Isopropylbenzene | 98-82-8 | µg/L | * | 0.8 U | 0.460 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1416 U |
| 4-Isopropyltoluene | 99-87-6 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1757 U |
| 4-Methyl-2-Pentanone | 108-10-1 | µg/L | 560 | 10 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3544 U |
| Methylene Chloride | 75-09-2 | µg/L | 5 | 5 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1735 U |
| Naphthalene | 91-20-3 | µg/L | 20 | | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 5.00 U | 0.1804 U |
| n-propylbenzene | 103-65-1 | µg/L | * | | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2416 U |
| Styrene | 100-42-5 | µg/L | 100 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U, J4 | 0.1731 U |
| 1,1,1,2 - Tetrachloroethane | 630-20-6 | µg/L | 1.3 | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1988 U |
| 1,1,2,2 - Tetrachloroethane | 79-34-5 | µg/L | 0.2 | 0.2 UJ | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 0.200 U | 1.00 U, J4 | 0.1154 U |
| Tetrachloroethene | 127-18-4 | µg/L | 3 | 3 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U, J4 | 0.2419 U |
| Toluene | 108-88-3 | µg/L | 40 | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1417 U |
| 1,2,3 - Trichlorobenzene | 87-61-6 | µg/L | 70 | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.8373 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | µg/L | 70 | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3331 U |
| 1,1,1 - Trichloroethane | 71-55-6 | µg/L | 200 | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U, J4 | 0.2710 U |
| 1,1,2-Trichloroethane | 79-00-5 | µg/L | 5 | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3098 U |
| Trichloroethene | 79-01-6 | µg/L | 3 | 3 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U, J4 | 0.2242 U |
| 1,2,3 - Trichloropropane | 96-18-4 | µg/L | 200 | | 0.200 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2766 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | µg/L | 10 | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1026 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | µg/L | 10 | | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.1720 U |
| Vinyl chloride | 75-01-4 | µg/L | 1 | 1 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3022 U |
| Xylenes | 1330-20-7 | µg/L | 20 | 5 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.220 U |
| Bromodichloromethane | 75-27-4 | µg/L | 0.6 | | | | | | | 0.600 U, J4 | **0.4500 I** |
| Trichlorofluoromethane | 79-69-4 | µg/L | 2100 | 5 U | 1.00 U | 2.00 U | 2.00 U | 1.00 U | 1.00 U | 1.00 U | 0.3268 U |
| Methyl *tert* -butyl ether | 1634-04-4 | µg/L | 50 | 5 U | 0.490 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 1.00 U | 0.2359 U |
| **Inorganics** | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | µg/L | 300 | | **715.0** | **414.0** | **342.2** | **145.7** | **213.6** | **109.4** | **111.3 V** |
| **Water Chemistry** | | | | | | | | | | | |
| Nitrate | 14797-55-8 | mg/L | 10 | | 0.02 U | 0.0200 U | 0.0200 U | **0.063** | 0.0031 U | 0.2 | **0.181** |
| Nitrite | 14797-65-0 | mg/L | 1 | | 0.005 U | 0.0050 U | 0.0050 U | 0.0035 U | 0.0035 U | 0.043 | 0.0035 U |
| Sulfate | 14808-79-8 | mg/L | 250 | | | | **54.8** | **73.2** | **58.1** | 35.9 | **28.2** |
| Alkalinity | ALK | mg/L | * | | **1.8** | **39.6** | **91.1** | **43.6** | **87.8** | 67 | **88.3** |
| Total Organic Carbon | TOC | mg/L | * | | **7.43** | **4.61** | **5.53** | **4.76** | **6.71** | 5.55 | **5.70** |
| Total Disolved Solids | TDS | mg/L | * | | **136** | **164** | **230** | **82** | **212** | 172 | **186** |
| Total Sulfide | 18496-25-8 | mg/L | * | | 0.10 U | 0.10 U | 0.10 U | **0.27** | 0.10 U | 0.10 U | 0.10 U |
| Chloride | 16887-00-6 | mg/L | 250 | | 5 U | 5.00 U | 5.00 U | **4.99** | **4.52** | 5.92 | **7.23** |
| Nitrate-Nitrite Nitrogen | | mg/L | * | | 0.018 U | | 0.0200 U | | | | |
| **Gases** | | | | | | | | | | | |
| Hydrogen (nm/L) | 1333-74-0 | nM/L | * | | NS | **4.9** | **2.3** | **2.8** | **2.1** | 4.4 | **1.3** |

**TABLE 4**

**HISTORICAL DETECTIONS IN GROUNDWATER**
**Site Area 36**

**NAVAL TRAINING CENTER**
**ORLANDO, FLORIDA**

Notes:

[(a)] Groundwater Cleanup Target Level [Development of Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, F.A.C., May 26, 1999].

[*] Indicates that the screening value is not available.
Empty cells indicate non-detects.
"I" the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
"J" qualifier indicates an estimated value.
"J3" qualifier indicates that the reported value failed to meet the established quality control criteria for either precision and/or accuracy
"J4" qualifier indicates that the sample matrix interfered with the ability to make an accurate determination
"=" qualifier indicates parameter detected as indicated
"V" qualifier indicates the analyte was detected in both the sample and the associated method blank.
"U" qualifier indicates the compound was analyzed for but not detected
NA - Not analyzed.
nM/L - nanomoles per liter.
Values in shaded cells are equal to or exceed the screening criteria.

TABLE 5

VALIDATED DETECTIONS IN GROUNDWATER
STUDY AREA 36

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

| Well Designation | | | | OLD-36-01AR | OLD-36-02AR | OLD-36-08BR | OLD-36-09CR | OLD-36-10BR | OLD-36-11CR | OLD-36-18CR | OLD-36-19AR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | | | | | | | | |
| Sample Date | | | | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 |
| **Organic Parameters** | | | | | | | | | | | |
| TRPH | 5289290-40-0 | mg/L | 5 | **0.03 I V** | **0.03 I V** | **0.16 I V** | **0.06 I V** | **0.03 I V** | **0.03 I V** | **0.06 I V** | **0.04 I V** |
| **Volatiles** | | | | | | | | | | | |
| Acetic Acid (mg/L) | 64-19-7 | mg/L | * | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U |
| Propionic Acid (mg/L) | 79-09-4 | mg/L | * | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U |
| Pyruvic Acid (mg/L) | 127-17-3 | mg/L | * | 2000 U | 2000 U | 2000 U | 2000 U | 2000 U | 2000 U | 2000 U | 2000 U |
| n-Butyric Acid (mg/L) | 107-92-6 | mg/L | * | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U |
| 1,1-Dichloropropene | 563-58-6 | µg/L | * | 0.010400 U | 0.010400 U | 0.10400 U | 0.10400 U | 0.10400 U | 0.10400 U | 0.10400 U | 0.10400 U |
| L-Lactic Acid (mg/L) | 50-21-5 | mg/L | * | 10000 U | 10000 U | 10000 U | 10000 U | 10000 U | 10000 U | 10000 U | 10000 U |
| Methane | 74-82-8 | µg/L | * | **641** | 5 U | **13100** | **4890** | 5 U | **177** | 5 U | 5 U |
| Ethene | 74-85-1 | µg/L | * | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U | 18 U |
| Ethane | 74-84-0 | µg/L | * | 15 U | 15 U | 15 U | 15 U | 15 U | 15 U | 15 U | 15 U |
| Acetone | 67-64-1 | µg/L | 700 | 1.299 U | 1.299 U | 1.299 U | 1.299 U | 1.299 U | 1.299 U | 1.299 U | 1.299 U |
| Benzene | 71-43-2 | µg/L | 1 | 0.143 U | 0.143 U | 0.143 U | 0.143 U | 0.143 U | 0.143 U | 0.143 U | 0.143 U |
| Bromobenzene | 108-86-1 | µg/L | * | 0.175 U | 0.175 U | 0.175 U | 0.175 U | 0.175 U | 0.175 U | 0.175 U | 0.175 U |
| Bromochloromethane | 74-97-5 | µg/L | 91 | 0.301 U | 0.301 U | 0.301 U | 0.301 U | 0.301 U | 0.301 U | 0.301 U | 0.301 U |
| Bromoform | 75-25-2 | µg/L | 4.4 | 0.245 U | 0.245 U | 0.245 U | 0.245 U | 0.245 U | 0.245 U | 0.245 U | 0.245 U |
| Bromomethane | 74-83-9 | µg/L | 9.8 | 0.357 U | 0.357 U | 0.357 U | 0.357 U | 0.357 U | 0.357 U | 0.357 U | 0.357 U |
| 2-Butanone (MEK) | 78-93-3 | µg/L | 4200 | 0.729 U | 0.729 U | 0.729 U | 0.729 U | 0.729 U | 0.729 U | 0.729 U | 0.729 U |
| n-butylbenzene | 104-51-8 | µg/L | * | 0.159 U | 0.159 U | 0.159 U | 0.159 U | 0.159 U | 0.159 U | 0.159 U | 0.159 U |
| sec-Butylbenzene | 135-98-8 | µg/L | * | 0.262 U | 0.262 U | 0.262 U | 0.262 U | 0.262 U | 0.262 U | 0.262 U | 0.262 U |
| t-Butylbenzene | 98-06-6 | µg/L | * | 0.347 U | 0.347 U | 0.347 U | 0.347 U | 0.347 U | 0.347 U | 0.347 U | 0.347 U |
| Carbon disulfide | 75-15-0 | µg/L | 700 | 0.140 U | 0.140 U | 0.140 U | 0.140 U | 0.140 U | 0.140 U | 0.140 U | 0.140 U |
| Carbon Tetrachloride | 56-23-5 | µg/L | 3 | 0.406 U | 0.406 U | 0.406 U | 0.406 U | 0.406 U | 0.406 U | 0.406 U | 0.406 U |
| Chlorobenzene | 108-90-7 | µg/L | 100 | 0.105 U | 0.105 U | 0.105 U | 0.105 U | 0.105 U | 0.105 U | 0.105 U | 0.105 U |
| Chloroethane | 75-00-3 | µg/L | 12 | 0.316 U | 0.316 U | 0.316 U | 0.316 U | 0.316 U | 0.316 U | 0.316 U | 0.316 U |
| 2-chloroethylvinylether | 110-75-8 | µg/L | 175 | 4.62 U | 4.62 U | 4.62 U | 4.62 U | 4.62 U | 4.62 U | 4.62 U | 4.62 U |
| Chloroform | 67-66-3 | µg/L | 5.7 | 0.111 U | 0.111 U | 0.111 U | 0.111 U | 0.111 U | 0.111 U | 0.111 U | 0.111 U |
| Chloromethane | 74-87-3 | µg/L | 2.7 | 0.320 U | 0.320 U | 0.320 U | 0.320 U | 0.320 U | 0.320 U | 0.320 U | 0.320 U |
| 2-Chlorotoluene | 95-49-8 | µg/L | 140 | 0.366 U | 0.366 U | 0.366 U | 0.366 U | 0.366 U | 0.366 U | 0.366 U | 0.366 U |
| 4-Chlorotoluene | 106-43-4 | µg/L | 140 | 0.099 U | 0.099 U | 0.099 U | 0.099 U | 0.099 U | 0.099 U | 0.099 U | 0.099 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | µg/L | * | 0.880 U | 0.880 U | 0.880 U | 0.880 U | 0.880 U | 0.880 U | 0.880 U | 0.880 U |
| Dibromochloromethane | 124-48-1 | µg/L | 0.4 | 0.157 U | 0.157 U | 0.157 U | 0.157 U | 0.157 U | 0.157 U | 0.157 U | 0.157 U |
| 1,2 - Dibromoethane | 106-93-4 | µg/L | * | 0.147 U | 0.147 U | 0.147 U | 0.147 U | 0.147 U | 0.147 U | 0.147 U | 0.147 U |
| Dibromomethane | 74-95-3 | µg/L | * | 0.216 U | 0.216 U | 0.216 U | 0.216 U | 0.216 U | 0.216 U | 0.216 U | 0.216 U |
| 1,2 - Dichlorobenzene | 95-50-1 | µg/L | 600 | 0.151 U | 0.151 U | 0.151 U | 0.151 U | 0.151 U | 0.151 U | 0.151 U | 0.151 U |
| 1,3 - Dichlorobenzene | 541-73-1 | µg/L | 10 | 0.078 U | 0.078 U | 0.078 U | 0.078 U | 0.078 U | 0.078 U | 0.078 U | 0.078 U |
| 1,4-Dichlorobenzene | 106-46-7 | µg/L | 75 | 0.0398 U | 0.0398 U | 0.0398 U | 0.0398 U | 0.0398 U | 0.0398 U | 0.0398 U | 0.0398 U |
| Dichlorodifluoromethane | 75-71-8 | µg/L | 1400 | 0.392 U | 0.392 U | 0.392 U | 0.392 U | 0.392 U | 0.392 U | 0.392 U | 0.392 U |
| 1,1-Dichloroethane | 75-35-3 | µg/L | 70 | 0.172 U | 0.172 U | 0.172 U | 0.172 U | 0.172 U | 0.172 U | 0.172 U | 0.172 U |
| 1,2-Dichloroethane | 107-06-2 | µg/L | 3 | 0.087 U | 0.087 U | 0.087 U | 0.087 U | 0.087 U | 0.087 U | 0.087 U | 0.087 U |
| 1,1-Dichloroethene | 75-35-4 | µg/L | 7 | 0.2682 U | 0.2682 U | 0.2682 U | 0.2682 U | 0.2682 U | 0.2682 U | 0.2682 U | 0.2682 U |
| cis-1,2-Dichloroethene | 156-59-2 | µg/L | 70 | 0.2776 U | 0.2776 U | **62.39** | **4.820** | **3.200** | 0.2776 U | 0.2776 U | 0.2776 U |
| Trans-1,2-Dichloroethene | 156-60-5 | µg/L | 100 | 0.2371 U | 0.2371 U | 0.2371 U | 0.2371 U | 0.2371 U | 0.2371 U | 0.2371 U | 0.2371 U |
| 1,2-Dichloropropane | 78-87-5 | µg/L | 5 | 0.886 U | 0.886 U | 0.886 U | 0.886 U | 0.886 U | 0.886 U | 0.886 U | 0.886 U |
| 1,3 - Dichloropropane | 142-28-9 | µg/L | * | 0.2000 U | 0.2000 U | 0.2000 U | 0.2000 U | 0.2000 U | 0.2000 U | 0.2000 U | 0.2000 U |
| 2,2 -Dichloropropane | 594-20-7 | µg/L | * | 0.2341 U | 0.2341 U | 0.2341 U | 0.2341 U | 0.2341 U | 0.2341 U | 0.2341 U | 0.2341 U |
| *cis* -1,3-Dichloropropene[d] | 542-75-6 | µg/L | 0.2 | 0.1515 U | 0.1515 U | 0.1515 U | 0.1515 U | 0.1515 U | 0.1515 U | 0.1515 U | 0.1515 U |
| Trans-1,3-Dichloropropene | 10061-02-6 | µg/L | 0.2 | 0.1919 U | 0.1919 U | 0.1919 U | 0.1919 U | 0.1919 U | 0.1919 U | 0.1919 U | 0.1919 U |
| Ethylbenzene | 100-41-4 | µg/L | 30 | 0.2010 U | 0.2010 U | 0.2010 U | 0.2010 U | 0.2010 U | 0.2010 U | 0.2010 U | 0.2010 U |
| Hexachlorobutadiene | 87-68-3 | µg/L | * | 0.7084 U | 0.7084 U | 0.7084 U | 0.7084 U | 0.7084 U | 0.7084 U | 0.7084 U | 0.7084 U |
| 2-Hexanone | 591-78-6 | µg/L | 280 | 0.8353 U | 0.8353 U | 0.8353 U | 0.8353 U | 0.8353 U | 0.8353 U | 0.8353 U | 0.8353 U |

TABLE 5

VALIDATED DETECTIONS IN GROUNDWATER
STUDY AREA 36

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

| Well Designation | | | | OLD-36-01AR | OLD-36-02AR | OLD-36-08BR | OLD-36-09CR | OLD-36-10BR | OLD-36-11CR | OLD-36-18CR | OLD-36-19AR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | | | | | | | | |
| Sample Date | | | | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 |
| **Volatiles Continued** | | | | | | | | | | | |
| Isopropylbenzene | 98-82-8 | µg/L | * | 0.1416 U | 0.1416 U | 0.1416 U | 0.1416 U | 0.1416 U | 0.1416 U | 0.1416 U | 0.1416 U |
| 4-Isopropyltoluene | 99-87-6 | µg/L | * | 0.1757 U | 0.1757 U | 0.1757 U | 0.1757 U | 0.1757 U | 0.1757 U | 0.1757 U | 0.1757 U |
| 4-Methyl-2-Pentanone | 108-10-1 | µg/L | 560 | 0.3544 U | 0.3544 U | 0.3544 U | 0.3544 U | 0.3544 U | 0.3544 U | 0.3544 U | 0.3544 U |
| Methylene Chloride | 75-09-2 | µg/L | 5 | 0.1735 U | 0.1735 U | 0.1735 U | 0.1735 U | 0.1735 U | 0.1735 U | 0.1735 U | 0.1735 U |
| Naphthalene | 91-20-3 | µg/L | 20 | 0.1804 U | 0.1804 U | 0.1804 U | 0.1804 U | 0.1804 U | 0.1804 U | 0.1804 U | 0.1804 U |
| n-propylbenzene | 103-65-1 | µg/L | * | 0.2416 U | 0.2416 U | 0.2416 U | 0.2416 U | 0.2416 U | 0.2416 U | 0.2416 U | 0.2416 U |
| Styrene | 100-42-5 | µg/L | 100 | 0.1731 U | 0.1731 U | 0.1731 U | 0.1731 U | 0.1731 U | 0.1731 U | 0.1731 U | 0.1731 U |
| 1,1,1,2 - Tetrachloroethane | 630-20-6 | µg/L | 1.3 | 0.1988 U | 0.1988 U | 0.1988 U | 0.1988 U | 0.1988 U | 0.1988 U | 0.1988 U | 0.1988 U |
| 1,1,2,2 - Tetrachloroethane | 79-34-5 | µg/L | 0.2 | 0.1154 U | 0.1154 U | 0.1154 U | 0.1154 U | 0.1154 U | 0.1154 U | 0.1154 U | 0.1154 U |
| Tetrachloroethene | 127-18-4 | µg/L | 3 | 0.2419 U | 0.2419 U | 0.2419 U | 0.2419 U | 0.2419 U | 0.2419 U | 0.2419 U | 0.2419 U |
| Toluene | 108-88-3 | µg/L | 40 | 0.1417 U | 0.1417 U | 0.1417 U | 0.1417 U | 0.1417 U | 0.1417 U | 0.1417 U | 0.1417 U |
| 1,2,3 - Trichlorobenzene | 87-61-6 | µg/L | 70 | 0.8373 U | 0.8373 U | 0.8373 U | 0.8373 U | 0.8373 U | 0.8373 U | 0.8373 U | 0.8373 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | µg/L | 70 | 0.3331 U | 0.3331 U | 0.3331 U | 0.3331 U | 0.3331 U | 0.3331 U | 0.3331 U | 0.3331 U |
| 1,1,1 - Trichloroethane | 71-55-6 | µg/L | 200 | 0.2710 U | 0.2710 U | 0.2710 U | 0.2710 U | 0.2710 U | 0.2710 U | 0.2710 U | 0.2710 U |
| 1,1,2-Trichloroethane | 79-00-5 | µg/L | 5 | 0.3098 U | 0.3098 U | 0.3098 U | 0.3098 U | 0.3098 U | 0.3098 U | 0.3098 U | 0.3098 U |
| Trichloroethene | 79-01-6 | µg/L | 3 | 0.2242 U | 0.2242 U | 0.2242 U | **25.60** | 0.2242 U | 0.2242 U | 0.2242 U | 0.2242 U |
| 1,2,3 - Trichloropropane | 96-18-4 | µg/L | 200 | 0.2766 U | 0.2766 U | 0.2766 U | 0.2766 U | 0.2766 U | 0.2766 U | 0.2766 U | 0.2766 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | µg/L | 10 | 0.1026 U | 0.1026 U | 0.1026 U | 0.1026 U | 0.1026 U | 0.1026 U | 0.1026 U | 0.1026 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | µg/L | 10 | 0.1720 U | 0.1720 U | 0.1720 U | 0.1720 U | 0.1720 U | 0.1720 U | 0.1720 U | 0.1720 U |
| Vinyl chloride | 75-01-4 | µg/L | 1 | 0.3022 U | 0.3022 U | 0.3022 U | 0.3022 U | 0.3022 U | 0.3022 U | 0.3022 U | 0.3022 U |
| Xylenes | 1330-20-7 | µg/L | 20 | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U |
| Bromodichloromethane | 75-27-4 | µg/L | 0.6 | 0.1837 U | 0.1837 U | 0.1837 U | 0.1837 U | 0.1837 U | 0.1837 U | 0.1837 U | 0.1837 U |
| Trichlorofluoromethane | 79-69-4 | µg/L | 2100 | 0.3268 U | 0.3268 U | 0.3268 U | 0.3268 U | 0.3268 U | 0.3268 U | 0.3268 U | 0.3268 U |
| Methyl *tert* -butyl ether | 1634-04-4 | µg/L | 50 | 0.2359 U | 0.2359 U | 0.2359 U | 0.2359 U | 0.2359 U | 0.2359 U | 0.2359 U | 0.2359 U |
| **Inorganics** | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | mg/L | 0.3 | **0.0494 I V** | **0.0437 I V** | **0.5240** | **0.4873** | **0.1152 V** | **0.1520** | **1.136** | **0.0260 I V** |
| **Water Chemistry** | | | | | | | | | | | |
| Nitrate | 14797-55-8 | mg/L | 10 | 0.0031 U | **0.054** | **0.0150** | 0.0031 U | 0.0031 U | 0.0031 U | 0.0031 U | **1.54** |
| Nitrite | 14797-65-0 | mg/L | 1 | 0.0035 U | **0.005** | 0.0035 U | 0.0035 U | 0.0035 U | 0.0035 U | 0.0035 U | 0.0035 U |
| Sulfate | 14808-79-8 | mg/L | 250 | **54.3** | **95.4** | 2.00 U | **10.2** | **17.5** | **18.6** | **16.6** | **18.4** |
| Alkalinity | ALK | mg/L | * | **207 J3** | **191** | **83.3 J3** | **4.1 J3** | **50.0 J3** | **49.2 J3** | **4.0 J3** | **213 J3** |
| Total Organic Carbon | TOC | mg/L | * | **13.69** | **13.22** | **11.4** | **3.45** | **7.85** | **7.66** | **4.69** | **9.43** |
| Total Disolved Solids | TDS | mg/L | * | **354.0** | **392** | **172** | **70** | **120.0** | **118** | **104** | **318** |
| Total Sulfide | 18496-25-8 | mg/L | * | 0.10 U | 0.10 U | 0.10 U | **1.52** | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Chloride | 16887-00-6 | mg/L | 250 | **4.60** | **7.04** | **6.27** | **7.75** | **3.41** | **5.04** | **6.3** | **15.3** |
| | | | | | | | | | | | |
| **Gases** | | | | | | | | | | | |
| Hydrogen (nm/L) | 1333-74-0 | nM/L | * | **1.5** | **1.6** | **2.9** | **1.6** | **1.6** | **1.3** | **1.4** | **1.4** |
| **Field Parameters** | | | | | | | | | | | |
| Carbon Dioxide | 124-38-9 | mg/L | * | **126.00** | **155** | **70.00** | **205.00** | **94** | **110** | NM | **77** |
| Dissolved Oxygen | DO | mg/L | * | **0.36** | **0.36** | **0.27** | **0.41** | **0.4** | **0.48** | NM | **1.16** |
| Ferrous Iron | FE-FS | mg/L | * | 0 | **0.2** | **1.2** | **1** | **0.3** | **0.2** | NM | 0 |
| Hydrogen Sulfide | 7783-06-4 | mg/L | * | 0 | 0 | **5** | **2** | **2** | 0 | 0 | **0.3** |
| Redox Potential (mV) | | mV | * | **-122.3** | **-125.6** | **-190.6** | **-120.6** | **-13.3** | **-92.3** | **-32.3** | **-7.1** |
| Temperature ($^{o}$C) | | $^{o}$C | * | **25.04** | **24.93** | **25.42** | **25.63** | **25.4** | **25.47** | **25.93** | **24.88** |
| pH | | SU | * | **6.99** | **6.82** | **5.82** | **4.86** | **5.96** | **5.97** | **4.83** | **6.9** |
| Conductivity | | mS/cm | * | **591** | **1,314.00** | **444** | **188** | **185** | **191** | **213** | **582** |

TABLE 5

VALIDATED DETECTIONS IN GROUNDWATER
STUDY AREA 36

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

| Well Designation | | | | OLD-36-20BR | OLD-36-22BR | OLD-36-22BR-DUP | OLD-36-23CR | OLD-36-24BR | OLD-36-33AR | OLD-36-35CR | OLD-36-36CR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID | CAS Number | UNITS | Florida GCTL[a] | | | | | | | | |
| Sample Date | | | | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 |
| **Organic Parameters** | | | | | | | | | | | |
| TRPH | 5289290-40-0 | mg/L | 5 | **0.03 I V** | **0.03 I V** | **0.09 I V** | **0.2 I V** | **0.03 I V** | **0.03 I V** | **0.04 I V** | **0.04 I V** |
| **Volatiles** | | | | | | | | | | | |
| Acetic Acid (mg/L) | 64-19-7 | mg/L | * | 500.0 U | 500.0 U | | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U |
| Propionic Acid (mg/L) | 79-09-4 | mg/L | * | 500.0 U | 500.0 U | | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U |
| Pyruvic Acid (mg/L) | 127-17-3 | mg/L | * | 2000 U | 2000 U | | 2000 U | 2000 U | 2000 U | 2000 U | 2000 U |
| n-Butyric Acid (mg/L) | 107-92-6 | mg/L | * | 500.0 U | 500.0 U | | 500.0 U | 500.0 U | 500.0 U | 500.0 U | 500.0 U |
| 1,1-Dichloropropene | 563-58-6 | µg/L | * | 0.10400 U | 0.10400 U | 0.10400 U | 0.10400 U | 0.10400 U | 0.10400 U | 0.10400 U | 0.10400 U |
| L-Lactic Acid (mg/L) | 50-21-5 | mg/L | * | 10000 U | 10000 U | | 10000 U | 10000 U | 10000 U | 10000 U | 10000 U |
| Methane | 74-82-8 | µg/L | * | 5 U | **100** | | 5 U | 5 U | 5 U | **32** | **32** |
| Ethene | 74-85-1 | µg/L | * | 18 U | 18 U | | 18 U | 18 U | 18 U | 18 U | 18 U |
| Ethane | 74-84-0 | µg/L | * | 15 U | 15 U | | 15 U | 15 U | 15 U | 15 U | 15 U |
| Acetone | 67-64-1 | µg/L | 700 | 1.299 U | 1.299 U | 1.299 U | 1.299 U | 1.299 U | 1.299 U | 1.299 U | 1.299 U |
| Benzene | 71-43-2 | µg/L | 1 | 0.143 U | 0.143 U | 0.143 U | 0.143 U | 0.143 U | 0.143 U | 0.143 U | 0.143 U |
| Bromobenzene | 108-86-1 | µg/L | * | 0.175 U | 0.175 U | 0.175 U | 0.175 U | 0.175 U | 0.175 U | 0.175 U | 0.175 U |
| Bromochloromethane | 74-97-5 | µg/L | 91 | 0.301 U | 0.301 U | 0.301 U | 0.301 U | 0.301 U | 0.301 U | 0.301 U | 0.301 U |
| Bromoform | 75-25-2 | µg/L | 4.4 | 0.245 U | 0.245 U | 0.245 U | 0.245 U | 0.245 U | 0.245 U | 0.245 U | 0.245 U |
| Bromomethane | 74-83-9 | µg/L | 9.8 | 0.357 U | 0.357 U | 0.357 U | 0.357 U | 0.357 U | 0.357 U | 0.357 U | 0.357 U |
| 2-Butanone (MEK) | 78-93-3 | µg/L | 4200 | 0.729 U | 0.729 U | 0.729 U | 0.729 U | 0.729 U | 0.729 U | 0.729 U | 0.729 U |
| n-butylbenzene | 104-51-8 | µg/L | * | 0.159 U | 0.159 U | 0.159 U | 0.159 U | 0.159 U | 0.159 U | 0.159 U | 0.159 U |
| sec-Butylbenzene | 135-98-8 | µg/L | * | 0.262 U | 0.262 U | 0.262 U | 0.262 U | 0.262 U | 0.262 U | 0.262 U | 0.262 U |
| t-Butylbenzene | 98-06-6 | µg/L | * | 0.347 U | 0.347 U | 0.347 U | 0.347 U | 0.347 U | 0.347 U | 0.347 U | 0.347 U |
| Carbon disulfide | 75-15-0 | µg/L | 700 | 0.140 U | 0.140 U | 0.140 U | 0.140 U | 0.140 U | 0.140 U | 0.140 U | 0.140 U |
| Carbon Tetrachloride | 56-23-5 | µg/L | 3 | 0.406 U | 0.406 U | 0.406 U | 0.406 U | 0.406 U | 0.406 U | 0.406 U | 0.406 U |
| Chlorobenzene | 108-90-7 | µg/L | 100 | 0.105 U | 0.105 U | 0.105 U | 0.105 U | 0.105 U | 0.105 U | 0.105 U | 0.105 U |
| Chloroethane | 75-00-3 | µg/L | 12 | 0.316 U | 0.316 U | 0.316 U | 0.316 U | 0.316 U | 0.316 U | 0.316 U | 0.316 U |
| 2-chloroethylvinylether | 110-75-8 | µg/L | 175 | 4.62 U | 4.62 U | 4.62 U | 4.62 U | 4.62 U | 4.62 U | 4.62 U | 4.62 U |
| Chloroform | 67-66-3 | µg/L | 5.7 | 0.111 U | 0.111 U | 0.111 U | 0.111 U | 0.111 U | 0.111 U | 0.111 U | **5.19** |
| Chloromethane | 74-87-3 | µg/L | 2.7 | 0.320 U | 0.320 U | 0.320 U | 0.320 U | 0.320 U | 0.320 U | 0.320 U | 0.320 U |
| 2-Chlorotoluene | 95-49-8 | µg/L | 140 | 0.366 U | 0.366 U | 0.366 U | 0.366 U | 0.366 U | 0.366 U | 0.366 U | 0.366 U |
| 4-Chlorotoluene | 106-43-4 | µg/L | 140 | 0.099 U | 0.099 U | 0.099 U | 0.099 U | 0.099 U | 0.099 U | 0.099 U | 0.099 U |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | µg/L | * | 0.880 U | 0.880 U | 0.880 U | 0.880 U | 0.880 U | 0.880 U | 0.880 U | 0.880 U |
| Dibromochloromethane | 124-48-1 | µg/L | 0.4 | 0.157 U | 0.157 U | 0.157 U | 0.157 U | 0.157 U | 0.157 U | 0.157 U | 0.157 U |
| 1,2 - Dibromoethane | 106-93-4 | µg/L | * | 0.147 U | 0.147 U | 0.147 U | 0.147 U | 0.147 U | 0.147 U | 0.147 U | 0.147 U |
| Dibromomethane | 74-95-3 | µg/L | * | 0.216 U | 0.216 U | 0.216 U | 0.216 U | 0.216 U | 0.216 U | 0.216 U | 0.216 U |
| 1,2 - Dichlorobenzene | 95-50-1 | µg/L | 600 | 0.151 U | 0.151 U | 0.151 U | 0.151 U | 0.151 U | 0.151 U | 0.151 U | 0.151 U |
| 1,3 - Dichlorobenzene | 541-73-1 | µg/L | 10 | 0.078 U | 0.078 U | 0.078 U | 0.078 U | 0.078 U | 0.078 U | 0.078 U | 0.078 U |
| 1,4-Dichlorobenzene | 106-46-7 | µg/L | 75 | 0.0398 U | 0.0398 U | 0.0398 U | 0.0398 U | 0.0398 U | 0.0398 U | 0.0398 U | 0.0398 U |
| Dichlorodifluoromethane | 75-71-8 | µg/L | 1400 | 0.392 U | 0.392 U | 0.392 U | 0.392 U | 0.392 U | 0.392 U | 0.392 U | 0.392 U |
| 1,1-Dichloroethane | 75-35-3 | µg/L | 70 | 0.172 U | 0.172 U | 0.172 U | 0.172 U | 0.172 U | 0.172 U | 0.172 U | 0.172 U |
| 1,2-Dichloroethane | 107-06-2 | µg/L | 3 | 0.087 U | 0.087 U | 0.087 U | 0.087 U | 0.087 U | 0.087 U | 0.087 U | 0.087 U |
| 1,1-Dichloroethene | 75-35-4 | µg/L | 7 | 0.2682 U | 0.2682 U | 0.2682 U | 0.2682 U | 0.2682 U | 0.2682 U | 0.2682 U | 0.2682 U |
| cis-1,2-Dichloroethene | 156-59-2 | µg/L | 70 | 0.2776 U | 0.2776 U | 0.2776 U | 0.2776 U | 0.2776 U | 0.2776 U | 0.2776 U | 0.2776 U |
| Trans-1,2-Dichloroethene | 156-60-5 | µg/L | 100 | 0.2371 U | 0.2371 U | 0.2371 U | 0.2371 U | 0.2371 U | 0.2371 U | 0.2371 U | 0.2371 U |
| 1,2-Dichloropropane | 78-87-5 | µg/L | 5 | 0.886 U | 0.886 U | 0.886 U | 0.886 U | 0.886 U | 0.886 U | 0.886 U | 0.886 U |
| 1,3 - Dichloropropane | 142-28-9 | µg/L | * | 0.2000 U | 0.2000 U | 0.2000 U | 0.2000 U | 0.2000 U | 0.2000 U | 0.2000 U | 0.2000 U |
| 2,2 -Dichloropropane | 594-20-7 | µg/L | * | 0.2341 U | 0.2341 U | 0.2341 U | 0.2341 U | 0.2341 U | 0.2341 U | 0.2341 U | 0.2341 U |
| *cis* -1,3-Dichloropropene[d] | 542-75-6 | µg/L | 0.2 | 0.1515 U | 0.1515 U | 0.1515 U | 0.1515 U | 0.1515 U | 0.1515 U | 0.1515 U | 0.1515 U |
| Trans-1,3-Dichloropropene | 10061-02-6 | µg/L | 0.2 | 0.1919 U | 0.1919 U | 0.1919 U | 0.1919 U | 0.1919 U | 0.1919 U | 0.1919 U | 0.1919 U |
| Ethylbenzene | 100-41-4 | µg/L | 30 | 0.2010 U | 0.2010 U | 0.2010 U | 0.2010 U | 0.2010 U | 0.2010 U | 0.2010 U | 0.2010 U |
| Hexachlorobutadiene | 87-68-3 | µg/L | * | 0.7084 U | 0.7084 U | 0.7084 U | 0.7084 U | 0.7084 U | 0.7084 U | 0.7084 U | 0.7084 U |
| 2-Hexanone | 591-78-6 | µg/L | 280 | 0.8353 U | 0.8353 U | 0.8353 U | 0.8353 U | 0.8353 U | 0.8353 U | 0.8353 U | 0.8353 U |

TABLE 5

VALIDATED DETECTIONS IN GROUNDWATER
STUDY AREA 36

NAVAL TRAINING CENTER
ORLANDO, FLORIDA

| Well Designation / Sample ID | CAS Number | UNITS | Florida GCTL[(a)] | OLD-36-20BR | OLD-36-22BR | OLD-36-22BR-DUP | OLD-36-23CR | OLD-36-24BR | OLD-36-33AR | OLD-36-35CR | OLD-36-36CR |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample Date | | | | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 | 12/6/2004 |
| **Volatiles Continued** | | | | | | | | | | | |
| Isopropylbenzene | 98-82-8 | µg/L | * | 0.1416 U | 0.1416 U | 0.1416 U | 0.1416 U | 0.1416 U | 0.1416 U | 0.1416 U | 0.1416 U |
| 4-Isopropyltoluene | 99-87-6 | µg/L | * | 0.1757 U | 0.1757 U | 0.1757 U | 0.1757 U | 0.1757 U | 0.1757 U | 0.1757 U | 0.1757 U |
| 4-Methyl-2-Pentanone | 108-10-1 | µg/L | 560 | 0.3544 U | 0.3544 U | 0.3544 U | 0.3544 U | 0.3544 U | 0.3544 U | 0.3544 U | 0.3544 U |
| Methylene Chloride | 75-09-2 | µg/L | 5 | 0.1735 U | 0.1735 U | 0.1735 U | 0.1735 U | 0.1735 U | 0.1735 U | 0.1735 U | 0.1735 U |
| Naphthalene | 91-20-3 | µg/L | 20 | 0.1804 U | 0.1804 U | 0.1804 U | 0.1804 U | 0.1804 U | 0.1804 U | 0.1804 U | 0.1804 U |
| n-propylbenzene | 103-65-1 | µg/L | * | 0.2416 U | 0.2416 U | 0.2416 U | 0.2416 U | 0.2416 U | 0.2416 U | 0.2416 U | 0.2416 U |
| Styrene | 100-42-5 | µg/L | 100 | 0.1731 U | 0.1731 U | 0.1731 U | 0.1731 U | 0.1731 U | 0.1731 U | 0.1731 U | 0.1731 U |
| 1,1,1,2 - Tetrachloroethane | 630-20-6 | µg/L | 1.3 | 0.1988 U | 0.1988 U | 0.1988 U | 0.1988 U | 0.1988 U | 0.1988 U | 0.1988 U | 0.1988 U |
| 1,1,2,2 - Tetrachloroethane | 79-34-5 | µg/L | 0.2 | 0.1154 U | 0.1154 U | 0.1154 U | 0.1154 U | 0.1154 U | 0.1154 U | 0.1154 U | 0.1154 U |
| Tetrachloroethene | 127-18-4 | µg/L | 3 | 0.2419 U | 0.2419 U | 0.2419 U | **9.740** | 0.2419 U | 0.2419 U | 0.2419 U | 0.2419 U |
| Toluene | 108-88-3 | µg/L | 40 | 0.1417 U | 0.1417 U | 0.1417 U | 0.1417 U | 0.1417 U | 0.1417 U | 0.1417 U | 0.1417 U |
| 1,2,3 - Trichlorobenzene | 87-61-6 | µg/L | 70 | 0.8373 U | 0.8373 U | 0.8373 U | 0.8373 U | 0.8373 U | 0.8373 U | 0.8373 U | 0.8373 U |
| 1,2,4-Trichlorobenzene | 120-82-1 | µg/L | 70 | 0.3331 U | 0.3331 U | 0.3331 U | 0.3331 U | 0.3331 U | 0.3331 U | 0.3331 U | 0.3331 U |
| 1,1,1 - Trichloroethane | 71-55-6 | µg/L | 200 | 0.2710 U | 0.2710 U | 0.2710 U | 0.2710 U | 0.2710 U | 0.2710 U | 0.2710 U | 0.2710 U |
| 1,1,2-Trichloroethane | 79-00-5 | µg/L | 5 | 0.3098 U | 0.3098 U | 0.3098 U | 0.3098 U | 0.3098 U | 0.3098 U | 0.3098 U | 0.3098 U |
| Trichloroethene | 79-01-6 | µg/L | 3 | 0.2242 U | 0.2242 U | 0.2242 U | **2.060** | 0.2242 U | 0.2242 U | 0.2242 U | 0.2242 U |
| 1,2,3 - Trichloropropane | 96-18-4 | µg/L | 200 | 0.2766 U | 0.2766 U | 0.2766 U | 0.2766 U | 0.2766 U | 0.2766 U | 0.2766 U | 0.2766 U |
| 1,2,4-Trimethylbenzene | 95-63-6 | µg/L | 10 | 0.1026 U | 0.1026 U | 0.1026 U | 0.1026 U | 0.1026 U | 0.1026 U | 0.1026 U | 0.1026 U |
| 1,3,5-Trimethylbenzene | 108-67-8 | µg/L | 10 | 0.1720 U | 0.1720 U | 0.1720 U | 0.1720 U | 0.1720 U | 0.1720 U | 0.1720 U | 0.1720 U |
| Vinyl chloride | 75-01-4 | µg/L | 1 | 0.3022 U | 0.3022 U | 0.3022 U | 0.3022 U | 0.3022 U | 0.3022 U | 0.3022 U | 0.3022 U |
| Xylenes | 1330-20-7 | µg/L | 20 | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U | 0.220 U |
| Bromodichloromethane | 75-27-4 | µg/L | 0.6 | 0.1837 U | 0.1837 U | 0.1837 U | 0.1837 U | 0.1837 U | 0.1837 U | 0.1837 U | **0.4500 I** |
| Trichlorofluoromethane | 79-69-4 | µg/L | 2100 | 0.3268 U | 0.3268 U | 0.3268 U | 0.3268 U | 0.3268 U | 0.3268 U | 0.3268 U | 0.3268 U |
| Methyl *tert*-butyl ether | 1634-04-4 | µg/L | 50 | 0.2359 U | 0.2359 U | 0.2359 U | 0.2359 U | 0.2359 U | 0.2359 U | 0.2359 U | 0.2359 U |
| **Inorganics** | | | | | | | | | | | |
| Iron, Dissolved | 7439-89-6 | mg/L | 0.3 | **0.0268 I** | **0.0895 V** | | **0.7357** | **0.0558 V** | **0.0686 V** | **0.8620** | **0.1113 V** |
| **Water Chemistry** | | | | | | | | | | | |
| Nitrate | 14797-55-8 | mg/L | 10 | **0.088** | 0.0031 U | | 0.0031 U | **0.301** | 0.0331 U | 0.0031 U | **0.181** |
| Nitrite | 14797-65-0 | mg/L | 1 | 0.0035 U | 0.0035 U | | 0.0035 U | 0.0035 U | 0.0035 U | 0.0035 U | 0.0035 U |
| Sulfate | 14808-79-8 | mg/L | 250 | **22.3** | **35.4** | | **22.9** | **38.9** | **20.2** | **25.2** | **28.2** |
| Alkalinity | ALK | mg/L | * | **104 J3** | **6.0 J3** | | 1.0 U J3 | **41.0 J3** | **174 J3** | **18.4 J3** | **88.3** |
| Total Organic Carbon | TOC | mg/L | * | **8.5** | **8.06** | | **4.92** | **4.97** | **9.88** | **6.6** | **5.70** |
| Total Disolved Solids | TDS | mg/L | * | **210** | **98.0** | | **84.0** | **178** | **272** | **128** | **186** |
| Total Sulfide | 18496-25-8 | mg/L | * | 0.10 U | **1.44** | | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| Chloride | 16887-00-6 | mg/L | 250 | **17.4** | **8.13** | | **7.00** | **9.04** | **7.29** | **6.68** | **7.23** |
| | | | | | | | | | | | |
| **Gases** | | | | | | | | | | | |
| Hydrogen (nm/L) | 1333-74-0 | nM/L | * | **1.4** | **1.6** | | **1.4** | **1.2** | **1.4** | **1.9** | **1.3** |
| **Field Parameters** | | | | | | | | | | | |
| Carbon Dioxide | 124-38-9 | mg/L | * | **127** | **181** | | **132** | **162** | **95** | **88** | **94** |
| Dissolved Oxygen | DO | mg/L | * | **0.31** | **0.42** | | **0.59** | **4.12** | **0.62** | **0.47** | **1.63** |
| Ferrous Iron | FE-FS | mg/L | * | **0.2** | **0.2** | | **1.8** | **0.5** | 0 | **1.6** | **0.8** |
| Hydrogen Sulfide | 7783-06-4 | mg/L | * | 0 | 0 | | **2** | **0.1** | 0 | **1** | 0 |
| Redox Potential (mV) | | mV | * | **36.9** | **72.6** | | **3.4** | **103.4** | **22** | **-81.8** | **67** |
| Temperature ($^{o}$C) | | $^{o}$C | * | **25.55** | **25.32** | | **25.24** | **26.16** | **27.07** | **26.43** | **26.12** |
| pH | | SU | * | **6.37** | **4.95** | | **4.73** | **6.89** | **6.93** | **5.66** | **6.57** |
| Conductivity | | mS/cm | * | **377** | **352** | | **256** | **211** | **481** | **309** | **334** |

Notes:
mV = millivolts, ($^{o}$C) = degrees Celcius, SU = Standard Units
(a) Groundwater Cleanup Target Level [Development of Soil Cleanup Target Levels (SCTLs) for Chapter 62-777, F.A.C., May 26, 1999].
* Indicates that the screening value is not available.
"J3" qualifier indicates the reported value is between the established quality control criteria for either precision and/or accuracy
"V" qualifier indicates the analyte was detected in both the sample and the associated method blank.
"U" the compound was analyzed for but not detected
NM - Not measured
nM/L - nanomoles per liter, mg/L - millgrams per liter, µg/L - micrograms per liter
Bolded values indicate detects
Values in shaded cells are equal to or exceed the screening criteria.
"I" the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

# FIGURES


| | |
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| **Figure 1** | *Site Location Map, Study Area 36* |
| **Figure 2** | *Site Map, Study Area 36* |
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| **Figure 6** | *Groundwater Detections Map & Natural Attenuation Potential, Shallow (A) Zone* |
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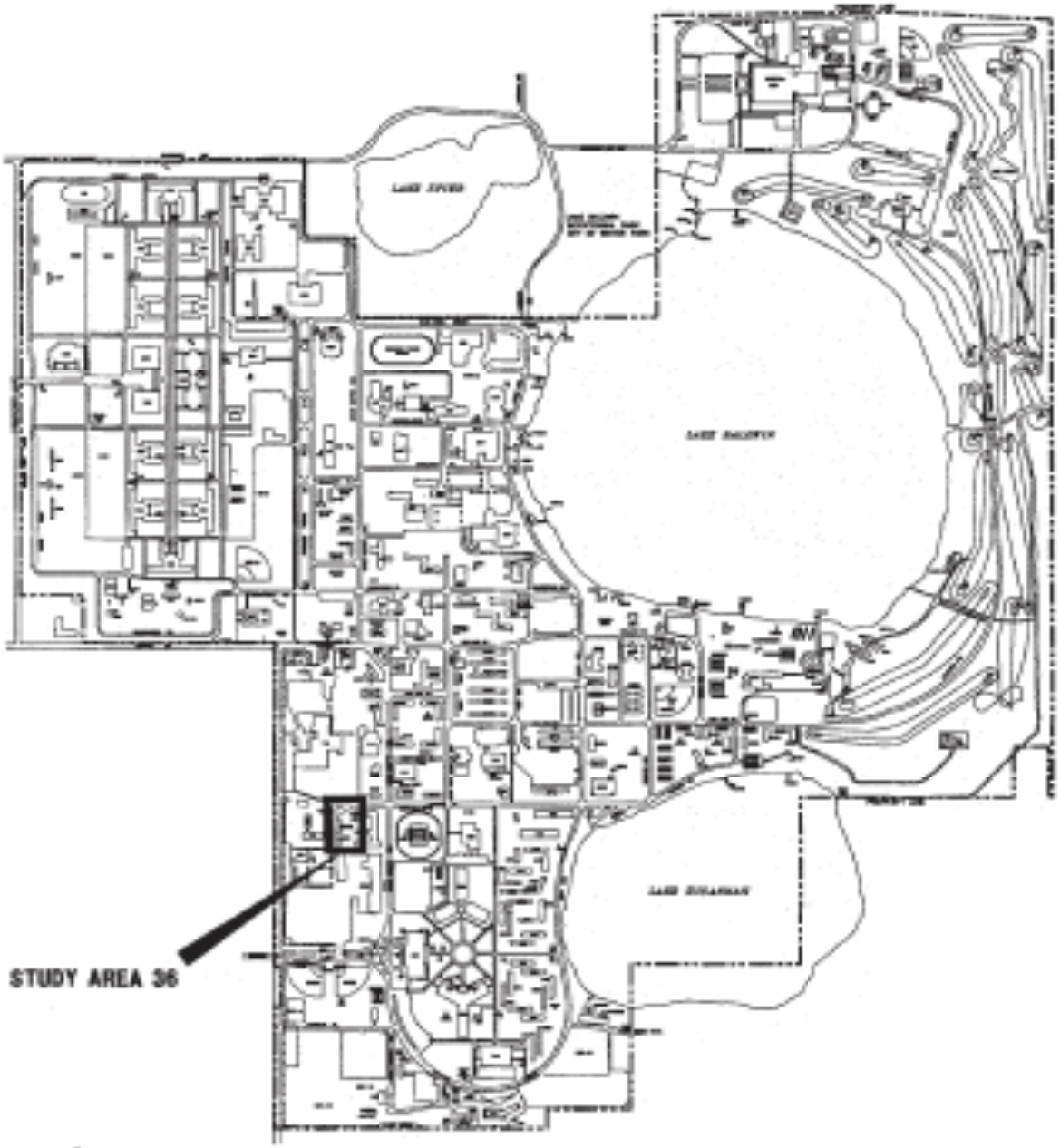
| **Figure 8** | *Groundwater Detections Map & Natural Attenuation Potential, Deep (C) Zone* |



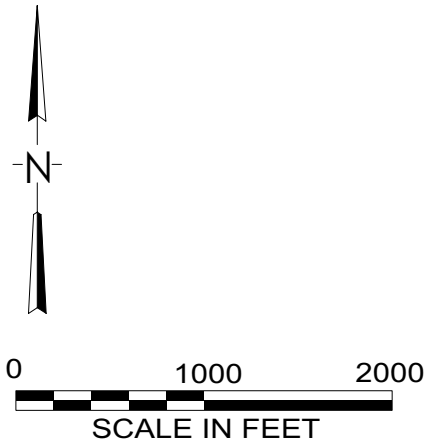




Figure 1
Site Location Map
Study Area 36

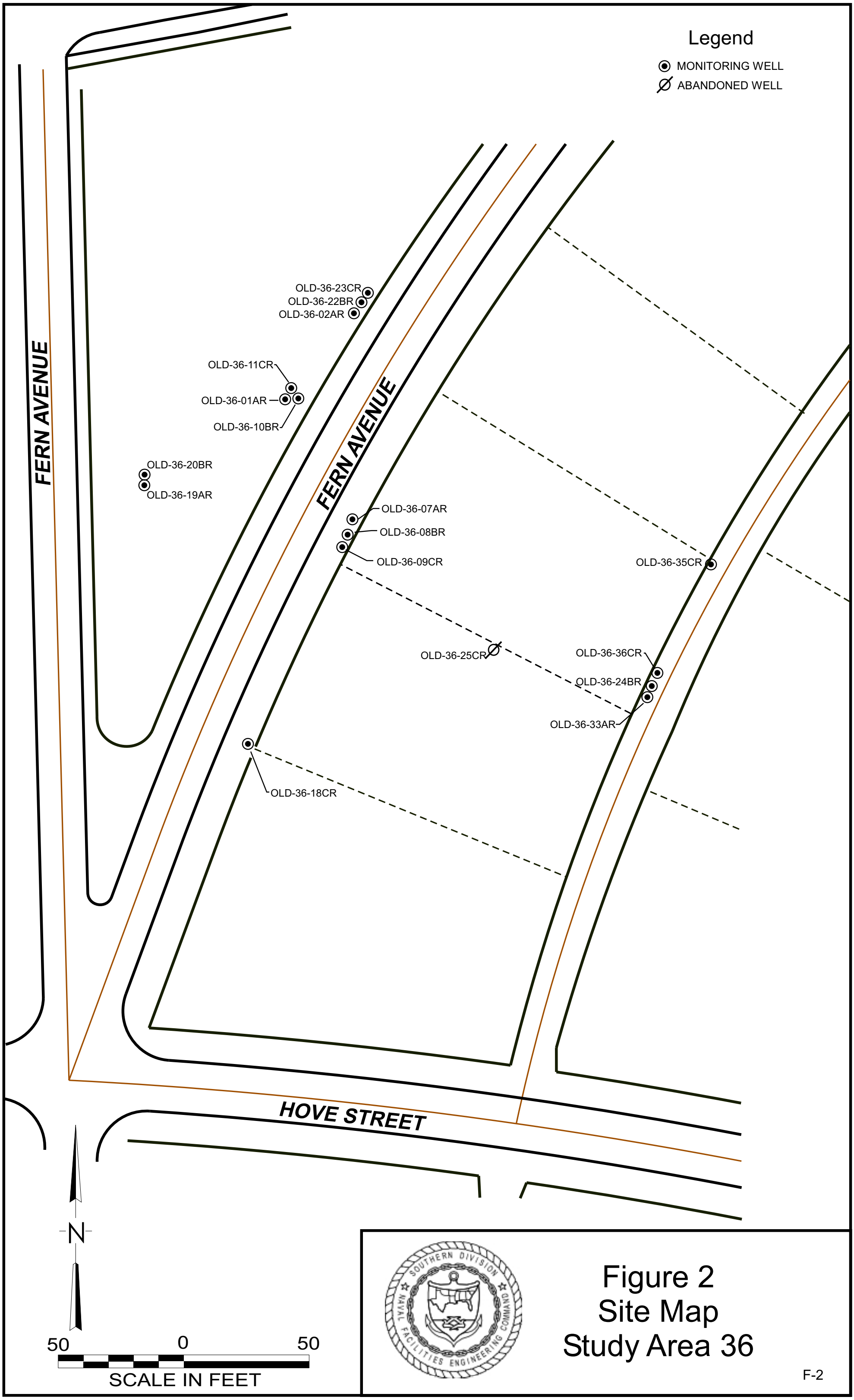



Figure 2
Site Map
Study Area 36

| Well Number | TOC ELEVATION (AMSL) | Well Type | Depth to Water on 12/04/04 | Water Elevation on 12/4/04 |
|---|---|---|---|---|
| **SHALLOW MONITORING WELLS** | | | | |
| OLD-36-01AR | 115.24 | 2" well | 4.11 | 111.13 |
| OLD-36-02AR | 114.37 | 2" well | 3.20 | 111.17 |
| OLD-36-07AR | 113.82 | 2" well | 7.8 | 106.02 |
| OLD-36-19AR | 115.46 | 2" well | 4.46 | 111.00 |
| OLD-36-33AR | 115.075 | 2" well | 3.75 | 111.325 |

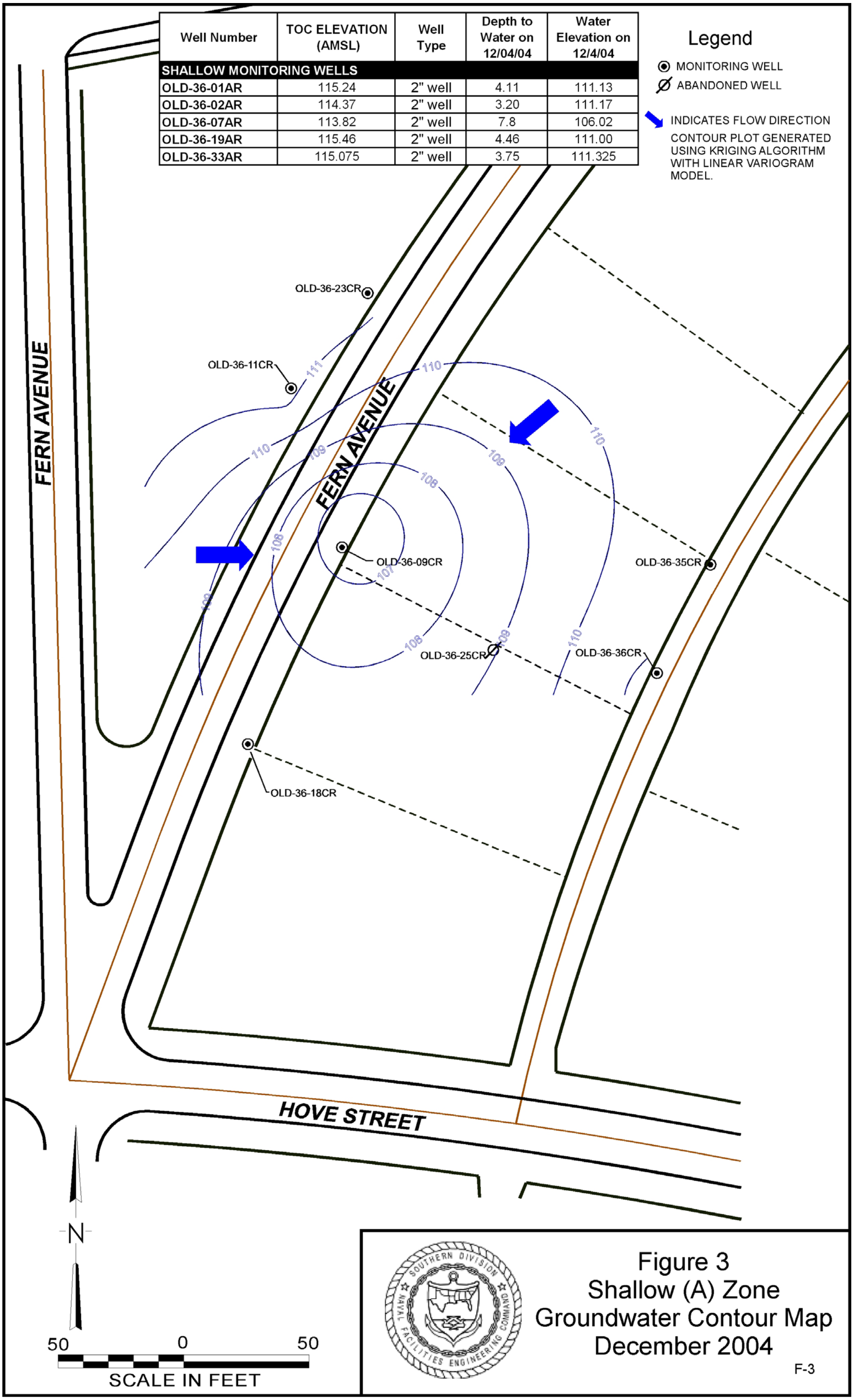



Figure 3
Shallow (A) Zone
Groundwater Contour Map
December 2004

F-3

| Well Number | TOC ELEVATION (AMSL) | Well Type | Depth-to-Water on 12/4/04 | Water Elevation on 12/4/04 |
|---|---|---|---|---|
| **INTERMEDIATE MONITORING WELLS** | | | | |
| OLD-36-08BR | 113.84 | 2" well | 2.65 | 111.19 |
| OLD-36-10BR | 115.16 | 2" well | 3.75 | 111.41 |
| OLD-36-20BR | 115.43 | 2" well | 4.46 | 110.97 |
| OLD-36-22BR | 114.38 | 2" well | 3.26 | 111.12 |
| OLD-36-24BR | 115.08 | 2" well | 3.95 | 111.13 |

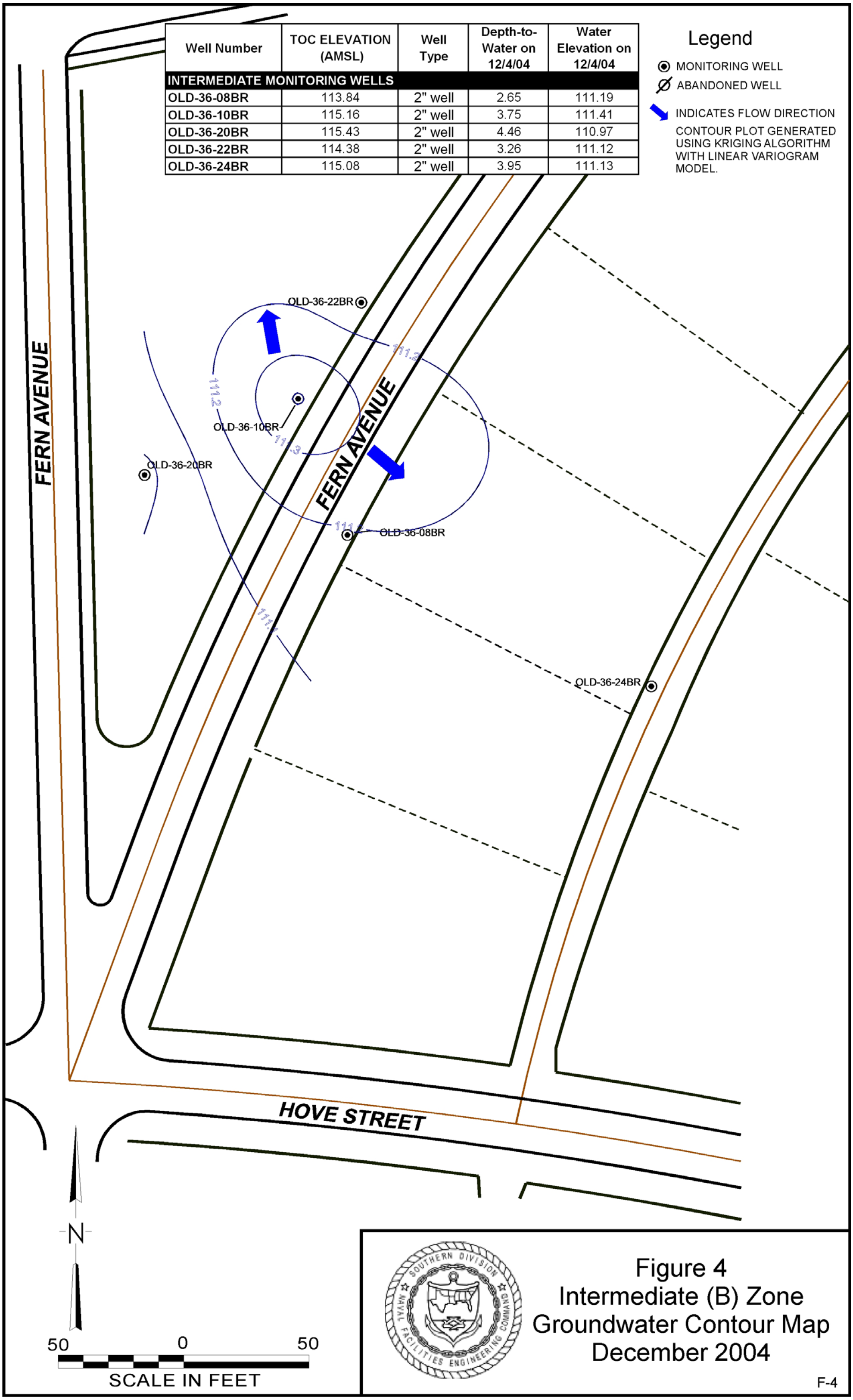



Figure 4
Intermediate (B) Zone
Groundwater Contour Map
December 2004

| Well Number | TOC ELEVATION (AMSL) | Well Type | Depth-to-Water on 12/4/04 | Water Elevation on 12/4/04 |
|---|---|---|---|---|
| DEEP MONITORING WELLS | | | | |
| OLD-36-09CR | 113.82 | 2" well | 6.95 | 106.87 |
| OLD-36-11CR | 115.34 | 2" well | 8.25 | 107.09 |
| OLD-36-18CR | 115.38 | 2" well | 6.5 | 108.88 |
| OLD-36-23CR | 114.43 | 2" well | 7.54 | 106.89 |
| OLD-36-36CR | 115.075 | 2" well | 7.9 | 107.175 |

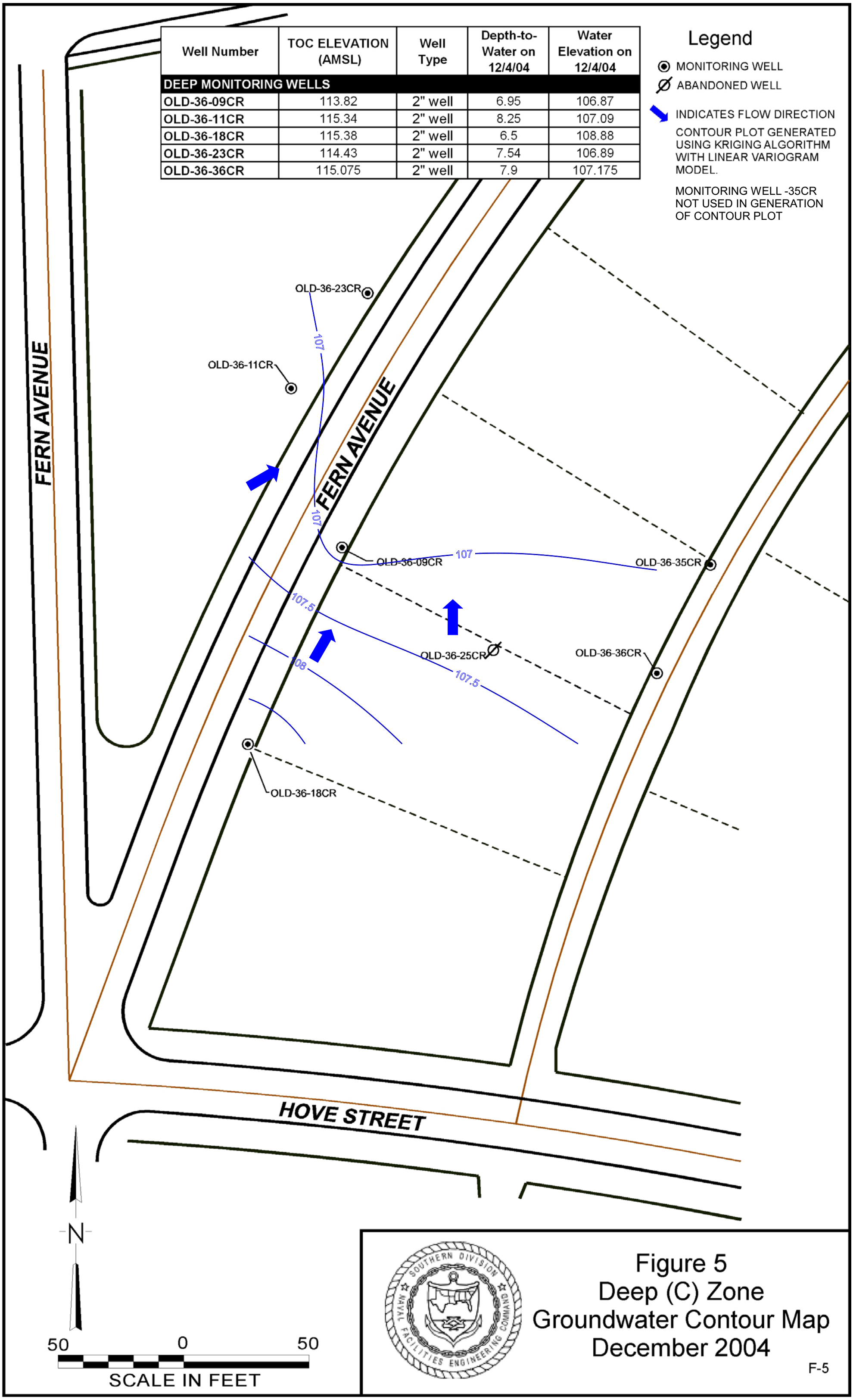



Figure 5
Deep (C) Zone
Groundwater Contour Map
December 2004

F-5

| Well Designation | | | |
|---|---|---|---|
| Sample ID / Sample Date | CAS Number | UNITS | Florida GCTL |
| **Volatiles** | | | |
| Methane (CH4) | 74-82-8 | µg/L | * |
| **Inorganics** | | | |
| Iron, Dissolved (Fe) | 7439-89-6 | mg/L | 0.3 |

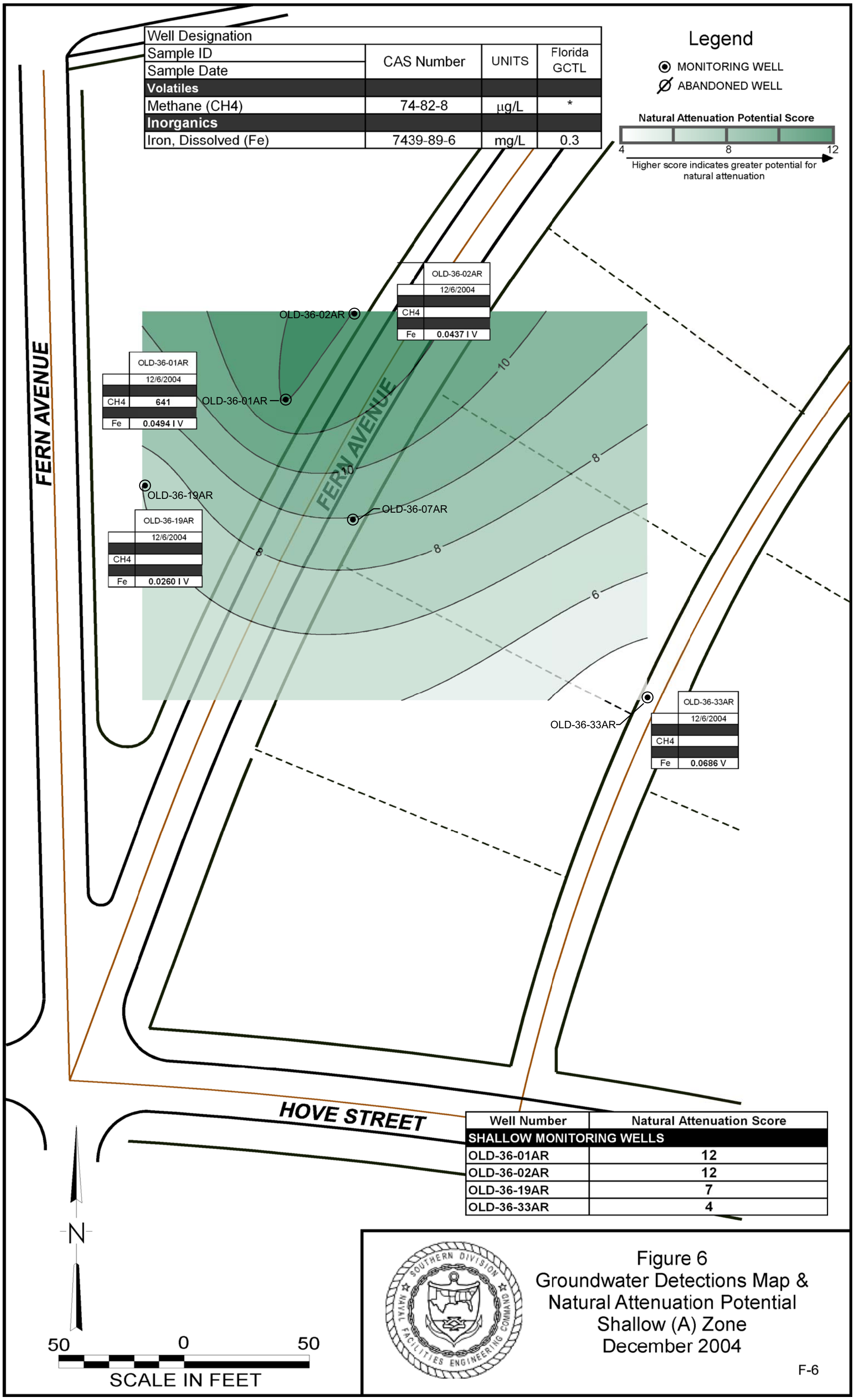
## Legend

- MONITORING WELL
- ABANDONED WELL

**Natural Attenuation Potential Score**

4 — 8 — 12

Higher score indicates greater potential for natural attenuation




| Well Number | Natural Attenuation Score |
|---|---|
| **SHALLOW MONITORING WELLS** | |
| OLD-36-01AR | 12 |
| OLD-36-02AR | 12 |
| OLD-36-19AR | 7 |
| OLD-36-33AR | 4 |

Figure 6
Groundwater Detections Map &
Natural Attenuation Potential
Shallow (A) Zone
December 2004

| Well Designation | | | |
|---|---|---|---|
| Sample ID / Sample Date | CAS Number | UNITS | Florida GCTL |
| **Volatiles** | | | |
| Methane (CH4) | 74-82-8 | µg/L | * |
| cis-1,2-Dichloroethene (c12D) | 156-59-2 | µg/L | 70 |
| **Inorganics** | | | |
| Iron, Dissolved (Fe) | 7439-89-6 | mg/L | 0.3 |

## Legend

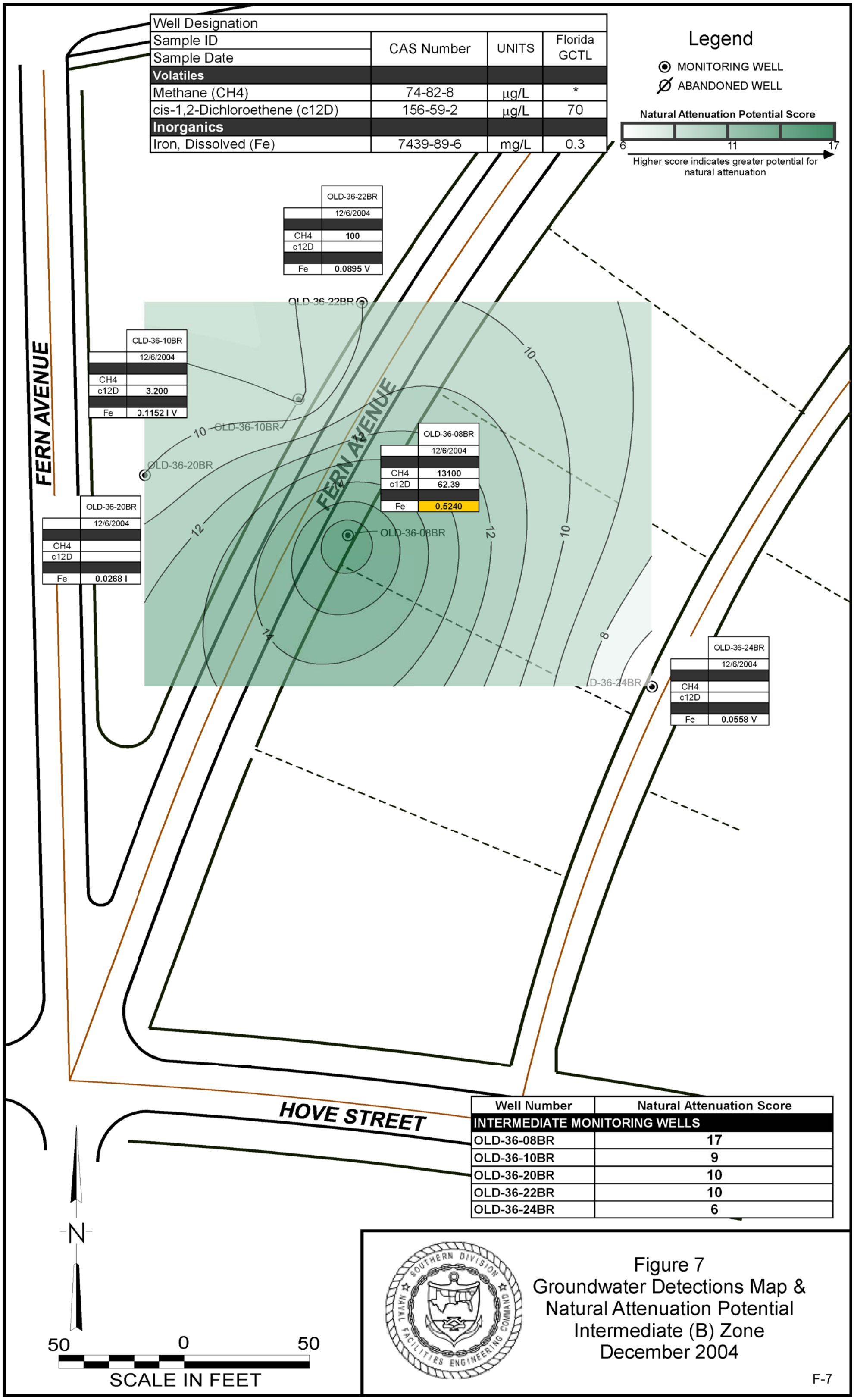
MONITORING WELL

ABANDONED WELL

**Natural Attenuation Potential Score**

6 — 11 — 17

Higher score indicates greater potential for natural attenuation




| | OLD-36-22BR |
|---|---|
| | 12/6/2004 |
| CH4 | 100 |
| c12D | |
| Fe | 0.0895 V |

| | OLD-36-10BR |
|---|---|
| | 12/6/2004 |
| CH4 | |
| c12D | 3.200 |
| Fe | 0.1152 I V |

| | OLD-36-08BR |
|---|---|
| | 12/6/2004 |
| CH4 | 13100 |
| c12D | 62.39 |
| Fe | 0.5240 |

| | OLD-36-20BR |
|---|---|
| | 12/6/2004 |
| CH4 | |
| c12D | |
| Fe | 0.0268 I |

| | OLD-36-24BR |
|---|---|
| | 12/6/2004 |
| CH4 | |
| c12D | |
| Fe | 0.0558 V |

| Well Number | Natural Attenuation Score |
|---|---|
| **INTERMEDIATE MONITORING WELLS** | |
| OLD-36-08BR | 17 |
| OLD-36-10BR | 9 |
| OLD-36-20BR | 10 |
| OLD-36-22BR | 10 |
| OLD-36-24BR | 6 |

Figure 7
Groundwater Detections Map &
Natural Attenuation Potential
Intermediate (B) Zone
December 2004

| Well Designation | | | |
|---|---|---|---|
| Sample ID / Sample Date | CAS Number | UNITS | Florida GCTL |
| **Volatiles** | | | |
| Methane (CH4) | 74-82-8 | µg/L | * |
| Bromodichlormethane (BDCM) | 75-27-4 | µg/L | 0.6 |
| Chloroform (ChCl3) | 67-66-3 | µg/L | 5.7 |
| cis-1,2-Dichloroethene (c12D) | 156-59-2 | µg/L | 70 |
| Tetrachloroethene (PCE) | 127-18-4 | µg/L | 3 |
| Trichloroethene (TCE) | 79-01-6 | µg/L | 3 |
| **Inorganics** | | | |
| Iron, Dissolved (Fe) | 7439-89-6 | mg/L | 0.3 |

## Legend

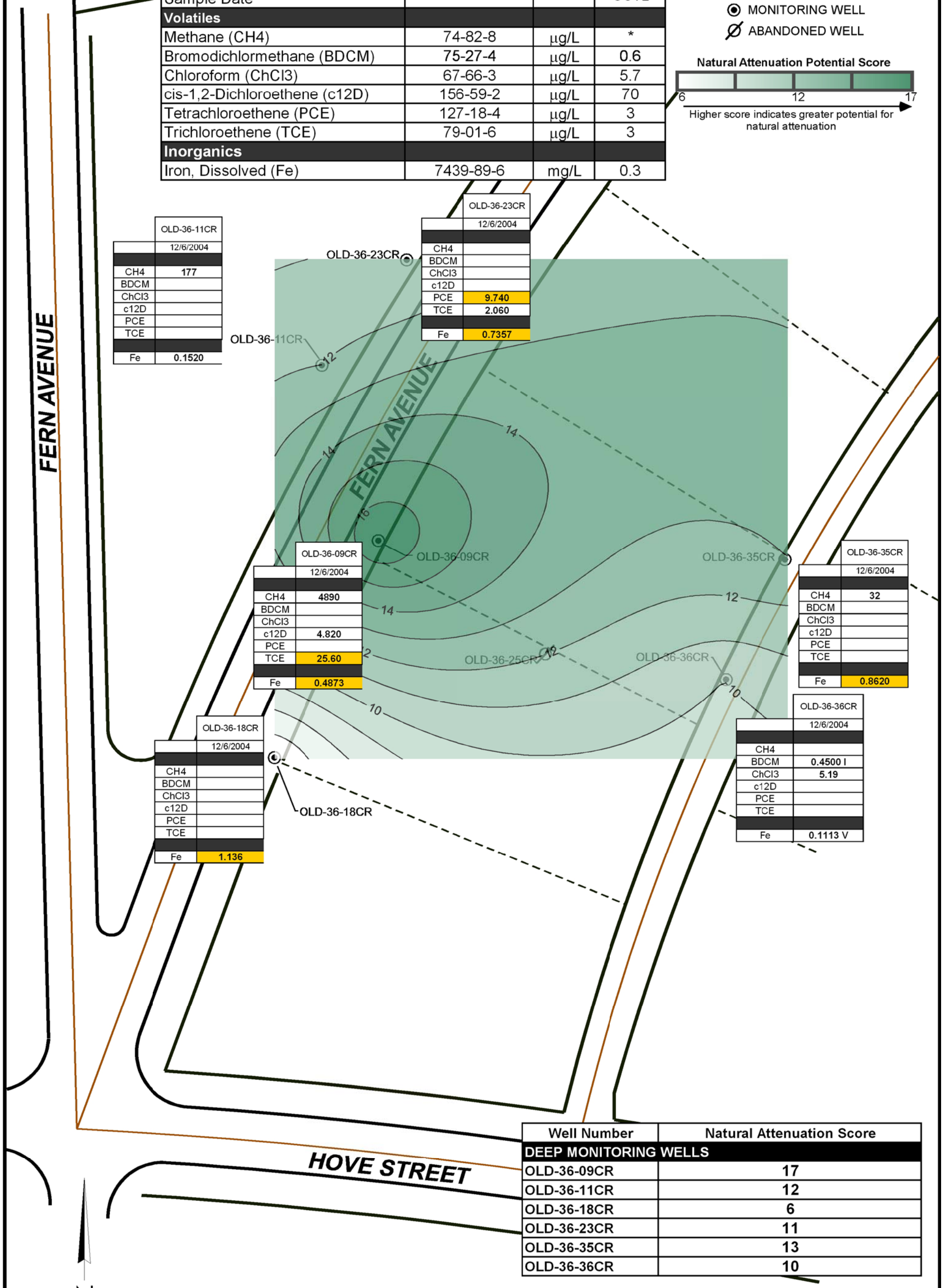
MONITORING WELL

ABANDONED WELL

**Natural Attenuation Potential Score**

6 — 12 — 17

Higher score indicates greater potential for natural attenuation




| | OLD-36-11CR |
|---|---|
| | 12/6/2004 |
| CH4 | 177 |
| BDCM | |
| ChCl3 | |
| c12D | |
| PCE | |
| TCE | |
| Fe | 0.1520 |

| | OLD-36-23CR |
|---|---|
| | 12/6/2004 |
| CH4 | |
| BDCM | |
| ChCl3 | |
| c12D | |
| PCE | 9.740 |
| TCE | 2.060 |
| Fe | 0.7357 |

| | OLD-36-09CR |
|---|---|
| | 12/6/2004 |
| CH4 | 4890 |
| BDCM | |
| ChCl3 | |
| c12D | 4.820 |
| PCE | |
| TCE | 25.60 |
| Fe | 0.4873 |

| | OLD-36-35CR |
|---|---|
| | 12/6/2004 |
| CH4 | 32 |
| BDCM | |
| ChCl3 | |
| c12D | |
| PCE | |
| TCE | |
| Fe | 0.8620 |

| | OLD-36-18CR |
|---|---|
| | 12/6/2004 |
| CH4 | |
| BDCM | |
| ChCl3 | |
| c12D | |
| PCE | |
| TCE | |
| Fe | 1.136 |

| | OLD-36-36CR |
|---|---|
| | 12/6/2004 |
| CH4 | |
| BDCM | 0.4500 I |
| ChCl3 | 5.19 |
| c12D | |
| PCE | |
| TCE | |
| Fe | 0.1113 V |

| Well Number | Natural Attenuation Score |
|---|---|
| **DEEP MONITORING WELLS** | |
| OLD-36-09CR | 17 |
| OLD-36-11CR | 12 |
| OLD-36-18CR | 6 |
| OLD-36-23CR | 11 |
| OLD-36-35CR | 13 |
| OLD-36-36CR | 10 |

Figure 8
Groundwater Detections Map &
Natural Attenuation Potential
Deep (C) Zone
December 2004

# APPENDICES

| | |
|---|---|
| **A** | *December 2004 Groundwater Sampling Logs* |

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Larry Wolski | Technician 2: | Weather: "Cloudy, Sunny" |
| Sampling ID: 07-71009/4:OLD-36-01AR:12/6/04 | | |
| Notes: 4 gallons after hydrogen. | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-01AR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 115.24 | Northing: 1537944.56 | Easting: 549500.77 |
| Static Depth to Water (ft): 4.24 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: PPE | | Pump Set at (ft): 6.50 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 09:55 | Purge End: 10:11 | Total Volume Purged (gal): 0.70 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:03 | 4.27 | 0.30 | 0.00 | 0.78 | 24.79 | 581.0 | 7.01 | -99.0 | 11.10 | clear | none |
| 10:06 | 4.29 | 0.50 | 0.00 | 0.52 | 24.93 | 587.0 | 6.99 | -113.0 | 7.17 | | |
| 10:09 | 4.28 | 0.70 | 0.06 | 0.36 | 25.01 | 590.0 | 6.99 | -120.8 | 7.10 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 10:11
Sample End Time: 10:52
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 0.36
Temp (*C): 25.04
SEC (uS/cm): 591
pH: 6.99
ORP (mV): -122.3
Turb (NTU): 6.96

**Hach Field Data (mg/L)**

DO:
CO2: 126
Alkalinity:
Ferrous Iron: 0
H2S: 0
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:
CO2 High Range:
CO2 Low Range:
Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Karen Baer | Technician 2: | Weather: Sunny |
| Sampling ID: 07-71009/4:OLD-36-02AR:12/6/04 | | |
| Notes: Total purge water created after hydrogen sampling = 4 gallons | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-02AR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 114.37 | Northing: 1537979.39 | Easting: 549528.57 |
| Static Depth to Water (ft): 3.35 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: Teflon | | Pump Set at (ft): 5.00 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 09:48 | Purge End: 10:22 | Total Volume Purged (gal): 0.80 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10:14 | 3.45 | 0.30 | 0.00 | 0.65 | 24.69 | 1,306.0 | 6.92 | -133.1 | 0.70 | | |
| 10:18 | 3.40 | 0.50 | 0.06 | 0.48 | 24.84 | 1,311.0 | 6.88 | -133.3 | 0.87 | | |
| 10:21 | 3.40 | 0.80 | 0.15 | 0.39 | 24.92 | 1,314.0 | 6.92 | -133.5 | 0.95 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 10:22
Sample End Time: 11:06
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 0.36
Temp (*C): 24.93
SEC (uS/cm): 1314
pH: 6.82
ORP (mV): -125.6
Turb (NTU): 0.89

**Hach Field Data (mg/L)**

DO:
CO2: 155
Alkalinity:
Ferrous Iron: 0.2
H2S: 0
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:

CO2 High Range:
CO2 Low Range:

Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Hydrogen, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Karen Baer | Technician 2: | Weather: Sunny |
| Sampling ID: 07-71009/4:OLD-36-08BR:12/6/04 | | |
| Notes: Total purge water created after hydrogen sampling = 5 gallons | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-08BR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 113.84 | Northing: 1537888.76 | Easting: 549525.42 |
| Static Depth to Water (ft): 2.75 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: Teflon | | Pump Set at (ft): 16.00 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 11:16 | Purge End: 11:41 | Total Volume Purged (gal): 1.40 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11:24 | 4.35 | 0.30 | 0.00 | 0.85 | 25.38 | 450.0 | 5.83 | -157.1 | 218.00 | brown | none |
| 11:29 | 4.60 | 0.60 | 0.07 | 0.35 | 25.42 | 445.0 | 5.83 | -172.3 | 105.00 | | |
| 11:32 | 4.80 | 0.90 | 0.08 | 0.33 | 25.37 | 443.0 | 5.82 | -179.9 | 77.20 | | |
| 11:36 | 4.90 | 1.10 | 0.05 | 0.36 | 25.38 | 441.0 | 5.82 | -187.3 | 64.90 | | |
| 11:40 | 4.90 | 1.40 | 0.10 | 0.31 | 25.40 | 443.0 | 5.83 | -192.2 | 61.00 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 11:41
Sample End Time: 00:27
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 0.27
Temp (*C): 25.42
SEC (uS/cm): 444
pH: 5.82
ORP (mV): -190.6
Turb (NTU): 67.2

**Hach Field Data (mg/L)**

DO:
CO2: 70
Alkalinity:
Ferrous Iron: 1.2
H2S: 5
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:
CO2 High Range:
CO2 Low Range:
Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Hydrogen, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Karen Baer | Technician 2: | Weather: Sunny |
| Sampling ID: 07-71009/4:OLD-36-09CR:12/6/04 | | |
| Notes: Total purge water created after hydrogen sampling = 4 gallons | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-09CR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 113.82 | Northing: 1537884.91 | Easting: 549523.79 |
| Static Depth to Water (ft): 7.02 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: PPE | | Pump Set at (ft): 29.00 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 12:24 | Purge End: 12:55 | Total Volume Purged (gal): 1.30 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:39 | 7.15 | 0.40 | 0.00 | 0.63 | 25.68 | 171.0 | 5.03 | -92.1 | 71.90 | brown | sulfuric |
| 12:42 | 7.12 | 0.60 | 0.06 | 0.36 | 25.73 | 177.0 | 4.97 | -108.8 | 45.20 | | |
| 12:47 | 7.10 | 0.90 | 0.07 | 0.30 | 25.72 | 182.0 | 4.91 | -117.2 | 36.60 | | |
| 12:50 | 7.11 | 1.10 | 0.06 | 0.27 | 25.72 | 187.0 | 4.88 | -124.7 | 29.90 | | |
| 12:54 | 7.11 | 1.30 | 0.06 | 0.91 | 25.63 | 188.0 | 4.84 | -106.0 | 25.80 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 12:55
Sample End Time: 13:40
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 0.41
Temp (*C): 25.63
SEC (uS/cm): 188
pH: 4.86
ORP (mV): -120.6
Turb (NTU): 29.6

**Hach Field Data (mg/L)**

DO:
CO2: 205
Alkalinity:
Ferrous Iron: 1
H2S: 2
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:
CO2 High Range:
CO2 Low Range:
Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Hydrogen, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Larry Wolski | Technician 2: | Weather: "Cloudy, Cool, Sunny" |
| Sampling ID: 07-71009/4:OLD-36-10BR:12/6/04 | | |
| Notes: 4 gallons after hydrogen | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-10BR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 115.16 | Northing: 1537944.87 | Easting: 549506.04 |
| Static Depth to Water (ft): 3.91 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: PPE | | Pump Set at (ft): 19.00 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 07:53 | Purge End: 08:07 | Total Volume Purged (gal): 0.80 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 07:59 | 3.96 | 0.40 | 0.00 | 0.65 | 24.93 | 184.0 | 5.98 | 184.0 | 9.69 | clear | none |
| 08:02 | 3.96 | 0.60 | 0.00 | 0.43 | 25.25 | 185.0 | 5.98 | 185.0 | 8.16 | | |
| 08:05 | 3.97 | 0.80 | 0.06 | 0.39 | 25.39 | 185.0 | 5.97 | -6.1 | 6.96 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 08:07
Sample End Time: 08:50
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 0.4
Temp (*C): 25.4
SEC (uS/cm): 185
pH: 5.96
ORP (mV): -13.3
Turb (NTU): 6.5

**Hach Field Data (mg/L)**

DO:
CO2: 94
Alkalinity:
Ferrous Iron: 0.3
H2S: 2
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:
CO2 High Range:
CO2 Low Range:
Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Larry Wolski | Technician 2: | Weather: "Cloudy, Sunny" |
| Sampling ID: 07-71009/4:OLD-36-11CR:12/6/04 | | |
| Notes: 4 gallons after hydrogen. | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-11CR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 115.34 | Northing: 1537949.13 | Easting: 549503.17 |
| Static Depth to Water (ft): 8.40 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: PPE | | Pump Set at (ft): 30.00 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 08:55 | Purge End: 09:07 | Total Volume Purged (gal): 0.60 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 09:00 | 8.65 | 0.30 | 0.00 | 0.78 | 25.15 | 186.0 | 5.99 | -67.4 | 16.00 | clear | none |
| 09:02 | 8.65 | 0.40 | 0.00 | 0.53 | 25.34 | 189.0 | 5.98 | -80.5 | 19.40 | | |
| 09:05 | 8.66 | 0.60 | 0.06 | 0.51 | 25.45 | 190.0 | 5.99 | -90.2 | 20.50 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 09:07
Sample End Time: 09:51
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 0.48
Temp (*C): 25.47
SEC (uS/cm): 191
pH: 5.97
ORP (mV): -92.3
Turb (NTU): 20.1

**Hach Field Data (mg/L)**

DO:
CO2: 110
Alkalinity:
Ferrous Iron: 0.2
H2S: 0
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:
CO2 High Range:
CO2 Low Range:
Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Karen Baer | Technician 2: | Weather: Sunny |
| Sampling ID: 07-71009/4:OLD-36-18CR:12/6/04 | | |
| Notes: "Too turbid for hach kits -CO2 and fe IITotal purge water created after hydrogen sampling = 3 gallons " | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-18CR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 115.38 | Northing: 1537805.46 | Easting: 549485.73 |
| Static Depth to Water (ft): 6.61 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: PPE | | Pump Set at (ft): 28.00 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 13:48 | Purge End: 14:08 | Total Volume Purged (gal): 0.90 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13:56 | 6.85 | 0.40 | 0.00 | 0.61 | 25.85 | 213.0 | 4.74 | 26.2 | 352.00 | milky | none |
| 14:00 | 6.80 | 0.70 | 0.07 | 0.43 | 25.87 | 213.0 | 4.79 | 1.9 | 667.00 | | |
| 14:04 | 6.80 | 0.80 | 0.03 | 0.42 | 25.91 | 212.0 | 4.82 | -15.2 | 856.00 | | |
| 14:07 | 6.80 | 0.90 | 0.03 | 0.43 | 25.93 | 213.0 | 4.82 | -27.9 | 795.00 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 14:08
Sample End Time: 14:53
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 0.4
Temp (*C): 25.93
SEC (uS/cm): 213
pH: 4.83
ORP (mV): -32.2
Turb (NTU): 746

**Hach Field Data (mg/L)**

DO:
CO2:
Alkalinity:
Ferrous Iron:
H2S: 0
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:
CO2 High Range:
CO2 Low Range:
Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Hydrogen, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids:"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Larry Wolski | Technician 2: | Weather: Sunny |
| Sampling ID: 07-71009/4:OLD-36-19AR:12/6/04 | | |
| Notes: 4 gallons after hydrogen. | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-19AR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 115.46 | Northing: 1537909.97 | Easting: 549443.75 |
| Static Depth to Water (ft): 4.56 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: PPE | | Pump Set at (ft): 6.00 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 11:58 | Purge End: 12:12 | Total Volume Purged (gal): 0.60 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12:03 | 4.57 | 0.30 | 0.00 | 1.68 | 24.82 | 579.0 | 6.90 | 43.6 | 2.23 | clear | none |
| 12:06 | 4.56 | 0.40 | 0.00 | 1.26 | 24.90 | 582.0 | 6.94 | 9.2 | 1.63 | | |
| 12:09 | 4.57 | 0.60 | 0.06 | 1.13 | 24.92 | 582.0 | 6.88 | -5.0 | 1.19 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 12:12
Sample End Time: 12:49
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 1.16
Temp (*C): 24.88
SEC (uS/cm): 582
pH: 6.9
ORP (mV): -7.1
Turb (NTU): 1.23

**Hach Field Data (mg/L)**

DO:
CO2: 77
Alkalinity:
Ferrous Iron: 0
H2S: 0.3
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:
CO2 High Range:
CO2 Low Range:
Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Larry Wolski | Technician 2: | Weather: Sunny |
| Sampling ID: 07-71009/4:OLD-36-20BR:12/6/04 | | |
| Notes: 3.5 gallons after hydrogen. | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-20BR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 115.43 | Northing: 1537914.2 | Easting: 549443.96 |
| Static Depth to Water (ft): 4.53 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: PPE | | Pump Set at (ft): 21.00 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 10:57 | Purge End: 11:13 | Total Volume Purged (gal): 0.70 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11:04 | 4.59 | 0.40 | 0.00 | 0.59 | 25.61 | 365.0 | 6.33 | 60.3 | 10.90 | clear | none |
| 11:07 | 4.59 | 0.60 | 0.00 | 0.37 | 25.59 | 371.0 | 6.33 | 56.0 | 6.30 | | |
| 11:10 | 4.60 | 0.70 | 0.03 | 0.31 | 25.57 | 375.0 | 6.35 | 41.9 | 5.39 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 11:13
Sample End Time: 11:54
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 0.31
Temp (*C): 25.55
SEC (uS/cm): 377
pH: 6.37
ORP (mV): 36.9
Turb (NTU): 5.23

**Hach Field Data (mg/L)**

DO:
CO2: 127
Alkalinity:
Ferrous Iron: 0.2
H2S: 0
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:

CO2 High Range:
CO2 Low Range:

Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Karen Baer | Technician 2: | Weather: Sunny |
| Sampling ID: 07-71009/4:OLD-36-22BR:12/6/04 | | |
| Notes: Total purge water created after hydrogen sampling = 2.5 gallons | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-22BR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 114.38 | Northing: 1537983.7 | Easting: 549531.4 |
| Static Depth to Water (ft): 3.41 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: Teflon | | Pump Set at (ft): 16.00 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 08:43 | Purge End: 09:11 | Total Volume Purged (gal): 0.70 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 09:04 | 3.52 | 0.40 | 0.00 | 0.59 | 25.33 | 352.0 | 4.92 | 111.0 | 2.48 | clear | none |
| 09:08 | 3.50 | 0.60 | 0.06 | 0.48 | 25.26 | 352.0 | 4.94 | 92.0 | 1.52 | | |
| 09:11 | 3.50 | 0.70 | 0.03 | 0.43 | 25.31 | 351.0 | 4.94 | 79.4 | 1.38 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 09:11
Sample End Time: 09:59
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 0.42
Temp (*C): 25.32
SEC (uS/cm): 352
pH: 4.95
ORP (mV): 72.6
Turb (NTU): 1.02

**Hach Field Data (mg/L)**

DO:
CO2: 181
Alkalinity:
Ferrous Iron: 0.2
H2S: 0
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:
CO2 High Range:
CO2 Low Range:
Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Hydrogen, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Karen Baer | Technician 2: | Weather: Sunny |
| Sampling ID: 07-71009/4:OLD-36-23CR:12/6/04 | | |
| Notes: Total purge water created after hydrogen sampling = 4 gallons | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-23CR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 114.43 | Northing: 1537987.46 | Easting: 549534.14 |
| Static Depth to Water (ft): 7.65 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: PPE | | Pump Set at (ft): 30.00 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 07:54 | Purge End: 08:08 | Total Volume Purged (gal): 0.90 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 08:00 | 8.42 | 0.30 | 0.00 | 1.07 | 25.14 | 238.0 | 4.79 | 57.4 | 1.69 | clear | none |
| 08:04 | 8.42 | 0.60 | 0.10 | 0.77 | 25.23 | 250.0 | 4.75 | 25.2 | 0.76 | | |
| 08:07 | 7.37 | 0.90 | 0.10 | 0.59 | 25.25 | 256.0 | 4.74 | 6.8 | 0.84 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 08:08
Sample End Time: 08:53
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 0.59
Temp (*C): 25.24
SEC (uS/cm): 256
pH: 4.73
ORP (mV): 3.4
Turb (NTU): 0.67

**Hach Field Data (mg/L)**

DO:
CO2: 132
Alkalinity:
Ferrous Iron: 1.8
H2S: 2
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:
CO2 High Range:
CO2 Low Range:
Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Hydrogen, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Larry Wolski | Technician 2: | Weather: "Cloudy, Sunny" |
| Sampling ID: 07-71009/4:OLD-36-24BR:12/6/04 | | |
| Notes: | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-24BR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 115.08 | Northing: 1537828.82 | Easting: 549648.87 |
| Static Depth to Water (ft): 3.95 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: PPE | | Pump Set at (ft): 21.00 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 14:05 | Purge End: 14:23 | Total Volume Purged (gal): 0.75 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 14:14 | 4.62 | 0.30 | 0.00 | 4.09 | 26.07 | 215.0 | 6.92 | 112.5 | 5.54 | clear | none |
| 14:17 | 4.60 | 0.60 | 0.00 | 4.03 | 26.11 | 212.0 | 6.93 | 107.1 | 5.03 | | |
| 14:21 | 4.59 | 0.75 | 0.05 | 4.10 | 26.16 | 211.0 | 6.90 | 104.1 | 2.53 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 14:23
Sample End Time: 15:05
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 4.12
Temp (*C): 26.16
SEC (uS/cm): 211
pH: 6.89
ORP (mV): 103.4
Turb (NTU): 2.64

**Hach Field Data (mg/L)**

DO:
CO2: 162
Alkalinity:
Ferrous Iron: 0.5
H2S: 0.1
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:
CO2 High Range:
CO2 Low Range:
Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Larry Wolski | Technician 2: | Weather: "Cloudy, Sunny" |
| Sampling ID: 07-71009/4:OLD-36-33AR:12/6/04 | | |
| Notes: 4 gallons after hydrogen. | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-33AR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 115.07 | Northing: 1537824.26 | Easting: 549646.92 |
| Static Depth to Water (ft): 3.78 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: PPE | | Pump Set at (ft): 6.00 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 13:08 | Purge End: 13:25 | Total Volume Purged (gal): 0.60 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13:16 | 3.82 | 0.30 | 0.00 | 0.62 | 26.76 | 478.0 | 6.92 | 55.2 | 3.37 | clear | none |
| 13:19 | 3.82 | 0.50 | 0.00 | 0.69 | 26.99 | 482.0 | 6.93 | 52.3 | 3.29 | | |
| 13:22 | 3.81 | 0.60 | 0.03 | 0.68 | 27.10 | 482.0 | 6.99 | 26.7 | 3.26 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 13:25
Sample End Time: 14:03
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 0.62
Temp (*C): 27.07
SEC (uS/cm): 481
pH: 6.93
ORP (mV): 22
Turb (NTU): 3.35

**Hach Field Data (mg/L)**

DO:
CO2: 95
Alkalinity:
Ferrous Iron: 0
H2S: 0
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:
CO2 High Range:
CO2 Low Range:
Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Karen Baer | Technician 2: | Weather: Sunny |
| Sampling ID: 07-71009/4:OLD-36-35CR:12/6/04 | | |
| Notes: Total purge water created after hydrogen sampling = 4 gallons | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-35CR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 2.0 | Total Well Depth (ft): 35.00 | Well Screen Interval (ft): 30-35 |
| TOC Elevation (ft msl): 120.47 | Northing: 1537878.57 | Easting: 549674.58 |
| Static Depth to Water (ft): 8.25 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: PPE | | Pump Set at (ft): 32.00 |
| pH Meter: YSI 556 MPS | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 15:07 | Purge End: 15:21 | Total Volume Purged (gal): 0.60 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15:14 | 10.40 | 0.30 | 0.00 | 0.89 | 26.43 | 310.0 | 5.64 | -20.1 | 90.20 | turbid | none |
| 15:17 | 10.35 | 0.50 | 0.00 | 0.53 | 26.42 | 310.0 | 5.66 | -50.9 | 71.60 | | |
| 15:20 | 10.20 | 0.60 | 0.03 | 0.48 | 26.42 | 309.0 | 5.66 | -73.8 | 68.30 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 15:21
Sample End Time: 16:05
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 0.47
Temp (*C): 26.43
SEC (uS/cm): 309
pH: 5.66
ORP (mV): -81.8
Turb (NTU): 66

**Hach Field Data (mg/L)**

DO:
CO2: 88
Alkalinity:
Ferrous Iron: 1.6
H2S: 1
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:
CO2 High Range:
CO2 Low Range:
Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Hydrogen, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**

# GROUNDWATER PURGING & SAMPLING LOG

TERRAINE Environmental Consulting

## Project Information

| | | |
|---|---|---|
| Project No: 07-71009/4 | Project Name: Groundwater Sampling at Study Area 36 | |
| Technician 1: Larry Wolski | Technician 2: | Weather: "Cloudy, Sunny" |
| Sampling ID: 07-71009/4:OLD-36-36CR:12/6/04 | | |
| Notes: | | |

## Well Information

| | | |
|---|---|---|
| Well ID: **OLD-36-36CR** | Sampling Date: **12/6/2004** | |
| Well Diam (in): 0.0 | Total Well Depth (ft): 0.00 | Well Screen Interval (ft): |
| TOC Elevation (ft msl): 115.07 | Northing: 1537834.15 | Easting: 549651.13 |
| Static Depth to Water (ft): 8.19 | Well Capacity (gal): 0.00 | |

## Purge Setup

| | | | |
|---|---|---|---|
| Purge Method: Peristaltic | Tubing Material: PPE | | Pump Set at (ft): 32.00 |
| pH Meter: | Cond. Meter: YSI 556MPS | DO Meter: YSI 556 MPS | Turb. Meter: Hach 2100P |
| Purge Start: 15:13 | Purge End: 15:35 | Total Volume Purged (gal): 0.60 | |

## Purging Data

| Time | Water Level (ft) | Vol Purged (gal) | Pump Rate (gal/min) | DO (mg/L) | Temp (°C) | SEC (µS/cm) | pH | ORP (mV) | Turbidity (NTU) | Color | Odor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15:25 | 10.57 | 0.30 | 0.00 | 1.67 | 26.11 | 340.0 | 6.56 | 73.5 | 2.07 | clear | none |
| 15:29 | 11.04 | 0.40 | 0.00 | 1.68 | 26.12 | 334.0 | 6.58 | 70.3 | 4.10 | | |
| 15:33 | 11.66 | 0.60 | 0.06 | 1.57 | 26.12 | 334.0 | 6.57 | 67.4 | 3.43 | | |

## Sampling Data

**Sample Information**

Sample Date: 12/6/2004
Sample Start Time: 15:35
Sample End Time: 16:30
Field Filtered: ☐
Duplicate: ☐

**Final Purge Readings**

DO (mg/L): 1.63
Temp (*C): 26.12
SEC (uS/cm): 334
pH: 6.57
ORP (mV): 67
Turb (NTU): 3.64

**Hach Field Data (mg/L)**

DO:
CO2: 94
Alkalinity:
Ferrous Iron: 0.8
H2S: 0
Manganese:
Sulfate:
Sulfide:
Nitrate:

**CHEMetrics Field Data (mg/L)**

DO High Range:
DO High Range:

CO2 High Range:
CO2 Low Range:

Alkalinity High Range:
Alkalinity Low Range:

**Lab Analyses/Methods:**

"Alkalinity, Chloride, Dissolved iron, Methane/ethane/ethene, Nitrate/Nitrite, Sulfate, Sulfide, TDS, TOC, TRPH, VOCs, Volatile Fatty Acids"

**Technician Initials**